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LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

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LECTURE I.

The Minute Anatomy and Physiology of the Kidney.—Physical Characters of the Urine.—The Mechanism of Albuminuria.—Mode of Testing for Albumen.

AN exact knowledge of the structure and functions of the kidney is essential for a correct interpretation of its diseases. I therefore beg first to direct your attention to certain points of anatomy and physiology which will be found hereafter to have a direct bearing upon important pathological questions.

A longitudinal section of the kidney shows it to be composed of a cortical and a medullary portion. The medullary portion is arranged in the form of cones or pyramids—pyramids of Malpighi—usually from twelve to fifteen in number, the bases of which are directed outwards towards the surface of the gland, becoming gradually continuous with the cortical portion; while the apices are directed inwards towards the cavity or pelvis of the kidney. The cortical portion occupies the entire surface of the organ, forming a layer about two lines in thickness opposite the bases of the medullary cones, and sending prolongations inwards between the cones; so that each medullary cone is surrounded, except at its apex, by the cortical portion of the gland. The kidney is a tubular gland. The tubes of the cones take, for the most part, a straight course; while those of the cortex are extremely convoluted and tortuous. Tracing the tubes from the apex of a medullary cone, on the surface of which their open mouths may be seen, they are found to take a straight course through the pyramid, branching dichotomously, and diverging from each other as they proceed. After reaching the base of the pyramid, their course through the cortical portion varies: many tubes immediately become very tortuous, some of them bending down into the interpyramidal portions of the cortical substance, while others pass on in sets and in straight lines towards the surface; the tubes on the sides of each bundle diverging successively, and then taking a tortuous course through the cortical substance, so that only a few of the central tubes in each bundle retain their straight course quite up to the surface of the kidney. These all finally turn backwards, making many convolutions in the cortical portion of the gland. After leaving the medullary cones, the branching of the tubes, except in very rare instances, appears to cease. In all the numerous sections of the kidney that I have examined, I have never seen a convoluted uriniferous tube either branching or anastomosing with another tube. Some of the convoluted tubes dip down amongst the straight tubes, forming loops with their convexities towards the apex of the pyramid. Henle erroneously supposed that these looped tubes were closed at both ends, and therefore quite distinct from those which open into the pelvis of the kidney. There is good anatomical evidence that, as each convoluted uriniferous tube at one extremity forms a globular dilatation, which constitutes the capsule of the Malpighian body, so at the other end it passes into a straight tube which opens into the pelvis of the kidney. Some recent writers appear to think that, because Henle has allowed himself to be perplexed by the snake-like convolutions and tortuosities of the uriniferous tubes, Bowman's accurate description of the structure of the kidney has been entirely subverted and superseded. For an excellent criticism of the wild and baseless speculations to which Henle's statements have given rise, I refer you to Dr. Beale's book on *Kidney-Diseases*, etc.

We have next to trace the very remarkable arrangement of the blood-vessels within the kidney. The renal artery, entering the hilum of the kidney, sends small branches to the areolar and adipose tissue outside the pelvis; and then, passing into the substance of the organ, breaks up into terminal branches, which, with a few exceptions to be presently mentioned, correspond in number with the Malpighian bodies. Each terminal artery—the *afferent artery* of the Malpighian body—perforates a Malpighian capsule, and thus passes within the dilated end of the uriniferous tube. It there breaks up into loops of capillaries, which take a more or less tortuous course; these again unite into a single *efferent vein*, which pierces the Malpighian capsule near the entrance of the afferent artery; it then enters the capillary plexus which lies outside the tubes—the *intertubular plexus*. (See Fig. 1.) The intertubular capillaries anastomose freely on all sides, so as



Fig. 1.—Plan of the Minute Structure of the Kidney. *a*. Artery, sending an afferent branch, *a f*, which breaks up into *m*, the Malpighian capillaries. *e f*. Efferent vessel, which conveys the blood from the Malpighian capillaries into *p*, the plexus of capillaries between the tubes. These again unite, and form the vein *v*. *t*. The uriniferous tube. *c*. The capsule of the Malpighian body. The course of the circulation is indicated by the arrows.— $\times 60$.

to form a continuous network, whence the blood is ultimately collected into the commencing branches of the renal vein. The course of the circulation through the kidney, then, is as follows. The blood passes from the renal artery through the afferent arteries into the Malpighian capillaries; from these it is carried by the efferent veins to the intertubular capillaries; and thence it passes out of the kidney by the renal vein. The greater part of the blood which passes into the interior of the kidney takes the course which I have described; but amongst the straight tubes of the pyramids there are certain *vasa recta* which have a different distribution. Some of these *vasa recta* are efferent veins from Malpighian bodies near the bases of the pyramids, which, as originally described by Bowman, take a straight course towards the apices of the cones, and terminate in capillaries, from which the blood is returned by venous radicles, which also take a straight course and join the renal vein. But, in addition to these venous branches, it has been shown by Virchow, Beale, and others, that there are arterial *vasa recta* which pass off from the artery, take a straight course between the tubes of the cones, and terminate in a capillary network surrounding the tubes. These arterial *vasa recta* are probably the chief nutrient vessels of the pyramids. They may, therefore, be looked upon as analogous to the bronchial arteries in the lungs and the hepatic artery in the liver.

Each Malpighian body, as we have seen, consists of a globular plexus of capillaries contained within the dilated end of a convoluted tube; and we have now to consider briefly the structure of the uriniferous tubes. The tube is composed of two anatomical elements—the basement-membrane and the epithelium.

The basement-membrane is a thin transparent lamina, appearing, as a rule, structureless and quite homogeneous; the slightly fibrous appearance which it sometimes presents being probably due to contraction and corrugation after the sections which must of necessity be made for microscopic examination. This membrane is in direct contact on its outer surface with the intertubular capillaries, and on its inner surface with the epithelial lining of the tubes.

The epithelium in the convoluted tubes differs from that in the straight tubes. In the convoluted tubes, the epithelium is of the true glandular character. The cells are somewhat angular in outline; and between this and the central nucleus there are a number of granular particles. The cell-wall is often indistinct, and readily disintegrated by the action of water. The cells form a single layer within the tubes; and this cell-lining occupies from one-third to one-half of the diameter of the tube, leaving a clear canal in the central axis of the tube. (Fig. 2.)

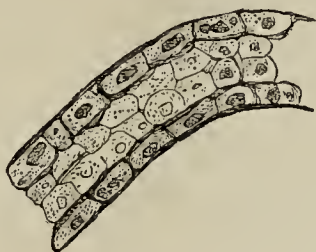


Fig. 2.—Portion of a Convoluted Uriniferous Tube. The lining of glandular epithelium leaves a clear canal in the middle, which is equal to about half the diameter of the tube.—X 200.

The epithelium in the straight tubes is flatter, less granular, and has more the character of pavement-epithelium; so that the clear canal within a small straight tube is wider than that of a convoluted tube of larger size.

In the human kidney, no epithelial cells can be seen either lining the Malpighian capsule or covering the Malpighian capillaries. In the kidney of the newt and the frog, a delicate layer of ciliated epithelium may be seen within that portion of the Malpighian capsule which lies next to the opening of the tube; and, in the newt's kidney, vibratile cilia may be seen throughout the entire length of the uriniferous tubes.

The appearance to which Goodsir originally gave the name of the *matrix* of the kidney has been a source of much perplexity to anatomists and pathologists. Fig. 3 represents an appearance which results

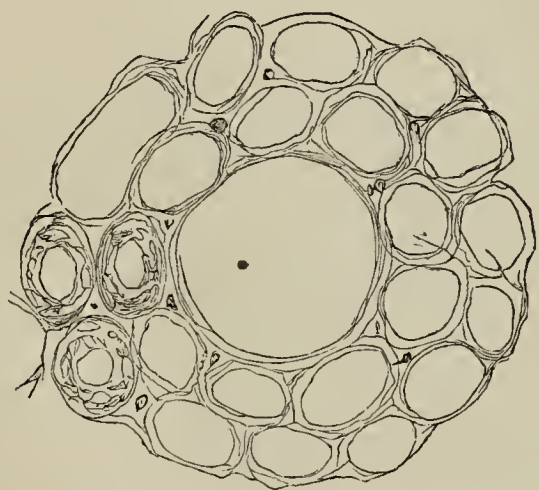


Fig. 3.—Section of the Cortex of the Kidney, after washing in water to remove the Gland-cells. The smaller rings are sections of the basement-membrane of the tubes; the larger ring is a section of a Malpighian capsule. In three sections of a tube the gland-cells remain. Sections of capillaries are seen here and there in the angular spaces between the tubes.—X 200.

from washing a thin section of the cortex of an uninjected kidney in water, so as to remove the gland-cells. The appearance is that of a fibrous network enclosing circular and oval spaces. The explanation of the appearance is this. The tubes lie in close contact with each other, having the intertubular capillaries between them. A thin transverse section gives a reticular appearance; the rings being formed by the basement-membrane of the tubes, with the capillaries in the interspaces and angles. The so-called matrix has no existence apart from the basement-membrane and capillaries. The convolutions of the tubes and the network of capillaries mutually support each other. No connective or supporting tissue is required; and, as Dr. Beale well remarks, the intervention of any such tissue would tend to increase the

distance between the secreting cells and the blood, and so render the gland less perfectly fitted for the discharge of its function. There is no more appearance of connective tissue on the *outer* surface of the basement-membrane between it and the capillaries, than there is on the *inner* surface between it and the gland-cells. The tissues on each

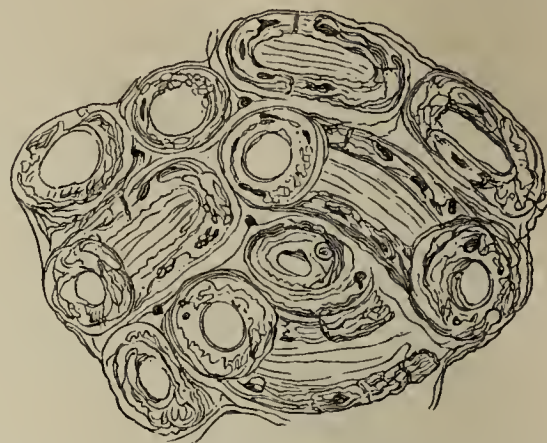


Fig. 4.—Section of the Cortex of the Kidney. The gland-cells are here attached to the inner surface of the basement-membrane. The light interspaces correspond with the rings of the basement-membrane in fig. 3.—X 200.

surface of the basement-membrane adhere to it without the intervention of another tissue to which the term connective tissue can be given. (See Fig. 4.)

You may make a coarse imitation of the fibrous network of the kidney by taking half a dozen India-rubber tubes, cementing them together side by side, so as to form a bundle of parallel tubes. Transverse sections will then form a network, the rings of the meshes being formed by the divided India-rubber tubes, as the reticular appearance in the kidneys is the result of sections of the basement-membrane of the uriniferous tubes.

Bear in mind, then, that there is no distinct structure to which the term matrix can be applied. The fibrous appearance represented in Fig. 3, which has been often described as a morbid formation of fibrous tissue surrounding and constricting the tubes, is, I hope, rendered quite intelligible by the description which I have given you.

The diameter of the convoluted tubes is remarkably uniform, and equals about one-five-hundredth of an inch. That of the straight tubes is much more variable; while many straight tubes have a narrower outline than the convoluted tubes, but a wider canal, in consequence of the more flattened form of the epithelium, others, especially near the apex of a cone, are more than twice as large as the con-

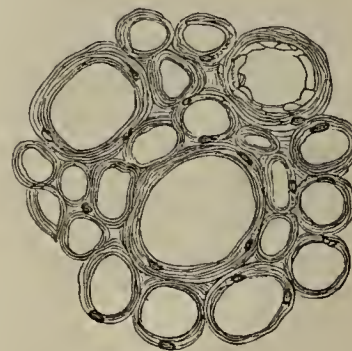


Fig. 5.—Section of a Medullary Cone. The rings which are here of unequal sizes are sections of the straight tubes. In one section the epithelium remains.—X 200.

voluted tubes. This may be seen by a comparison of Figs. 3 and 5, the latter representing a section of straight tubes in a cone. The basement-membrane of the straight tubes is somewhat thicker than that of the convoluted tubes, and the medullary cones are firmer than the tissue of the cortex.

Nerves.—The nerves of the kidney are chiefly derived from the sympathetic. In man and in the higher animals, it is difficult to trace their distribution; but in the kidney of the newt Dr. Beale has found that not only are the terminal branches of the nerves distributed to the small arteries and veins, but also to the convoluted tubes and to the Malpighian and intertubular capillaries. The nerve-fibres are all connected with ganglion-cells, from each of which two or more fibres proceed in different directions, and so establish a communication between various parts of the organ. It is probable, as Dr. Beale suggests, that the nerves which are distributed over the uriniferous tubes consti-

tute an afferent system, which, through the nerve-centres and the efferent nerves distributed to the arteries, are capable of influencing and regulating the blood-supply to the capillaries, and so the functional activity in health and in disease.

Practically, the kidney may be said to be made up of two sets of tubular vessels—one set of tubes containing blood, the other containing gland-cells; and the organ is so constructed as to bring the two sets of tubes—the sanguiferous and the uriniferous—into close and intimate relationship with each other.

The Function of the Kidneys is to discharge from the body superfluous water, together with certain peculiar urinary solids. There appears no reason to doubt the essential accuracy of Mr. Bownan's original doctrine that, while the convoluted tubes, with their lining of gland-cells, are the agents by which the solids of the urine (the urea, uric acid, etc.) are secreted, the watery portion of the secretion is chiefly discharged through the Malpighian bodies.

The convoluted tubes resemble, in all essential points, the secreting tissues of true glands, and especially in the character of their epithelial cells; while the Malpighian bodies, in their structure and arrangement, form a striking contrast. The epithelial cells either cease altogether or entirely change their character within the Malpighian capsules. The Malpighian capillaries lie within the dilated ends of the tubes, and are entirely uncovered by epithelium. "It would be difficult," as Mr. Bowman says, "to conceive a disposition of parts more calculated to favour the escape of water from the blood, than that of the Malpighian body." Each afferent artery breaks up into a number of minute capillaries of far greater aggregate capacity than itself. Hence must arise an abrupt retardation of the blood-stream. The vessels in which this delay occurs are uncovered by cells. The interior of the capsule certainly in the lower animals, and probably in the higher, is lined by cilia whose motion directs the current of liquid towards the orifice of the tube. "Why is so wonderful an apparatus placed at the extremity of each uriniferous tube, if not to furnish water, to aid in the separation and solution of the urinous products from the epithelium of the tube?"

The epithelium of the straight tubes, as I have before mentioned, is allied to the lamelliform or pavement variety. It probably has no glandular function, the tubes which form the medullary cones being merely ducts for conveying away the secreted products from the convoluted tubes into the pelvis of the kidney.

The precise mode in which the glandular epithelium separates its peculiar products from the blood and discharges them into the duct, is a mystery which has not yet been solved. It is probable that the cells of the kidney continually pass away in the secretion, and that they are constantly replaced by new formations; but, whatever may be the process by which these changes are effected, no entire gland-cells, nor even the *débris* of renal epithelium, are normally visible in the urine. The appearance of renal cells in the urine affords undoubted evidence of a pathological process.

Conflicting results have been obtained by different experimenters in their attempts to solve the question whether the peculiar urinary constituents exist ready formed in the blood and are only separated by the kidney, or whether they are formed wholly or in part by the gland. It had long been the accepted doctrine that urea and uric acid exist normally in the blood, that they are thrown out by the kidneys, and that they accumulate and cause uræmia when the secretory function of the kidney has been impaired by disease. Dr. Oppler of Berlin threw doubt upon this doctrine. He found, as he believed, much more urea in the blood of dogs whose ureters had been tied than in the blood of those whose kidneys had been extirpated, and he concluded that the excess was due to the formation of urea by the kidneys in the first class of cases. It is probable that animals live longer after ligature of the ureters than after the more formidable operation of nephrotomy, and this may explain the excess of urea in the ligatured cases. The more recent observations of Meissner and others have tended to re-establish the older doctrine by showing that urea and uric acid exist in the blood of healthy animals, and, moreover, that they are so abundant in the liver as to render it probable that the liver is the chief seat of their formation.*

There is, then, good reason for the doctrine that the urinary constituents are largely brought to the kidney by the blood, whence they are discharged through the uriniferous tubes of the gland; and hence arises the contamination of the blood by urine when the kidneys are structurally changed and their excretory function suspended or much impaired.

Physical Characters of the Urine.—Healthy urine is a transparent perry-coloured liquid, having an acid reaction and a density usually

ranging between 1015 and 1025, but it may temporarily fall much below or rise considerably above these limits without being morbid. The daily secretion of urine has been estimated by some observers to be as low as 35 ounces; by others as high as 81 ounces (Parkes *On the Urine*, p. 5); the mean being 50½ ounces. The amount secreted depends upon the measure of fluid taken in and the amount passed off by other channels, especially by the skin.

Referring you for a detailed account of the chemistry of the urine to the works of Parkes, Thudichum, Beale, etc., I may remind you in passing that, as the lungs and the liver are large eliminators of carbon, so the urinary secretion is remarkable for the abundance of its nitrogenous constituents. Urea, the chief urinary solid, contains a large proportion of nitrogen, and the amount of urea discharged by an adult male in twenty-four hours ranges, according to different observers, from 286 grains to 688 grains, the mean being 512 grains (Parkes, pp. 7 and 8).

The Mechanism of Albuminuria.—Now, before I proceed further, let me show you, by referring to the anatomy of the kidney, that the peculiar position of the Malpighian capillaries within the dilated ends of the uriniferous tubes is attended with this result, that any interference with the circulation through the kidney is apt to be associated with an escape of blood-constituents through the Malpighian capillaries, which, mingling with the urine, render it either bloody, or, if the serum alone escape, simply albuminous.

Looking at the plan of the renal circulation (fig. 1), you see that, whether the escape of blood-constituents be traceable to an altered physical relation between the blood and the walls of the vessels, or to engorgement of the Malpighian capillaries, the result of an increased afflux of blood through the arteries or of an impeded return of blood through the intertubular capillaries and veins consequent on an obstruction within the kidney itself, or beyond, in the heart or lungs—in each and every case the blood-materials, transuding through the walls of the Malpighian capillaries into the tubes, mingle with the urine and render it bloody or albuminous. There are many interesting points of analogy between the liver and the kidney as regards structure, functions, and pathology; but in the liver there is nothing analogous to the intratubular Malpighian capillaries, and therefore, while albuminuria is of very common occurrence, an albuminous or sanguineous condition of the bile is a rare event.

Tests for Albumen in the Urine.—Albuminous urine is usually coagulated by heat short of the boiling point, and by nitric acid. A careful application of both tests can rarely lead to error, but mistakes have often arisen from the employment of only one of these methods. Heat alone will not coagulate albumen in urine which is neutral or alkaline. In such a case, the addition of nitric acid coagulates and precipitates the albumen. Add a few drops of liquor potassæ to albuminous urine, and you will find that it will not coagulate by heat.

On the other hand, in urine which is alkaline, neutral, or feebly acid, a precipitate of phosphatic salts may be thrown down by boiling, and this may be mistaken for albumen. The addition of a drop or two of nitric acid immediately dissolves the phosphatic sediment and renders the urine clear. You see, then, that if you trust to heat alone, you may fail to detect albumen, which is abundantly present; or, on the other hand, you may mistake a phosphatic sediment for albumen. The addition of a few drops of nitric acid to albuminous urine usually forms an unmistakable coagulum. This test employed alone would less frequently mislead than heat alone. In using the nitric acid test, certain facts are noteworthy, and some care is required to avoid error.

1. The addition of a drop or two of nitric acid occasionally forms a precipitate, which is rapidly redissolved; then the further addition of the acid causes a permanent precipitate.

2. The addition of a small quantity of nitric acid to urine—as much acid, for instance, as may be left in an unwashed test-tube which has contained a mixture of urine and nitric acid—will sometimes prevent the coagulation of albumen by heat.

3. Heat alone does not always coagulate albuminous urine which is highly acid, and to which no extraneous matter has been added.

I have mentioned these three facts in succession, because it is probable that they are closely related. A certain kind and degree of acidity of urine is unfavourable for the coagulation of albumen, either by heat or by a small quantity of nitric acid. Dr. Beale's observations have shown that free phosphoric acid tends to keep albumen in solution. In cases I and II before mentioned, phosphoric acid is probably set free by the minute quantity of nitric acid; in case III, there is probably an excess of phosphoric acid in the urine itself. In each of these cases an excess of nitric acid gives an unmistakable precipitate.

4. An excess of nitric acid, by its oxidising influence, may decompose and dissolve a scanty sediment of albumen, especially when added to boiling urine.

* See, for references to these experiments, New Sydenham Society's *Biennial Prospect*, 1867-8.

5. Nitric acid added to urine containing urates abundantly may cause a cloudy precipitate of uric acid. When boiled, the urine becomes clear and of dark colour by the decomposition of the uric acid.

6. A crystalline precipitate of nitrate of urea in concentrated urine could scarcely be mistaken for albumen.

7. Urine containing copaiba, cubebs, and other resinous substances, may be rendered turbid by nitric acid, but not by heat.

In conclusion, let me remind you of two delicate tests for a mere trace of albumen: 1, in urine which is turbid with urates; and 2, in clear urine.

1. Pour the turbid urine into a clean test-tube until the tube is two-thirds full. Hold the tube steadily by the lower end, and heat the upper stratum of urine over a spirit-lamp. The liquid is first cleared by solution of the urates, and then made opalescent by coagulation of the albumen.

2. Pour the clear cold urine into a test-tube until it is half full; slope the tube, and allow from five to ten drops of nitric acid to trickle down the under side of the tube: three layers are quickly formed—clear nitric acid below, clear urine at the top, and an opalescent stratum of slightly coagulated urine between the two.

[To be continued.]

ARTERIO-CAPILLARY FIBROSIS.

IT having been resolved at the last meeting of the Royal Medical and Chirurgical Society to refer the questions in dispute between Sir William Gull, Dr. Sutton, and myself, to a scientific committee, I had determined to leave the matter in their hands and not to reply to any comments or criticisms which might appear, either in this or any other journal; but some statements in Sir William Gull's clinical lecture are so likely to perplex and mislead, that I must claim the privilege of a brief reply.

Sir William Gull quotes Dr. Beale, and says that "Dr. Beale's views as regards the vascular changes in the kidneys are entirely in accordance with what has been seen by both Dr. Sutton and himself." Upon this I beg to remark that Dr. Beale's drawings represent a condition of minute vessels entirely different from that which I describe as hypertrophy. Most of his comments apparently have reference to the so-called "amyloid disease", or waxy degeneration of the arterial walls; and he seems to have "too hastily assumed" that I had mistaken amyloid disease or other forms of degeneration for true muscular hypertrophy. A comparison of Dr. Beale's illustrations with those appended to my paper in the fifty-first volume of the *Medico-Chirurgical Transactions* will show that they represent essentially different conditions of the arterial walls.

Sir William Gull's statement that, as regards the vascular changes in the kidneys, he and Dr. Beale are entirely in accord, implies that the now celebrated "hyalin-fibroid" change is only another name for amyloid or waxy or lardaceous degeneration.

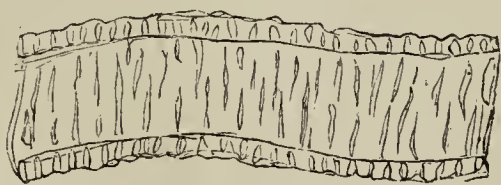


Fig. 1.—Normal Artery.

Now, I venture to point out that in Sir William Gull's lecture three quite distinct classes of arterial change are confounded together:

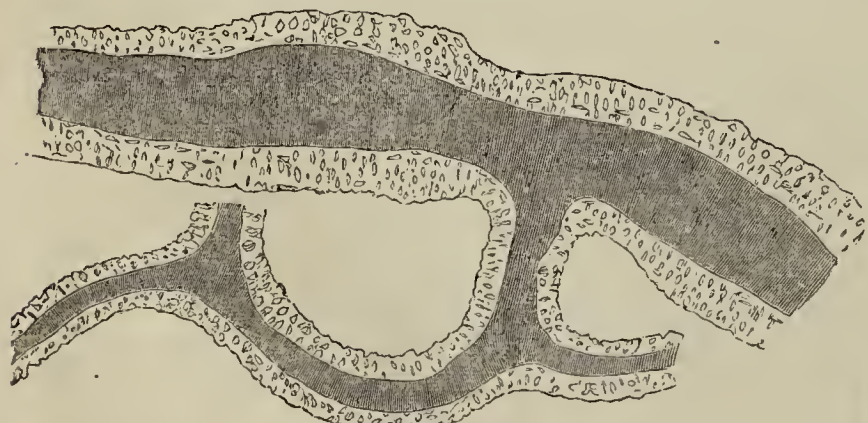


Fig. 2.—Hypertrophied Subcutaneous Artery in Chronic Bright's Disease. The canal is injected.

1. Muscular hypertrophy—that is, an increased thickness of the muscular coat without structural change (compare figs. 1 and 2): 2. Amyloid degeneration, which involves all the coats of the artery in an almost homogeneous wax-like mass (see fig. 3): 3. The "hyalin-fibroid"

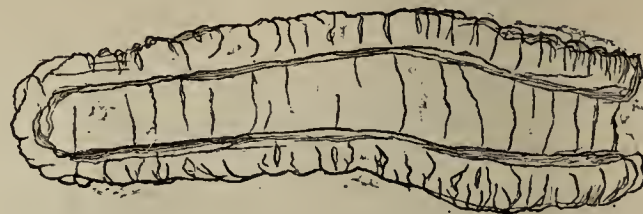


Fig. 3.—Waxy or Lardaceous Degeneration of a Renal Artery.

change, which is a *post mortem* result of distension of the external fibrous tunic of the artery by fluid (see fig. 4). I have shown, in my paper at the Royal Medical and Chirurgical Society, that, in their

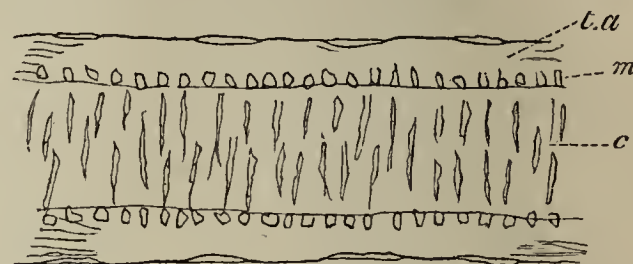


Fig. 4.—Normal Artery rendered Hyaline by Glycerine and Camphor Water.

drawings and description of the hypertrophied renal artery, Sir William Gull and Dr. Sutton have demonstrably mistaken the circular layer of muscular fibres for the fibrous coat of the artery.

Entirely agreeing with Sir William Gull that "it is always dangerous to rest in a narrow pathology," I would suggest that the pathology which is based upon changes artificially produced in the vessels after their removal from the body is not remarkable for its breadth.

GEORGE JOHNSON, M.D., F.R.S.

OBSTETRIC MEMORANDA.

ON MECHANICAL AND FORCIBLE DILATATION OF THE CERVIX UTERI.

WHILE agreeing with Dr. Henry Bennet's statement with regard to the closed condition of the healthy os uteri internum, I think the fears which he expresses lest gynaecologists, overlooking this point, should "render nearly every healthy woman who is examined liable to be considered as suffering under morbid closure," are unnecessary, for the following reasons. 1. As a rule, healthy women do not go to the doctor to be examined. 2. If they do, it would be an egregious error to pass the sound or other instrument in the face of absence of uterine symptoms, and after digital examination had revealed a healthy uterus.

PERCY BOULTON, M.D.

DIVISION OF THE OS UTERI.

IN the JOURNAL of December 21st, 1872, my friend Dr. Henry Bennet has imputed to me a statement—"Dr. Greenhalgh told us that in less than two years he had divided the os internum with his metro-tome in more than three hundred cases in his own study"—which is so at variance with facts, that I feel bound to give it an unqualified refutation. On reference to the meeting in question, I find no record of any such statement, nor do I recollect having spoken on the occasion; and, as the statement is said to have been made so far back as 1866, I shall feel obliged to Dr. Bennet if he will refer me to the passage in question. Already overtaxed by private and public practice, and teaching with little time and less inclination, Dr. Bennet must excuse me from accepting his challenge to enter the lists of controversy upon his peculiar views. I have little doubt, however, that he will obtain ample satisfaction upon that point from that able and shrewd observer who started this discussion, and with whom Dr. Bennet has done me the honour to couple my name.

R. GREENHALGH.

72, Grosvenor Street, Dec. 24th, 1872.

CLINICAL LECTURE

ON

ERYSIPELAS: ITS NATURE AND AFFINITIES.

Delivered at St. Bartholomew's Hospital.

By W. S. SAVORY, F.R.S.,

Surgeon to and Lecturer on Surgery at the Hospital; etc.

YOU may remember that, during the prevalence of erysipelas last winter several cases occurred in the hospital. For awhile, indeed, the disease may be said to have been epidemic here—on a very small scale, to be sure, but still large enough to yield some useful lessons. In one ward, Abernethy, between the middle of January and the beginning of March, five patients were attacked. There were of course many points of interest in this outbreak of the affection under our very eyes; an excellent opportunity was afforded for the study of it. And of these points I wish now to fix your attention especially upon two—those two which were illustrated by the cases in Abernethy, and by some of you very often discussed. The first of these is that, of the patients in the ward, those only who had wounds were affected—the subjects of diseases not accompanied by an open wound escaping; and that the first local sign of the disease—the blush of redness—almost always appeared at the margin of the wound. The second is that the disease, beyond question, spread by contagion; the fresh cases not appearing indifferently in any part of the ward, but the disease passing, in almost every instance, from the person affected to the patient nearest to him who had an open wound. Now, as you know very well, neither of these facts is new. Each of them, even when viewed singly, is full of importance; but how vastly is their significance augmented when considered together; what a light is thrown by each upon the other! How contradictory, too, at the first glance, they seem of each other! I remember that they struck several of you thus, and led to many questions. Let us consider one of them. Is erysipelas a specific fever, or is it a local disease? There are high authorities and much argument for either view. It may be said, perhaps, that the generally accepted view is, that erysipelas is a specific fever—allied, therefore, to scarlatina, measles, and small-pox. This is the doctrine set forth, for example, by the highest authorities in our standard works; but there are many eminent men who maintain the doctrine that erysipelas is simply a local disease. For examples of this view I may refer you to Mr. Higginbottom, in the BRITISH MEDICAL JOURNAL for June 7th, 1865, p. 11; also to an article in the same paper for June 18th, 1870, p. 632. Now the two facts, so marked in our cases to which I have alluded, seem, I say, at the first glance, to be diametrically opposed to each other on this great question. Did not the commencement of the disease about a wound imply a local origin? Does not the spread of such a disease by contagion imply an affection of the blood? If, indeed, the disease never infected patients without wounds, and then invariably commenced at their site, it might be argued that the passage of the disease from one person to another was still consistent with a local nature; but inasmuch as the disease may be transmitted to persons without any breach of surface, or, when transmitted to persons who have wounds, may (and in one of our cases did) first reveal itself upon a distant part, and throughout its progress never extend to the neighbourhood of the wound, then I submit that infection, under these circumstances, cannot be reconciled with the notion of a simply local disease.

Are, then, these two facts irreconcilably opposed? Let us seek for an answer by looking further into the character of erysipelas. In the first place, then, in what characters does erysipelas resemble the specific fevers? Upon what evidence is the doctrine of its affinity to these diseases founded? Erysipelas resembles the specific fevers in the following features. The local affection is accompanied by fever; the affection of the skin is usually preceded by obvious disturbance of the general health; the affection passes away after a very limited duration, and usually runs a tolerably regular and definite course; and, chief of all, it can be communicated from one person to another—it is infectious. But, on the other hand, it differs from these diseases in this great character—that, so far from one attack preventing another, it would appear rather that a proclivity is thereby induced; but whatever degree of doubt may exist about this, it seems clear that it has no power to protect the constitution from its own recurrence.

Other points of distinction between erysipelas and the specific fevers have been noted, but in value they bear no comparison with this one. Such are the following.

That in erysipelas the stage of incubation is extremely short, and not unfrequently absent.

Even assuming this statement to be literally true, it is surely worth very little in the question. When it is considered how widely, in this respect, the well established specific fevers differ from each other, and how wide an apparent difference is presented even by the same fever in different instances, this cannot be regarded as of any value or importance. Moreover, it may be fairly asked, Upon what evidence is it alleged that the stage of incubation is not unfrequently absent?

That the constitutional disturbance is mostly in exact ratio with the severity of the local inflammation, as if caused by it.

Surely this, as a ground of distinction, is very largely overstated. Indeed, the observation is in direct contradiction to that of others (see, for example, *System of Medicine*, vol. I, p. 607-8, and *System of Surgery*, vol. I, p. 215). The very most that can be truly said is, that perhaps in erysipelas there may be usually observed a closer relation between the severity of the local and constitutional symptoms than in the specific fevers. But, even accepting this statement as it stands, it cannot be considered as a mark of distinction of any moment.

That all proved blood-diseases, attended by rashes, produce them symmetrically, while erysipelas never does so.

Again, it must be asserted that this statement is vastly overcharged. The difference, such as it is, cannot be said to be more than one of degree.

That the stages of erysipelas are by no means uniform.

This statement must be qualified thus: the stages of erysipelas are not usually so uniform as those of the other diseases in question.

That the rash of erysipelas never comes out fully at once, but extends gradually from the part first affected.

Is this never true of any of the others? And as evidence of essential distinction, what is it worth?

I repeat, therefore, that, allowing their utmost value to these points of difference as evidence in proof of distinction, the absence of any power in erysipelas to protect the system from its own recurrence is worth far more than all of them together. This, in truth, is the cardinal character of distinction between erysipelas and the zymotic diseases commonly so called; and erysipelas, thus distinguished, however closely in many of its features it may, as assuredly it does, resemble the specific fevers, must be put apart from them.

Now, then, let us turn to the doctrine of the simply local nature of erysipelas. The evidence from which this conclusion has been drawn is, I think, chiefly that which has been advanced to show that erysipelas is not a specific disease. It has—at least by many—been in some measure assumed that, if erysipelas can be shown to be not a specific disease like scarlatina, the alternative must be that it is a purely local one. But to what extent is this conclusion borne out by evidence? First, there is the fact already insisted on—that erysipelas is a contagious disease—that it passes from one person to another. Then it may affect not only any part of the surface or of the integument, but also internal parts or organs; and there is good reason for believing that mischief of this nature more frequently affects internal parts than is commonly supposed. Then, again, the local mischief is often—nay, usually—preceded by obvious constitutional disturbance; and when of any extent, it is accompanied by well marked fever.

If, therefore, this disease is to be considered a local one, in the current acceptation of the term, what characters, it may be asked, should be regarded as proof of the constitutional nature of a disease? The one fact, apparently, in favour of the local nature of erysipelas is that which has been already pointed out, and which was so marked in our cases—the inflammation very often starts from a wound or local injury. Now, with regard to this important feature it should be noted, in the first place, that two or more very different affections are commonly confounded under the term: erysipelas proper, and diffuse phlegmonous inflammation, more or less acute, which, however closely it may resemble true erysipelas in aspect, is certainly distinct in its nature. Next—and this is of more importance—it is not one of the especial characters of erysipelas, in distinction from other forms of general, even zymotic, disease, that it is prone to manifest itself by local action in parts around a wound, which are, therefore, irritated or disturbed. In answer, then, to the objection—Why, if erysipelas be a constitutional disease, should its local action be so often determined to a wound? it may be replied that, assuming the idea of local irritation or disturbance as a determining cause to be good for nothing, yet such a fact of a disease unquestionably constitutional does not stand alone. To quote cancer may be said to be begging the question, because cancer itself is held by some to be a local disease; but it has been noted on

many occasions that, when scarlatina or measles has followed a surgical operation, the characteristic rash has first appeared about the wound, although in a part remote from those which, under ordinary circumstances, are earliest affected.

But, furthermore—for the association of erysipelas with wounds is frequent, and this cannot be said of the other affections—is it a character of the poison of erysipelas that it is prone to enter the system through an open wound? That the fact of its frequently starting from a wound may better be explained by the poison entering there, than by its being subsequently determined to the part by local irritation, seems suggested by the reflection that it is especially about wounds while open that erysipelas often begins, rather than in the neighbourhood of other injuries, which, although they may be far more severe, yet do not involve any breach of surface. It is not any kind of injury, however severe, but the open wound which is especially associated with the occurrence of erysipelas.

The terms local and constitutional, in their application to disease, are not—perhaps cannot be—sharply defined; but I think that, unless these words be strained from their ordinary signification, the facts in favour of the view of erysipelas being an affection of the blood outweigh altogether those which can be urged in support of its being simply a local malady.

If erysipelas, then, cannot, in the face of such evidence, be regarded as simply a local disease, nor again as a specific fever, where is its place? Looking at the mode in which it may be communicated, it cannot be doubted that the mischief is excited by matter of some sort, which is transferred from one person to another, and that the poison, when it enters the system, passes into and circulates with the blood. Erysipelas, then, I submit, belongs to that class of diseases which result from what is called blood-poisoning, of which pyæmia is the type; and that this view, which is now taken by many, of its nature and affinities is the only one in harmony with all the evidence before us.

Erysipelas is a disease in which the local inflammation is usually preceded, and in all but the most trivial instances always accompanied, by constitutional disturbance. The local inflammation may first appear on any part of the integument, and spread to any other part; and there is every reason to believe that local mischief of essentially the same nature may affect internal organs. It can certainly be communicated from one person to another, and yet probably sometimes arises independently of contagion. Although it often occurs independently of any wound, yet it so very frequently supervenes upon a breach of surface that the association cannot be passed over as accidental, but the wound must be regarded as fulfilling some condition peculiarly favourable to the occurrence of erysipelas. There is not the slightest evidence to show that it has any power of protecting the system from its own recurrence.

The nature of erysipelas and its affinity to pyæmia are still further disclosed by examinations after death. In the more severe cases—those that prove fatal—it is then, if not previously, found that the affection of the integument forms but a fragment of the whole mischief. Various internal organs reveal changes which cannot be distinguished from those wrought by pyæmia. Note the following passage from Mr. De Morgan's essay on erysipelas in the *System of Surgery*. After pointing to the morbid states of the viscera, he writes: "The principal morbid characters are found in the blood"; and "where death has occurred from the disease, the blood is sometimes thin and fluid, sometimes pitchy, often depositing a blackish powder. It stains the inner surface of the heart and great vessels, while the course of the superficial veins is tracked out by exudation. The corpuscles are much altered, broken up, and irregular." Then he continues: "A very important fact has, however, been mentioned to me by Mr. Busk—viz., that in all the fatal cases which he examined the lungs were highly congested, and that on close inspection the smaller pulmonary vessels were always found to contain pus; that, in fact, a minor degree of pyæmia was always present" (vol. I, p. 224). So, again, Dr. Russell Reynolds writes in his article, Erysipelas, in the *System of Medicine*: "It is well known that in many cases of fatal erysipelas, evidences of disease may be found in the spleen, liver, kidneys, lungs, bronchi, larynx, trachea, and fauces; but there is nothing specific in the character of the changes discovered in these organs—nothing, that is, which is peculiar to the disease called erysipelas—nothing, indeed, which depends on erysipelas *per se*; but all that may be found is only the sign of such general blood-change as may be associated not only with the disease now under consideration, but also with that large group of maladies which stands in close relation with pyæmia" (vol. I, p. 687). I quote these passages literally from well known authors in preference to using my own words, that in such a description of the morbid changes in erysipelas you may not suspect me of overstating the case for any purpose of argument. Such

changes can be attributed, I think, only to the action of some poison operating in and through the blood.

But while by the characters presented during life and the changes disclosed after death erysipelas declares its relationship to pyæmia, yet it differs from it as one member of a family differs from another in certain individual features. It may be communicated from one person to another; and in its especial liability to affect the subjects of open wounds it strikingly resembles pyæmia. But, then, it often appears in persons without wounds or any local injury whatever, and this is not the case with pyæmia. Is the poison, then, of erysipelas, whatever it may be, of a more subtle nature, and so able to penetrate more freely through unbroken surfaces? Indeed, the not unfrequent occurrence of erysipelas without previous local injury of any kind in persons who up to the time of the attack believed themselves to be in good health, and apparently as the result of mere exposure to cold and damp, will, no doubt, seem to many altogether opposed to the notion that a poison of any kind can be at work in the mischief. But here, again, assuming these cases to be, in their nature, one with those which arise from contagion, the positive evidence of a *materies morbi* in the latter class must be allowed to outweigh the negative evidence of the former. Moreover, it would appear that certain persons, and those only at certain times, are susceptible of an attack of erysipelas under conditions which, in those predisposed, suffice to induce it. It may be said that in such cases external influences of this kind act as the exciting or determining cause, but only upon those predisposed to the affection. In pyæmia, there is evidence that the poison may be either generated by the person himself or come from another, so in erysipelas it seems probable that the poison may sometimes arise from within as well as enter from without. The affinity of erysipelas to pyæmia—that they are but different forms or modes of expression of the same mischief—is shown by their very frequent association in the same case. In a case of general blood-poisoning, such as is called pyæmia, erysipelas very often supervenes, and is developed during the progress of the affection in very different degrees. Indeed, in such varying proportions are these two forms of blood-poisoning often blended, so gradually or alternately do the more striking symptoms of one or the other rise into the ascendant, that the same case will be called by one pyæmia, by another erysipelas. But, furthermore, when in the progress of a case, either with or without any apparent change in the wound, the patient becomes ill; when the temperature and pulse rise and at length come rigors, and the surgeon is for some time doubtful in what particular form the threatened mischief will appear, in such cases I hail with a sense of some relief the first appearance of a blush of erysipelas as, under such ominous conditions, the lesser of two evils. Far more hopeful is an encounter with erysipelas, even in a severe degree, than with that form of mischief in which the rigors, followed by profuse sweating, are at length succeeded by signs of mischief in the lungs or about the joints. It seems to me that erysipelas is distinguished from pyæmia in the proportion which the local bears to the general mischief. In erysipelas the local mischief is more intense; in pyæmia the general mischief is more profound. And although in the worst instances of both forms of disease both local and general mischief in the worst degree are wrought, in the lighter cases of these affections I think I often observe an inverse proportion between the two. When the action of the poison is more intense upon a part, there is, perhaps, a better chance for the system generally to escape.* So when a poison enters by a wound and expends itself directly by violent local action, the system generally is affected in a far less degree than if it passed directly into the blood. If poison have infected a wound, far, far better is violent inflammation, either in the form of erysipelas or otherwise, ending in suppuration about it or near it, or anywhere between it and the system at large, than rigors and rise of temperature and pulse, without any or with trivial signs of local disturbance. A resulting abscess under such circumstances may fairly be styled critical. Signs of irritation in the lymphatics, leading up to inflamed glands, are, for the same reason, full of promise of escape from the worst consequences: and, therefore, in view of the arrest or expenditure of the poison in local action as a favourable alternative to its circulation throughout the system, the ad-

* This, indeed, appears to me to be the cardinal point of distinction between septicæmia and pyæmia. They are not different kinds of disease, but rather different forms of the same affection, characterised by the relative degree in which changes in the blood itself and the local mischief consequent thereon are revealed. In the worst form of septicæmia, the blood is so poisoned and spoiled, that it kills outright before the local effects of this have time to develop and to pass through their several stages, or even to become fully manifest; whereas, in the milder forms of pyæmia, the mischief in the blood itself, being far less intense, escapes notice, does not, at least, so rapidly or directly destroy life, and is disclosed after death only by abscesses or other changes in various parts.

"As in experiment so in practice, the worst cases, those in which death is most rapid, reveal afterwards the least signs of local disease. Because in the very worst cases there has been no time for the local effects to supervene."

vent of erysipelas may be welcomed as an encouragement to the hope of escape from mischief which is far worse.

There can be no doubt, from clinical observation and actual experiment, that the blood may thus be poisoned by matter of various kinds. And although these various substances belong to the same class—being organic, are formed probably in the same way, are alike in their larger characters, and are capable, when they gain entrance into the blood, of exciting disease of the same nature, called blood-poisoning; yet these several substances possess, within their larger characters, certain individual peculiarities which are revealed in the extent and kind of changes they provoke; in the degree to which the blood itself is obviously affected; in the form of local mischief which ensues, even in some measure to the particular organs which are thus more prominently involved; and, lastly, though not least, in the proportion of the local mischief to the constitutional infection.

ON SICK-HEADACHE.

By P. W. LATHAM, M.D., F.R.C.P.,

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IN an article on Migraine, in the November number of the *Practitioner*, Dr. Anstie “desires to make at once the claim of independent observation,” as “more than one authority has lately put forward, as if it were a novelty, the doctrine, that sick-headache is essentially a neurosis.” He adds that, for several years back, he has recognised “the nervous origin of sick-headache,” and that it “is certainly a neuralgia, in the majority of cases affecting the first division of the fifth.”

I wish to make one or two remarks on these quotations, having lately put forward in this JOURNAL (March 23 and 30, 1872) certain views respecting the pathology and treatment of this disorder, based upon the supposition that it was a nervous disorder, but, in my opinion, certainly not what is usually termed a neuralgia.

Every one, I am sure, will concede to Dr. Anstie his “claim to independent observation;” but, in so doing, it must be allowed that he has been somewhat remiss in his historical research. The idea that migraine is a neuralgia originated, not within the last ten years, but nearly a century ago, when Tissot, in his *Traité des Nerfs et de leurs Maladies* (Paris, 1783, t. iii, part. ii, p. 121) localised the malady in the same part as Dr. Anstie now does—in the first division of the fifth nerve. Romberg (*Lehrbuch der Nervenkrankheiten des Menschen*) calls it Neuralgia Cerebralis; and says “We are not likely to confound this affection now-a-days with facial neuralgia as older authors, Wepfer and Tissot, have done.” (Romberg on *Diseases of the Nervous System*, translated by Dr. Sieveking, for the Sydenham Society. London: 1853. Vol. i, p. 177.) In referring to this, Hasse remarks “It might, with equal propriety, be regarded as having its seat in the ramifications of the trigeminus (Virchow’s *Handbuch der Speciellen Pathol. u. Therap.* 1855. B. 4, ab. i, p. 70), and adds that a satisfactory explanation is still wanting. Dr. Anstie’s meaning may perhaps be, that he is the first to *prove* that the disorder is certainly a neuralgia; this, I am inclined to think, has still to be accomplished. Lebert (*Handbuch der Praktischen Medicin. Vierte Aufl.* Tübingen. B. ii, s. 672); although he defines migraine as “a painful neuralgia probably in the ramus ophthalmicus,” yet, when discussing the diagnosis of neuralgia of the trigeminus says, “Migraine has a great resemblance to neuralgia of the ramus ophthalmicus, and may really be so; but the former causes much greater disturbance of the sensorium, it spreads much more generally over the head, and is not unfrequently accompanied with nausea and vomiting; after the attack there may be an intermission for weeks or months, and the attack itself runs a more uniform or continuous course” (*loc. cit.*, s. 699). These symptoms are not incompatible, however, with the disorder being, as I described it, an affection of the sympathetic ganglia. The theory which I advanced in my lecture (*loc. cit.*, p. 306) was this: if by fatigue, anxiety, or other depressing cause, the general tone of the body be lowered, and with it the regulating power of the cerebro-spinal over the sympathetic system impaired, then excitement of one or more portions of the latter takes place, causing contraction of the blood-vessels under the influence of the affected portions; this excitement is followed by exhaustion or paralysis of the sympathetic, and is associated (just as it would be after section of the nerve) with dilatation of the vessels, and—if the cervical portion of the sympathetic were affected—with headache. When this lecture was written, I was unaware that any author had previously given such a marked prominence to the sympathetic in the production of the series of symptoms. I have since seen two very important papers, though containing views diametrically opposed to each other, one published in

1860, by Du Bois Reymond (*Archiv. für Anatom. Physiol. u. Wissensch. Medicin.* 1860. S. 461), the other, in 1867, by Dr. Möllendorff (Virchow’s *Archiv.* B. xli, s. 385). I can, therefore, lay no claim to novelty in regarding migraine as an affection of the sympathetic. Dr. Edward Liveing, whose paper in the BRITISH MEDICAL JOURNAL (April 6, 1872) leads one to look with impatient hope for the early publication of his forthcoming work, though not denying “that disorders of local circulation occur in the course of megrim, and that the implication of the sympathetic may play an important part in their production, yet regards them among the least constant and regular of the phenomena, and certainly not as essential and as the cause of the rest.” Dr. Liveing regards the phenomena as those of “a nerve-storm traversing more or less of the sensory tract from the optic thalami to the ganglia of the vagus, or else radiating in the same tract from a focus in the neighbourhood of the quadrigeminal bodies.” These views, I trust, we shall soon be able to discuss, when Dr. Liveing’s treatise is published. He refers, however, in his paper, to Du Bois Reymond’s views, but only to dissent from them; and herein I agree with Dr. Liveing. Du Bois Reymond assumes that migraine is a “tetanic condition of the muscular fibres of the arteries in the affected side of the head, or a tetanus of the cervical portion of the sympathetic nerve of that side” (*loc. cit.* p. 464); that, *during* the headache, the arteries are in this tetanised condition, the pupil of the affected side dilated, and the temporal artery like a hard cord. Dr. Liveing says, “I carefully compared the temporal arteries in a well-marked hemicranial paroxysm, but could discover no such increased rigidity of the one on the painful side as Du Bois Reymond describes.” Du Bois Reymond himself saw a difficulty about his hypothesis, for he says, p. 465, “One symptom among those presented above, and which is never wanting in the description of migraine, certainly does not accord with our theory; namely, the reddening of the conjunctiva, which occurs during the attack. The reason of this, probably, may be that the muscular fibres of the vessels of the conjunctiva are either relaxed earlier, or began to contract sooner than those of the other affected vessels.” The tetanic state has, in fact, passed away with the commencement of the headache; the beat of the temporal artery, instead of being hard, is soft and full, its walls have lost their tonicity and are yielding, and this condition is also shown by the reddening of the conjunctiva.

That the stage of headache is accompanied by a fulness of the vessels, is shown very strikingly by Möllendorff’s investigations. Had I seen this author’s paper before my own was published, I should merely have brought forward my examples in support of his views, but, at the same time, I should have insisted more strongly than he does on the antecedent contraction of the arteries, and especially its relation to the disturbance of vision which, in many cases, precedes the headache. Möllendorff says (*loc. cit.*, p. 387), “If, during an attack of hemicrania, sufficient pressure be exerted on the common carotid of the painful side near the thyroid cartilage, as almost to stop pulsation in the temporal artery, the headache ceases as if by a charm, the eyes are joyfully opened, and the depressed and painful expression passes off. But, on discontinuing the pressure, the pain unfortunately returns with the first wave of the pulse. The first pulsations are, in fact, more painful than before; since, owing to the defective tonicity of the vessel, the fresh rush of blood causes greater vibration of its walls; the throbbing, however, soon becomes more uniform.

“If, on the other hand, before the pain has reached its climax, the carotid artery of the opposite side or the subclavian artery of the same side be compressed, the pain is then increased. The blood-stream in one direction being thus cut off, a greater volume of blood is driven towards the relaxed carotid, and, owing to the paralysed muscular tonicity, admitted into it. If, however, the pain have reached its climax, then compression of the carotid artery of the unaffected side alleviates somewhat the headache, by allowing a more rapid lateral flow of blood to the unaffected side, and so relieving the painful side. This experiment has been invariably successful with every person that I have had an opportunity of seeing, during an attack of hemicrania.

“That there is an increased arterial flow of blood, resulting from the enlargement of the vessels, is also strikingly shown by the ophthalmoscope. It is, however, difficult to prevail upon the patients, during the attack, to submit to this very painful investigation. I can, therefore, only furnish the following result of repeated observation on the same individual.

“The eyes were quite normal and darkly pigmented. During the intervals between the attacks, no difference was observable in the two eyes on examining them with the ophthalmoscope. The fundus appeared dark brownish-red; the optic papilla normal; the arteria and vena centralis retinae in each eye equal. During the attacks, the fundus of the affected eye was bright scarlet red; the optic papilla reddened and swollen; the arteria and vena centralis retinae broader—the latter

nodulated and very tortuous, and of much darker colour than usual. The other eye had its dark brownish-red background, and its arteria and vena centralis as usual. The arterial fluxion is consequently manifest, both by the direct dilatation of the central vessels, as well as more particularly by the change in the colour of the choroid; the dilated bright red arteries concealing the pigment, and the fundus, instead of having a dark red-brown colour, appears of a scarlet colour. The thick, nodulated, tortuous vena centralis retinae, at the same time, indicates that there is an impediment to the return of blood to the brain. Considerable injection of the conjunctival vessels is often observed extending to the circumference of the cornea. This, however, disappears as the attack passes off. The most distinct ophthalmoscopic appearances are seen in the most severe attacks."

Dr. Möllendorff also refers to the very copious secretion of limpid urine which takes place during the headache, and to the secretion of sticky unpalatable saliva; the former corresponding with what results after section of the splanchnic nerves, and the latter after section of the nerves belonging to the glands.

In my previous paper, I remarked that some of the symptoms seemed to indicate a relationship, though fortunately a distant one, between this disorder and epilepsy. The recent communication of M. Brown-Séquard to the Société de Biologie has an important bearing on this point. Some years ago, M. Brown-Séquard discovered that epilepsy could be developed in the guinea-pig in three or four weeks after section of the sciatic nerve near its origin, or, still more certainly, by forcible ablation of the nerve, and that then, by gently irritating a certain zone in the temporal region, fits could at any time be produced. But he found that section of the spinal cord immediately above the organ of the sciatic nerve does not give rise to epilepsy; and this led him to suspect that the symptoms were due, not to section of the fibres of the sciatic nerve proper, but to section of the fibres of the sympathetic united to the sciatic after its emergence from the spinal cord. "Division of the great sympathetic in the abdomen produces only transient effects—incipient symptoms, as it were, of epileptic attacks, but nothing positive or definite. On the other hand, section of the roots of the last dorsal and first lumbar nerves produces epileptic attacks, and it is known that these roots furnish sympathetic filaments to the sciatic nerves. From all this M. Brown-Séquard concludes that it is to the section of the sympathetic that we must essentially attribute the artificial production of epilepsy." (*Lancet*, Oct. 5, 1872, p. 502).

Would not these experiments of M. Brown-Séquard rather show that a series of morbid phenomena originating in section of the sympathetic alone might develop such symptoms as are associated with migraine? but, that for the production of epilepsy, there must be a series of morbid phenomena both in the sympathetic and in the cerebro-spinal system—structures must be operated upon containing the two kinds of fibres; and possibly this is the reason why, though the two disorders may be essentially different and distinct from each other, they have some symptoms in common.

ON THE MORBID EFFECTS OF ALCOHOL.

By W. H. DICKINSON, M.D. Cantab., F.R.C.P.,

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As the last number of the JOURNAL contains no further communications upon this subject, I would ask for the insertion of the few concluding remarks which appear to be required of me. As regards pot-house pathology, my opponents have in one respect answered each other—one suspecting that in the liquor trade and out of it the consumption of alcohol is about equal; another, that persons engaged in this commerce drink so much and so fast that their kidneys are saved by the intervention of the more rapid forms of alcoholic poisoning.

Referring to Dr. Roberts's last contribution in the JOURNAL, I may repeat that my views are not based upon the registrars' reports, but merely corroborated by them. These returns, for reasons I have shown, probably contain a larger substratum of fact with regard to renal than to hepatic disease, but are probably in all cases far removed from absolute truth. I am, indeed, surprised that Dr. Roberts, entertaining as he justly does a mean opinion of their accuracy, should appeal to them for support as often as he does.

As resulting from alcoholic drinks with any practical frequency, Dr. Roberts gives up all changes except granular degeneration; and I am glad to find that our accord has become so considerable. Alcohol has a part, as I have shown, in causing this change, which is none the less real because it has been exaggerated. It causes, also, a congestive or coarse textured enlargement of the organ, which, like other renal changes, is more often found after death than suspected during life.

The question, therefore, is, not whether alcohol ever causes renal disease, but how often, as compared with other causes. Dr. Roberts, after failing to find obvious and tangible causes for chronic albuminuria, is led often to refer it to excess in drink, though the excess has been by no means great. But reasoning by exclusion is in this instance especially liable to error. Climate, age, and hereditary predisposition tell. "The young disease that must subdue at length" is often renal. The fibrosis of age, possibly directed by atmospheric influences, appears in this latitude to run its course faster in the kidney than in other organs. Granular degeneration less often arises from causes which can be distinctly isolated than in double association with bodily decay and with the ever acting surroundings which scarcely suggest themselves as causes of disease. Hence we must not reckon too much on the absence of the more glaring causes of renal disorder, nor be hastily driven to assign it to slight alcoholic excess. As we cannot expect to expose the origin of this disease save in a minority of instances, the absence of a "definite causal antecedent" goes but a little way towards establishing its descent from alcohol.

Touching the effects of alcohol, as gathered from the morbid anatomy of traders in liquor, Dr. Roberts thinks that these persons display only the acute, not the chronic, results. He thinks that renal disease results especially from small long continued excess, while the persons in question display the results of great or drunken excess. Much caution, however, is necessary in ascribing renal disease to such excess as requires a considerable proportion of life to produce its operation, since it is difficult to say how much may be due to time and climate, which thus have room to intrude. Besides this, I think it is clear that the observations in question do not only or chiefly refer to drunken or rapidly poisonous excess: they display the results of many rates of drinking, and give scope and verge enough for all its consequences. Of these, the chronic are the more prominent. It is probable that, with those who follow liquorous pursuits, soaking prevails rather than revelry. They are business-like rather than festive; and, as a rule, poison themselves, not with celerity but with perseverance.

I have given the average age of the alcoholic traders as 36.8 years; of the contrasted persons following non-alcoholic pursuits, as 40.6. *Ceteris paribus*, we might expect a slightly greater proportion of the granular kidney in the class having the longer average of life; but the difference between them (under four years) is not such as to make comparison very unfair on the score of age. Some further particulars may be of interest. The traders in liquor died at ages varying from 16 to 73; the contrasted class at ages varying from 16 to 87. The following table shows how many of each class died in each decade.

Age at Death.	Alcoholic Traders. 146 cases.	Non-Alcoholic Traders. 149 cases.
From 16 to 20 ...	10	11
From 21 to 30 ...	37	39
From 31 to 40 ...	50	28
From 41 to 50 ...	31	32
From 51 to 60 ...	12	21
From 61 to 70 ...	5	13
From 71 to 80 ...	1	4
From 81 to 90 ...	0	1

The mortality from alcohol between the ages of 31 and 40 is striking, and it may be worth while to inquire into its causes. The following table gives the leading causes of death within this decade, as observed in the two classes.

Chief cause of Death at Ages from 31 to 40.

	Alcoholic. 50 cases.	Non-Alcoholic. 28 cases.
Accidents and sequelæ...	7	4
Delirium tremens ...	7	0
Disease of brain, including meningitis ...	2	3
Sanguineous apoplexy ...	2	0
Paraplegia, from fall ...	0	1
Phthisis ...	12	7
Pneumonia ...	2	1
Empyema ...	0	1
Bronchitis ...	1	1
Disease of heart ...	3	3
Aneurism ...	0	1
Disease of liver ...	3	0
Albuminuric disease of kidney ...	6	2
Other disease of kidneys (unexplained abscess) ...	1	0
Morbid growths ...	2	1
Cholera ...	1	0
Carbuncle ...	0	1
Disease of bone or joint ...	0	2
Anæmia, etc. ...	1	0

Thus the alcoholic mortality in the fourth decade is due to delirium tremens, phthisis, the sequelæ of accidents, diseases of the kidney and liver, and sanguineous apoplexy—a large admixture of disease in which chronic changes abound. Within this epoch the kidneys show a larger preponderance of disease than before or after—a preponderance which might be misleading unless taken in connection with other facts. In the series of alcoholic traders, more than half the deaths attributed directly to renal disease occurred within these ten years. In the contrasted series, the same period comprised only one-seventh of the deaths thus attributed. Thus granular degeneration, which is chiefly concerned in this question, was most fatal in the one series before 40, in the other series after 40. Like other chronic and degenerative changes in the same circumstances, the disease was hastened rather than originated. The extent to which it was originated is shown in the facts, that in the alcoholic series, including all ages, it was found in thirty-one instances; in the opposed series, in twenty-seven—not greatly more frequent in one than in the other.

It appears to me that we see under the influence in question not so much chronic disease anticipated by acute as chronic disease, hastened and accumulated within the limits of a shortened life. Cirrhosis, and the slow form of phthisis which is common in the circumstances, are not far removed in their time of development from the granular kidney, and must be equally classed as chronic diseases. Alcohol hurries the effects of age. Under its influence fibrosis and vascular changes arrive before their day; and in such anticipation the kidneys share.

In the amount of renal change accredited to presumably healthy persons, Dr. Roberts finds a source of error. The error, if it be so regarded, is on the part of Nature in not making structures so indispensable to wear better. As to the condition of the kidneys, the best evidence lies in the actual examination of the organs. As against the results of such observation, it is to no purpose that Dr. Roberts urges that he has not found albuminous urine during life as often as I have discovered granular surfaces after death. It would be strange if he had. To say that one man in seven has kidneys with granular surfaces is by no means to assert that as large a proportion of mankind shows the outward signs of renal disease. Early, slight, and even sometimes considerable degrees of renal fibrosis may be quite without obvious urinary change. The presence of albumen marks degree and extent. The absence of the symptoms of phthisis does not prove that there are no tubercles in the lungs; the absence of albumen from the urine does not prove the kidneys to be healthy. "The water itself was a good healthy water; but for the party that owned it, he might have more diseases than he knew." Thus to reckon clinical against pathological observations is to compare sums under different denominations, and to insure an erroneous result.

Dr. Roberts says that granular kidneys are not necessarily affected with the granular degeneration of Bright's disease. One thing about them at least is clear—granular and contracted kidneys are not healthy. The actual revelation of this condition, therefore, has its value as a sign of more or less disease of this organ when the prevalence of renal disease is in question. But I will go further than this, and say, as the result of patient and minute examination of the organs thus affected, that though scars, seams, partial and even general contractions, may result from other causes, yet that the vast majority of kidneys which are found after death to have shrunk cortices and granular surfaces, owe these alterations to fibroid encroachment—not necessarily extensive enough to cause symptoms, but essentially of the same character as is found in association with the well known clinical manifestations of the granular kidney.

The facts given by Mr. Taylor are valuable so far as they go, representing as they do his own experience. Those quoted by Dr. Mitchell Wilson, though dealing with total abstainers, upon which evidence is much to be desired, are not upon a trustworthy basis, resting, as I gather, solely upon the certificates of death, which are far from affording means for the "safe and scientific comparison" which Dr. Wilson seeks. It is to be regretted that the writer who stated that he was "cognisant of a long investigation" contrasting teetotallers and drunkards, should have made no more explicit allusion to it.

In disputation there is a danger which I have been heedful to avoid—namely, exaggeration of the opinions which have been called in question. I do not deny that alcohol may have an injurious effect upon the kidneys, though I do not allow the paramount place which has been assigned to it in this relation. These organs are not exempt from the fatty, fibrotic, and tubercular changes which result from "the sweet poison of misused wine". They also take under its influence a congestive or coarse enlargement, to which I have given due place. But we must not forget the overpowering action of senile, hereditary, and, above all, of climatic influences; nor, as regards the effect of poisons, the extraordinary influence of lead. Touching climate, we

have the testimony both of foreign and transplanted British physicians as to the great infrequency of renal disorders, excepting of the lardaceous kind, in Southern Europe, India, and the tropics. This refers both to natives and settlers, and certainly has no constant association with abstinence from alcoholic drink. As to lead, I have elsewhere shown that of workers in lead killed by disease or accident, at least one-half have granular degeneration—a proportion of renal disease which does not result from any amount or rate of alcoholic excess. With the painter or plumber, be he never so temperate, the kidneys fare worse than with the abuser of alcohol, abuse it how he may. These organs are swayed more powerfully by other agencies than the alcoholic. The alcoholic agency expends much of its force upon other organs and tissues—the nervous system, the stomach, the liver, and the seats of tubercle and atheroma.

Awaiting further facts so far as they may be required, I here leave the matter to the impartial arbitration of time.

REPORT OF FIFTY CASES OF ETHER ADMINISTRATION IN THE GENERAL INFIRMARY AT LEEDS.

By A. F. MCGILL, Resident Medical Officer.

ETHER has been used in the Leeds General Infirmary in all cases in which it has been necessary to produce anæsthesia since November 8th. This report refers to the first fifty cases, and extends over a period of three weeks, from November 8th to November 30th. In the first eleven cases, the ether was given on a small sponge, covered by a folded towel. This method was found to be inconvenient. In the other cases, a large conical hollow sponge, covered with waterproof jaconette, has been used. The drug employed is the best methylated sulphuric ether: about one ounce is placed in the sponge, which is held tightly over the face, so as to exclude air as much as possible.

Of the fifty cases, nineteen were children under fifteen years of age; thirty-one were adults above that age. The average time required to produce anæsthesia was, in children, one minute and a half; in adults, two and a third minutes. The quantity of ether required was, in children, an ounce and two-thirds; in adults, two ounces and one-third. The average time for which the anæsthesia was kept up was, in children, seven minutes; in adults, twelve minutes; the quantities used being two and a half ounces and four and a half ounces respectively. Vomiting occurred in thirteen cases; in six children, and in seven adults. The following cases exemplify the use of ether.

I. A woman aged 62 had ovariectomy performed by Mr. Wheelhouse. Three minutes after the commencement of administration, three ounces having been used, she was insensible, and the operation was commenced. Perfect anæsthesia was kept up for thirty-three minutes. She never vomited after the operation, and made a speedy recovery.

II. Mr. Jessop performed the operation of lumbar colotomy on a woman aged 25. Three ounces of ether produced complete anæsthesia in three minutes. The operation was one of extreme difficulty, owing to the small size of the colon, and lasted sixty minutes, eleven and a half ounces of ether being used. No vomiting occurred, and the patient recovered without a bad symptom.

III. A woman aged 50 came to the Infirmary with a dislocation of the humerus into the axilla. This could not be reduced, owing to the rigid condition of the muscles. She was placed under the influence of ether, and within two and a half minutes the muscles were relaxed and the dislocation reduced.

Cases like the above show that ether can be used with advantage in severe and long operations, and also when it is necessary to produce muscular relaxation.

The following are the chief ways in which the action of ether differs from that of chloroform.

1. The heart's action is stimulated and the pulse improved, there being no tendency towards that most dangerous of all symptoms, cardiac syncope.

2. The respiration is laboured, and the blood imperfectly aerated, as shown by its becoming dark, as though venous, in the arteries.

3. Vomiting is less frequent, and not so troublesome: in only one case out of the thirteen in which it occurred was it at all persistent.

4. Struggling during administration is of frequent occurrence.

5. Restlessness and noisiness after the operation, lasting for some hours, is not unfrequent.

6. Patients who have had both ether and chloroform, much prefer the latter.

In conclusion, I may add that the advantages and disadvantages of

ether and chloroform seem to be so nearly balanced, that the question as to which should be used appears to be one of safety only. If further experience prove that ether is the safer, then it should be adopted; but if this be not proved, then I should prefer chloroform, as being both cheaper and easier to administer.

DEATH FROM ANÆSTHETICS.

By J. T. CLOVER, Esq., F.R.C.S.

I BEG to be allowed space for a few remarks on Dr. Jones's paper on Anæsthetics, contained in the JOURNAL for November 23rd and 30th.

In the fatal case which came under his observation in St. George's Hospital, a Snow's inhaler was used; and, from the account of what happened, I think the patient might have inhaled more than five per cent. of the vapour of chloroform. But, assuming that Dr. Jones's calculation is correct, the case shows that five per cent. may produce cardiac syncope and death. The case may be quoted to show the importance of limiting the strength of the chloroform, but it does not prove that chloroform is so uncertain in its effects that, however much care be taken in its administration, death will inevitably take place in certain cases. The dose which I find amply sufficient in all cases is three minims and a quarter, equal to about $3\frac{3}{4}$ cubic inches of vapour, to one hundred inches of air. I believe that five per cent. would produce an alarming effect on the pulse of most persons in a few minutes.

Dr. Jones says that Dr. Snow first adopted the plan of giving chloroform from a bag, and that he discontinued its use, as being too troublesome. Dr. Snow describes his apparatus at page 80 of his work on *Anæsthetics*. "The most exact way in which it is practicable to exhibit chloroform to a patient about to undergo an operation, is to introduce a measured quantity into a bag or balloon of known size, then to fill it up by means of the bellows, and allow the patient to inhale from it; the expired air being prevented from returning into the balloon by one of the valves of the face-piece to which it is attached. I tried this plan in a few cases in 1849, with so much chloroform in the balloon as produced four per cent. of vapour in proportion to the air. The effects were extremely uniform, the patients becoming insensible in three or four minutes, according to the greater or less freedom of respiration, and the vapour was easily breathed, owing to its being so equally mixed with the air. I did not try, however, to introduce this plan into general use, as the balloon would sometimes have been in the way of the surgeon, and filling it with bellows would have occasioned a little trouble. It seemed necessary to sacrifice a little of absolute perfection to convenience, and I therefore continued the plan which I had already followed."

It is clear that he had not thought of a plan of keeping the balloon out of the way of the surgeon, nor of replenishing it when partially exhausted, and his balloon was probably made of a material which would not long retain the vapour of chloroform. Neither the gas-balloons of the toy-shops nor air-tight bags of Mackintosh cloth will answer the purpose, unless the inside be protected by a coating of gelatine or something of like nature.

Further on, at page 416, Dr. Snow says, after describing two deaths from amylene: "In future, it is my intention to administer it from a bag, putting in so much of the liquid as will make fifteen per cent. of the vapour when filled with air." It is evident, therefore, that he fully recognised and valued the accuracy ensured by using a bag; but he did not *adopt* this plan, because the instrument with which he experimented was unfit for practical purposes.

I trust that these remarks will prevent the just influence of Dr. Snow's name from being used in opposing a more general adoption of the method of giving chloroform which I believe to be the safest, as well as the most accurate.

CLINICAL MEMORANDA.

DISLOCATION OF THE PATELLA ON ITS EDGE.

IN the JOURNAL of December 21st, 1872, I notice an interesting note by Mr. Southam of Manchester, on the above-named accident, where the dislocation took the form of an internal presentation of the articular surface of the patella. I am not aware which form is the more uncommon, dislocation on the edge with the articular surface inwards, or outwards. But a case of the following nature may be of interest, and add to our knowledge.

Some two years ago, when first appointed assistant-surgeon to Charing Cross Hospital, I was sent for by the house-surgeon from the

dissecting-room to see what he thought a rare form of injury; and on examining the patient, who had just jumped out of a cart at the hospital door, and wrenched his knee by so doing, I found the patella so dislocated, that it stood on edge, and its articular surfaces looked directly *outwards*. The patient was a young man of about 19, very muscular. I had him placed under the influence of chloroform, and by a sudden joint movement of extreme extension, and internal twisting of the patella, I had the satisfaction of returning it to its proper position.

I mentioned the case to a very distinguished surgeon, who told me that he thought the accident a common one. But, from the fact of Mr. Southam bringing the case forward, I am induced to mention the one under my own care. I should be inclined to think both cases worthy of record.

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REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

SEQUEL TO A CASE OF HYDROA: PROBABLE SYPHILITIC NATURE OF THE "HYDROA" ERUPTION.

(Under the care of Mr. HUTCHINSON.)

THE case of Ellen W., aged 25, was published in the BRITISH MEDICAL JOURNAL, 1870, vol. ii, p. 86 (Case XII), as hydroa, with unsymmetrical iritis, sore-throat, and severe rheumatic pains. The iritis excited a suspicion of syphilis; but at that time "nothing was discovered in support of such a suspicion." On January 19th, 1872, she again came under Mr. Hutchinson's care for nocturnal headache and a tender painful swelling of the right side of her nose. There was also a history of some swelling of the head at an earlier date. The headaches had lasted three months; the swelling of the nose, nine months. These symptoms again aroused the suspicion of syphilis; and close questioning now elicited strong, although not conclusive, evidence of the disease. She stated that, about eighteen months before the "hydroa" rash came out, she had a discharge which at the time she thought was caught from her husband; there was no bubo. This occurred sixth months after marriage; and she was not aware of any sores, etc., about the genitals, at a subsequent time nearer to the date of the eruption. When last seen, she had not been pregnant. During her last stay in the hospital, she took five- and afterwards seven-grain doses of iodide of potassium thrice daily, with rapid and complete relief to her headache and periosteal swelling—a positive fact in favour of the syphilitic nature of these symptoms, which, in Mr. Hutchinson's opinion, outweighs the somewhat unsatisfactory history of the primary disease and the rather doubtful character of the secondary symptoms.

ST. MARY'S HOSPITAL.

EXTENSIVELY DISSEMINATED CANCER, AFFECTING NEARLY ALL THE INTERNAL ORGANS.

(Under the care of Dr. SIEVEKING.)

FOR the notes of this case we are indebted to Mr. Williams, Clinical Clerk.

M. F., married, aged 43, was admitted into Victoria Ward on October 4th. She complained of severe pains in the back and loins, shooting up the spine. The pain was more or less constant, but came on also in paroxysms, especially after movement and towards night. She was also suffering from partial hemiplegia, the right leg being the most paralysed. The patient had generally enjoyed good health until about six weeks before admission, when the pains in the back and weakness in the legs came on gradually, without any apparent cause, and grew steadily worse.

On examining her chest, the lower half of the left side was found to be absolutely dull both before and behind. Respiration was absent over this area; above this the dullness was less marked, and there was marked tubular breathing, but no *râles*. The heart's apex was in the normal position; the right side of the chest was also normal. The left side was somewhat flattened, especially at the upper part; it measured sixteen inches just above the mamma; the right side measured seventeen inches. The patient had a slight cough, but had had no pain in the chest; no

marked cachexia, no night sweats. The bowels were regular; the urine was free from albumen.

October 10th. The patient was not so well; the paraplegia was more marked; appetite bad; she had some thirst. The temperature varied between 99 and 100 deg. The pain in the back had been considerably relieved by blistering. During the last few days, protrusion of the left eyeball had been noticed.

October 22nd. The protrusion of the left eyeball was very marked; there was increased pain in that region. The urine had to be drawn off by a catheter.

October 27th. The patient had become very drowsy and stupid; her breathing was laboured. The urine to-day contained a considerable quantity of blood.

November 3rd. During the last few days the patient had become more and more comatose; the dyspnoea has increased. She died this morning.

Necropsy.—Cancerous nodules were found in the liver and kidneys. Two-thirds of the left lung were found converted into a solid mass of encephaloid cancer. There was a considerable amount of fluid in the left pleura. The bronchial glands were enormously enlarged; from those in the posterior mediastinum the cancer had spread through the intervertebral foramina into the spinal canal in the middle dorsal region, and pressed on the cord. The brain itself was healthy, but several masses of cancer were found growing from the calvaria; one of these, attached to the anterior part of the middle cerebral fossa on the left side, had entered the orbit by the side of the optic nerve and had caused the protrusion of the eye.

REMARKS.—This case presents several points of interest. The patient was admitted for spinal meningitis of a subacute character; it was then found that she had effusion in the left pleura. Dr. Sieveking remarked that the diagnosis lay between tubercle and cancer. There was nothing in the appearance of the patient or in the family history to indicate one more than the other; but, looking to the age of the patient, the somewhat rapid, though insidious, invasion of the disease, and the character of the pulmonary signs, he inclined to the belief that the disease was malignant. The rapid development of the cerebral symptoms confirmed this view; and at the necropsy, less than three months after the first symptoms were noticed, the lungs, liver, kidneys, brain, spinal cord, and lymphatic glands, were all found to be invaded by cancerous growths.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

SNELLEN'S METHOD OF TREATING ENTROPION.

(Reported by Mr. PRIESTLEY SMITH, House-Surgeon.)

IN a recent number of the BRITISH MEDICAL JOURNAL, is a notice of a case, exhibited by Dr. Williams at a meeting of the South Wales Branch, in which entropion had been cured by including a portion of skin in a ligature, and allowing the thread to find its way out by ulceration. A description of the somewhat different plan of treating such cases, which has been practised in this hospital for the last four years by Mr. Solomon, may perhaps be of use.

Suppose the case to be one of inversion of the lower lid. A piece of stout black silk is armed at each end with a curved needle. One of these needles is passed from above downwards through the skin of the lid in question, entering almost close to the lashes, and rather to one side of the middle of the tarsal margin, and emerging on the cheek at a point just below the bony edge of the orbit. The second needle is made to enter in like manner close to the lashes, and about a quarter of an inch from the first puncture, and to pass out at the same point as the first. By a little traction on the two ends of the thread, the inversion of the cartilage is reduced, and the cilia are removed from their contact with the globe. The ends of the thread are then firmly tied over a small bit of wash-leather placed between them, where they come through the skin. By this proceeding a small triangle is formed, the base parallel with the ciliary margin, and the apex on the cheek; and hence a ligature, thus applied, is called by Mr. Solomon a "triangular thread." It is allowed to remain undisturbed until a small cord of induration can be felt indicating its position. It is then divided at the upper part, and drawn out below. This has to be done usually on the third or the fourth day.

The object in view is to excite a limited amount of inflammatory induration in the fold of skin and subcutaneous tissue, which shall suffice to retain the cartilage in its natural position, and to withdraw the thread before suppuration has been induced.

In cases of entropion due to spasmodic action of the orbicularis muscle, and, in fact, in almost all cases which are not complicated by the cicatrices of burns, or other results of injury, this method gives ad-

mirable results. Moreover, the triangular thread may be used with advantage in certain cases of eversion of the lids.

In lippitudo, and in the partial ectropion, due to the relaxed condition of the orbicularis muscle which exists in old people, it will often effect a cure. In such cases, the needles are passed from above downwards through the palpebral conjunctiva, instead of through the skin, and brought out together as before. The distance from the edge of the lid at which they must be made to enter depends upon the amount of

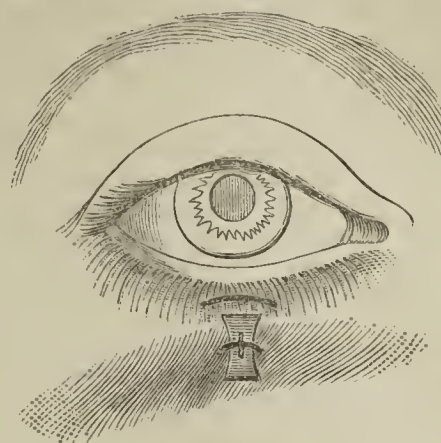


Fig. 1.

eversion, and the laxity of the conjunctiva. In some cases, in order to effect a cure, it is necessary to apply the thread twice to one lid, acting first on the inner half, and then upon the outer half, of the tarsal margin. Fig. 1 represents the triangular thread applied in a case of

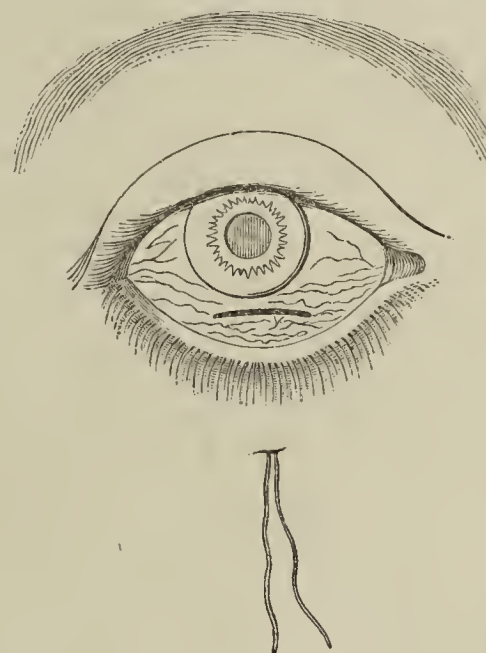


Fig. 2.

entropion, and fig. 2 shows its position before being drawn tight in a case of lippitudo.

This plan of treatment originated, I believe, with Dr. Snellen; and in his clinique at Utrecht, Mr. Solomon had an opportunity of observing its application and results. I have described it with Mr. Solomon's permission.

LEEDS INFIRMARY.

INJURY TO SPINE.

(Under the care of Dr. CLIFFORD ALLBUTT.)

THE notes of the following case seem to deserve brief record, as the accident and its consequences resembled those which are well known as "railway cases;" while, on the other hand, in the present case there was no question of compensation and no temptation to deceive.

A. B., a carpenter, was admitted under Dr. Clifford Allbutt's care in the spring of 1872. Thirteen weeks before, while laying some joists in a building, he fell through the floor to the ground below. He fell in part upon the head and shoulder, and "twisted his back." He was quite unable to rise, and when seen by a medical man after his removal, he was found to be completely paralysed in the legs. At this time there was also some tendency to retention of urine. The palsy became worse, the arms were gradually involved in it, and the daily use

of the catheter was required. In this state he obtained admission into the Leeds Infirmary. On admission, he was seen to be rather haggard and wasted from illness, but was probably a healthy man before the accident. His age was about thirty-five. It is unnecessary to enter every detail; and the chief points observed may be thus summed up. The legs were decidedly, but not extremely, wasted; they appeared to be no more wasted than long disuse might account for. When handled, the legs—the right one especially—presented a certain degree of rigidity of the extensors, as if there were some considerable voluntary resistance to the flexion of the limb. This resistance to flexion existed in a less degree in the left leg. The legs when at rest were straight, but the feet were pointed slightly inwards and downwards. There was absolutely no voluntary power in the legs, feet, or toes. The muscles showed deficient reaction to the faradic current, and slightly increased reaction to galvanism. Up to his admission, he had lain upon an ordinary mattress, and an excoriation about the size of a sixpenny-piece existed upon the sacrum. He was put upon a water-pillow, and this sore healed completely and at once. The catheter was at this time used twice daily, urine never being passed voluntarily or incontinently. The urine differed but little from the normal, being of ordinary specific gravity, and varying from faintly acid to a certain, not excessive, degree of alkalinity. The arms were not so completely paralysed as the legs, for he had some power of moving them, though not much useful power. The intercostal muscles were paralysed, and the breathing, therefore, was wholly abdominal. There was decided anæsthesia in the legs and lower abdomen, but this was not complete or nearly complete; in the arms and hands it amounted to little more than a complaint of numbness.

The man remained many weeks in the Infirmary, and had no medicine administered, save injections *per anum* and occasional purgatives, as there was a difficulty of defæcation, which seemed due to some palsy of the abdominal muscles. He slowly regained power, first in the arms and bladder, so that, after the first fortnight, the catheter was used no more. He became aware of the desire to micturate, and used the bed-vessel as he needed it. The legs, however, remained absolutely motionless for some time longer, save that reflex movements became more active. Gradually, however, he regained the power of moving first one leg, then the other, as he lay, and in this state he was discharged at his own request. A little faradism was used from time to time to prevent any great wasting of the muscles.

In commenting on the case, Dr. Allbutt said that it was difficult to decide between one or more lacerations of the cord with or without hæmorrhage, and softening and simple effusion into the sheath, with, perhaps, chronic meningitis. It seemed not unlikely that in the course of many months the patient would slowly regain the power of standing, or even of walking, on crutches. (There was no injury or tender point in the spine, save an indefinite tenderness between the shoulders.) He would draw attention, however, to the pointing of the toes and the rigidity of the knees; to the early recovery of power over the bladder, while the legs remained utterly paralysed; to the absence of bed-sore; and to the long abeyance of the intercostal muscles without danger to life. A case of railway injury came recently into court, in which these conditions were found, and in which they were absolutely relied upon by a well known London surgeon as proof of malingering.

ACUTE ASCENDING PARALYSIS.

Dr. Allbutt has forwarded to us short notes of the most rapid case of this terrible disease which has come under his notice. A lady, aged about 30, was staying at Halifax in the latter part of September, and, on the morning of her seizure, rose, feeling as well as usual. She also went to her breakfast and ate it as usual. About this time, however, she became aware of pain "across the shoulders," and this must have become severe, as she afterwards called it the "attack." It subsided before long; but, feeling faint and weak, she telegraphed to Mr. Loe of Leeds. On Mr. Loe's arrival, she had been lying down, and was said to be so much better that regret was expressed at the dispatch of the message. It was thought better, however, that she should accompany Mr. Loe back to Leeds in the early afternoon. On rising from the bed and walking with help downstairs, she seemed very weak in the legs, but this was put down to faintness. The difficulty of going from the cab to the train was still greater, and the idea of actual palsy occurred to Mr. Loe. On arriving at Leeds, the difficulty was very serious; and when she was placed on her couch at home and fully examined, the left arm was found to be very weak also. Dr. Allbutt met Mr. Loe in consultation early in the same evening. There was then no power whatever of moving the right leg, but the left leg could slowly be flexed and extended. A few hours before it had been the reverse, for then it was the left leg which was wholly palsied, and the right which was moved. The left arm was now completely palsied

down to the phalanges, and the right arm could only be moved with delay and labour. No squeeze could be given with the right hand. Anæsthesia was decidedly present in varying degree, advancing, on the whole, from the legs over the abdomen and into the arms, but it seemed to be inconstant in its distribution, and it was not easy to obtain definite answers.* Urine had not been passed since the morning, and the use of the catheter was ordered. The chest scarcely expanded at all, and the breathing was very rapid and mainly abdominal. The memory and intellect were perfectly clear, but she could not speak many words consecutively for lack of breath. At every fourth or fifth word she opened her mouth, swallowing at the air, as if even the auxiliary muscles of respiration were weakened. The temperature was normal. She had vomited twice or thrice during the day, but since morning had suffered no pain. As the patient had always been nervous and hysterical, and as the bowels had not been open for three days, it was determined to give a turpentine clyster, and to administer ether and valerian. The true character of the case could, however, scarcely be concealed, and the patient died shortly afterwards, fifteen hours at farthest from the first onset of her illness. The circulation continued for some little time after breathing had ceased. No necropsy was obtained.

REVIEWS AND NOTICES.

THE SURGERY OF THE OVARIES.†

THE almost simultaneous appearance of the works whose titles are given above brings before the medical world the actual state of knowledge and opinions in England, America, and Belgium, as to ovarian diseases admitting of surgical treatment. England and America are worthily represented by their most distinguished operators. Belgium, through M. GALLEZ, contributes a most valuable literary review and summary of the subject. Dr. CHAPMAN's book is almost exclusively devoted to a clinical illustration of uterine diseases, and can only be incidentally noticed in connection with elaborate treatises on diseases of the ovaries. And this preliminary observation must be made with reference to all the three other works—namely, that they deal, not with the diseases of the ovaries generally, but simply with those diseases which result in the formation of tumours, which may give rise to the question of treatment by surgical operation.

Tested by their contents, the works of Gallez and Peaslee are accurately described in their titles; that of Mr. WELLS is misleading. The last work, although so comprehensive in its title, in reality embraces no more than Dr. PEASLEE's, and hardly so much as that of Dr. Gallez. One objection we also feel it necessary to state to Dr. Gallez's title-page. It bears at the foot the date "1873." It came into our hands in November 1872; and, since this comparison of statement and fact shows that the title-page cannot be relied upon, it may possibly have been published in Belgium in October, or earlier still. We know that custom will be pleaded in explanation of this postdating; but we submit that the custom is bad and reprehensible, as tending to confound inquiry into questions of priority. To state that a book published in 1872 was published in 1873 is, in plain language, to state that which is untrue; and, howsoever venial and convenient this kind of untruth may appear to publishers, it must be regarded as a grave offence by men of science, who should prize rigorous accuracy before all things.

We think it useful to insist upon this point, in the interest of authors who are made to suffer by the falsification of dates. If there really be a contention between science and commerce as to the dating of a book, it is for authors to insist upon their rights, and not to be parties to a practice the only excuse for which is the fancied promotion of the sale of their works.

Of course, Dr. Gallez is in no way responsible for this little trade-trick. He states clearly in his preface the circumstances under which his book was produced. It received the prize of the Belgian Academy

* In the case reported by Harley and Clarke, no anæsthesia was present.

† Diseases of the Ovaries: their Diagnosis and Treatment. By T. Spencer Wells. London: J. and A. Churchill.

Ovarian Tumours: their Pathology, Diagnosis, and Treatment. By E. Randolph Peaslee, M.D., LL.D. New York: Appleton and Co. 1872.

Hysterology: a Treatise Descriptive and Clinical of the Diseases of the Uterus. By Ernest Chapman, M.A., M.D. New York: Wm. Wood and Co. 1872.

Histoire des Kystes de l'Ovaire, envisagés surtout au point de vue du Diagnostic et du Traitement, avec un Atlas de 24 planches. Par Louis Gallez, D.M., etc., Mémoire Couronné par l'Académie Royale de Médecine de Belgique. Bruxelles: Henri Manceaux. 1873.

offered for 1870. His preface is dated December 29th, 1869. Therefore, what the book contains must be taken to have been written before that date. Although bearing the date 1873, Dr. Gallez's book is really older than Mr. Wells's or Dr. Peaslee's by about two years.

It would carry us far beyond our space to review these three works with any approach to completeness. The most useful thing we can attempt is to present a comparative view of the conclusions arrived at upon some of the leading questions in ovariectomy.

The work of Dr. Gallez, as might be expected, treats more exhaustively the historical aspect of the subject. He discusses almost every point in the pathology and treatment of ovarian cysts historically, quoting the opinion of authors methodically, and giving in most instances an able appreciation of their value. In his account of the endogenous proliferation of the composite cysts, he gives, however, too much credit to recent authors, who have reproduced rather than extended or corrected the discoveries of the late Dr. Hodgkin, who, as Dr. Paget says, described the endogenous cysts "to the very life." Speaking of the genesis of multiple cysts, Gallez dismisses rather summarily the hypothesis that they are aberrant developments of Graafian vesicles. Quoting Ordoñez, he says, to establish this hypothesis it would be necessary to establish the presence of the ovule in the interior of the cyst in course of development. This, he declares, has, notwithstanding what Rokitansky may say, not been done. A book dated in 1873 might be expected to profit by one dated in 1872. Mr. Wells's book contains satisfactory testimony in confirmation of Rokitansky's observation. Wells cites in detail the clear description of Ritchie and Webb of specimens supplied by himself, and reproduces figures of ova found in cysts. But the hypothesis does not rest upon these direct observations of ova in the cysts; it is built upon the accurately traced histological characters of these cysts.

On the natural terminations of ovarian cysts Gallez is a little too brief. Dwelling rather fully upon spontaneous *rupture*, he does not distinguish *perforation* of the cyst. Yet this perforation Bristowe has shown to be very common, and Spiegelberg has also carefully described it; and the very precise descriptions of these eminent observers are not referred to. This perforation is described by Mr. Wells. The diagnosis is studied by all three authors. Gallez is too concise. Wells has worked it out with extreme care and precision. It would be difficult to find this important subject better discussed. Peaslee marshals the contrasting signs of ovarian disease and pregnancy, and the morbid conditions which may simulate ovarian tumours in parallel columns. This method, apparently so precise, has its advantages; but when we come to analyse the columns critically, we almost invariably find that the condensed propositions placed in opposition require to be again amplified by illustration and argument in order to avoid error, and to make them intelligible.

The history of the various methods of treating ovarian cysts is traced with minute detail by Gallez. It is worth tracing. Every method of treatment may be looked upon as a form of experiment calculated to bring out some feature in the constitution of ovarian disease. The amount of knowledge thus acquired could never have been deduced from ordinary clinical observation. In this way many methods now proved to be bad have, by their failure, been of the utmost value in elucidating the many-phased characters of these cysts, and thus in leading up to the more rational and successful treatment of the present day. Tapping by the abdomen and tapping by the vagina, simple or followed by drainage or the injection of irritating fluids, the excision of a portion of the cyst and maintaining a fistulous opening, and all the various surgical proceedings anxiously tried as means of averting what was long looked upon as the last desperate resort—extirpation—may be said to culminate in this great lesson: that the radical method of ovariectomy is really safer, as well as more thorough, than all the rest. The general conclusion that logically springs from the clinical records of the last twenty years, is simply to elevate extirpation into the first rank in the treatment of ovarian tumours. All other methods have sunk into comparative insignificance; some, at best, are resorted to as palliative, expectant, or diagnostic expedients. Although tapping and iodic injections may, in certain rare cases of simple ovarian or extra-ovarian cysts, suffice for cure, just as some cases are cured by spontaneous or accidental bursting, it may be accepted as a general law that, if a patient is to be cured of an ovarian tumour, it must be by gastrotomy and extirpation. Of course, there are cases—unfortunately many—for which this proceeding is either impracticable or unadvisable. And one of the greatest as well as most difficult questions to solve is, to discriminate between cases which admit of the operation and those which do not. One rule of great practical value has been much insisted upon by Hutchinson and Barnes. It is to avoid solid non-fluctuating tumours, or only to approach them with the utmost circumspection. The solid tumours will mostly include fibroid tumours of the uterus, many malignant tu-

mours with extension of disease to the neighbouring parts, and extensive pelvic and visceral adhesions.

As to the period in the course of the disease to select, we may adopt, with some modification, as a principle, the dictum of Nélaton. Extirpation is to be performed at the mean period of development. At the commencement it is too soon; towards the termination it is too late.

It would be hopeless to attempt an adequate discussion of the details of the operation. Different opinions are entertained upon almost every step. The greatest variety of ingenuity has perhaps been expended upon the treatment of the pedicle. Shall it be tied? And if tied, shall the stump be kept outside the peritoneum, or shall the ends of the ligature only be kept outside, or shall stump, ligature, and all be returned into the abdomen? Shall the stump be simply cauterised and returned into the abdomen? This plan has its advocates; and, could we feel secure against secondary hæmorrhage, it would probably be the best for general adoption. But there appears to be a general consent, amongst the most experienced and successful operators, that the introduction of the clamp by Hutchinson is one of the most important practical achievements in the history of the operation. This instrument, which is simply a modification of the carpenter's callipers, has been variously modified. It may, we think, be said, although we are not going to enter on the treacherous ground of statistics, that more successful work has been done with the aid of the clamp than with that of any other mode of dealing with the pedicle. The appreciation of the modes of dealing with the pedicle, like all other practical questions, is discussed with admirable clearness and judgment by Peaslee. The general conclusion arrived at by Wells may be accepted. Apply the clamp if the pedicle be long enough and other conditions be favourable. If the pedicle be too short and thick, apply the ligature or cautery. After all that may be urged on theoretical grounds in favour of cautery or ligature, on the intraperitoneal method, reasoning and experience concur in proving that the clamp, which keeps the dangerous part outside the body, avoids the risk of hæmorrhage, if not that of peritonitis also.

We advert to one practical point discussed in Peaslee's work and not referred to by Wells. It relates to the difficult question, how to deal with adhesions. "If," says Peaslee, "the cyst proves to be very intimately adherent to the intestines, the liver, spleen, uterus, bladder, or ureter, it should not be detached at all." And here comes the point. In cases where detachment was obviously impossible or too dangerous to attempt, the operation has commonly been given up, doing the best that seemed possible to secure external outlet for the contents of the cyst. But Atlee refused to be baffled by this difficulty. He sought to get behind it—to circumvent it. "The peritoneal covering should be separated from the fibrous layer of the cyst, and all the adherent portion left in contact with the viscus to which it is attached, as Dr. W. L. Atlee has practised for many years. In his 215th case, adhesions, seven or eight inches long, were thus left attached to the transverse colon."

Here we must bring our remarks to a close. It would require at least the space which each of the eminent authors has devoted to it, to give an adequate exposition of the many interesting questions involved in what must be looked upon as the grandest achievement of modern surgery. Both Wells's and Peaslee's works will be received with the respect due to the great reputation and skill of the authors. Both exist, not only as masters of their art, but as clear and graceful writers. In either work, the student and practitioner will find the fruits of rich experience, of earnest thought, and of steady well-balanced judgment. As England is proud of Wells, so America may well be proud of Peaslee, and the great world of science may be proud of both.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEWBERRY'S CHEST-PROTECTOR.

MESSRS. NEWBERRY and Sons, St. Paul's Churchyard, have brought under our notice an improved chest-protector. It is extremely well made, and has the special merit of being so cut as amply to cover the clavicles and apices of the lungs, which are commonly left unprotected by such devices. The elastics are so arranged as to keep it easily and comfortably in place.

SMITH'S VISITING LIST.

SMITH's *Visiting List and Physician's Pocket-Book* for 1873 is before us. It is one of the most convenient that could be devised, and well deserves its long established popularity. It greatly aids punctuality in keeping engagements, and simplifies to the utmost medical book-keeping.

LOCAL SECRETARIES will oblige by sending estimates of the number of new members, so that the proper number of JOURNALS may be ordered to be printed.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 4TH, 1873.

NURSING AS A PROFESSION.

"It cannot be too often nor too strongly urged, that the welfare of sick people depends more upon efficient nursing than upon all other remedial agencies combined. Physicians, medicine, and palatial buildings are useful; but a sensible, humane, and efficient nurse is indispensable." These straightforward, faithful words, quoted from the Report of the Medical Officer of the Homerton Fever Hospital, give honour to a vocation to which honour is due. It is only within the last few years that nurses of the type of Mrs. Gamp have ceased to be common, and that women have been to some extent educated as nurses on the sick. Almost all the hospitals now undertake to train young women as nurses, and a few take ladies as probationers at the small fee of one pound a week. But, though much has been done to increase the efficiency and raise the education of nurses, still more remains to do before nursing can be truly dignified with the title of a profession. It is still considered, although it requires no small amount of devotion and intelligence, a menial occupation, and one in which women of education cannot engage, unless out of principles of pure self-sacrificing charity. On the other hand, it has been thought that, while women have been knocking with persistence and elamour at the door of the medical profession, they have overlooked, in their eagerness, a branch of the healing art which is all their own, and where their advent would be warmly welcomed. Mr. Hinton, in a little pamphlet on *Nursing as a Profession*, has set forth, on this subject, views which are worthy of consideration both by ladies and by the medical profession. He argues that, in the same way as surgery has been raised from its former low status by a few intelligent surgeons to the rank of medicine, so nursing could, by a few earnest educated women, be elevated to a parallel position. But, granting that the necessary education can be obtained, and the highest duties fully performed, the whole question of position turns, he considers, upon that of remuneration. So long as nurses are poorly paid, nursing will remain a menial profession, and ladies will not enter it. But Mr. Hinton thinks that his ideal nurse could earn, and that her services would be worth, as much as three guineas a day; and that, by a few earning such an income, honour would be given to the whole corps, so that "ladies practising the profession of nursing should be on a social par with the members of the medical profession." We look with some interest for Mr. Hinton's ideal of a true nurse; and in this we are not disappointed, for it is a high one. "The nurse—a lady in all respects, whose very presence, therefore, is a source of cheerfulness and comfort, and soothes instead of irritating the brain—will have been trained to regulate all the constantly operating influences of air, temperature, light, etc., in the best way medical science knows how to direct. She will have the best skill in the final preparation and administration of food; will know every contrivance for securing sleep, and have a training and experience to enable her adopt the best method for each case. She will have her perceptions quick; her sensibilities acute, yet well under command; and will have learnt

well how to be truthful, open, and honest, with a restless and suspicious patient; to control and support a weak one; to recognise and calm the first commencement of morbid emotion or thought, and ward off, if it can be averted, threatened delirium; or to watch for, and develope into sanity again, the first gleam of returning reason." Her knowledge of anatomy, physiology, pathology, and the action of drugs, should be thorough, though not necessarily very minute or extensive. She should also understand the value and meaning of symptoms, the means of preventing contagion and infection. She should be able to record the variations of the pulse or thermometer, and know how to act in an emergency in the absence of the doctor. In one word, she should be a person on whose accurate observation the physician can rely, and in whose intelligent care the patient can rest. Indeed, with such a lieutenant, active, vigilant, and earnest, we think the physician's warfare against disease would be crowned with far greater success.

The benefit possibly accruing to the science of medicine from the observations of a highly educated class of nurses, such as we have described, is incalculable. Mr. Hinton speaks thus hopefully as to the possible results: "With persons ever at the bedside, skilled in observing with the utmost accuracy, and without disturbance to the patient, all those delicate variations which disease presents, medical knowledge itself might be expected to enter upon a new development. With the observing and recording power at hand, in the form of a body of skilled ladies, new subjects and methods of observation could hardly fail to develope themselves. The true nurse's part, indeed, would be one essentially of observation, and, apart from all the benefits it would confer upon the patient, would provide materials on which the future life of medicine might base itself."

Whether women are right or wrong in trying to gain an entrance into the medical profession as doctors and surgeons, is a matter of opinion; but that they would be right—unquestionably right—in raising the profession of nursing to its highest possible perfection, cannot admit of a doubt. This, then, is a question which the large and increasing number of educated women demanding honourable employment might take up with benefit to themselves and the public. On them it will greatly depend if nurses be allowed to remain half-educated; and, being such, that their services should be paid low and considered menial. On the other hand, the hospitals professing to train nurses must give a more thorough and systematic education. Not content with merely teaching them to dress a wound, put on a bandage, or to deliver a woman—arts which require but a small amount of imitative skill to attain unto—they must admit them to the lectures, to teach them the reason for and the value of what they do, so that in their sphere they be no automatic servants of, but rational fellow-workers with, the physician. We believe that in one hospital—St. Thomas's—owing to the exertions of the first of lady-nurses, Miss Nightingale, the nurses are systematically, and, as far as it goes, thoroughly trained. In others, the knowledge necessary before the granting of a certificate is of the most meagre and insufficient character. In one special hospital, a nurse receives a certificate of aptitude for her business after a month's training; and we have knowledge of a case of a certificated nurse from this hospital who manifested profound ignorance of her business, and who, by her carelessness and mismanagement, drove a puerperal patient into a state of mania. There can be no doubt, also, that much suffering is caused by uncertificated nurses, especially amongst the poor. Most physicians must have seen distressing instances of the coarseness and ignorance of such nurses. It is not to be supposed that ignorant persons can be prevented from nursing, be they so inclined; but, by supplying a large and sufficient staff of nurses, able, educated, and experienced, whose services can be well paid by those who have means, and paid by charity for those who have not, the untrained nurse will be forsaken for the trained, in the same way as the quack is forsaken for the doctor. A means of honourable employment would be opened for ladies, disease more surely grappled with, and the gain to doctors and patients alike great.

ACTION OF MERCURY ON THE LIVER.

THE valuable report of the Edinburgh Committee of the British Medical Association on the Action of Mercury on the Liver added very largely to our knowledge of the subject, without altogether settling a great many important questions concerning the therapeutics of the drug.

Few physicians who have had any practical experience of the use of mercurial purgatives in cases of so-called "biliousness", will deny that their immediate effect is decidedly beneficial, although many may be deterred from employing them by the belief that, once begun, they must be continued, and will ultimately prove highly injurious to the patient. The relief occasioned by a blue pill and a saline purgative is a matter of every-day observation; but the *modus operandi* of the mercury is a question on which much difference of opinion prevails, and any attempt to answer it must depend, to a considerable extent, on the view taken of the pathology of "biliousness". Do the dull, heavy, and languid feelings, the disinclination to exertion, mental or bodily, the irritable or peevish temper, the failing appetite, the muddy complexion, and dingy conjunctiva, which most persons know, alas! too well, owe their origin to catarrhal changes in the gastric and intestinal mucous membranes alone? or is popular pathology partly right in ascribing them to "bile in the blood" or a "sluggish liver"? For our part, we are inclined to hold the latter opinion, and to believe that not without reason are the disappearance from the eyes of the yellowish tinge which seems as if it only required to be somewhat deepened to become jaundice, and the coincident appearance of bile in the stools after a mercurial purgative, pointed to as proofs that too much bile in the blood is (partly at least) the cause of biliousness, since with its removal from the system the symptoms disappear. So long as it was supposed that bile was formed in the blood, and only separated from it by the liver, such a view as this might meet with ready acceptance; but how are we to reconcile it with the doctrine of most physiologists, that bile is not separated from the blood by the liver, but is formed within that organ itself? Fortunately, this is not difficult, for Schiff has shown that we have been latterly accustomed to take too narrow a view of the functions of the liver, and that it separates bile from the blood, or, as we may term it, excretes, as well as forms or secretes it. This he did by tying the ductus choledochus in dogs, and putting a cannula into the gall-bladder, so that he could collect the whole of the bile secreted by the liver. Immediately after the operation, the flow of bile was abundant, but in the course of half-an-hour it became greatly diminished, and remained so, never again reaching the amount at first observed. This curious result Schiff found to be due to the bile being all removed from the body by the cannula, instead of passing, as it normally does, into the duodenum, whence it is reabsorbed into the blood, and again excreted by the liver. In the first half hour after the fistula was made, the liver was excreting as well as forming bile, and so more flowed from it than in any subsequent period when it was only forming it.

Whenever Schiff introduced bile into the blood, either by injecting it directly into the veins, or putting it into the duodenum, stomach, or areolar tissue, the flow of bile from the liver was at once increased, but again diminished when the additional bile had been excreted. By another series of experiments, he also found that not only can a certain quantity of bile be present in the blood without producing jaundice, but that it probably is always present. We thus see that, normally, a great part of the bile goes round in a circle, from the liver into the duodenum, thence into the blood, so to the liver again, while another part is carried down by the contents of the intestine, and, after becoming more or less altered, passes out of the body with the fæces.

Let us now consider what the result will be if the quantity of bile circulating in this way should be increased. All observers are agreed that abundant food increases the secretion of bile; and we will suppose that

this has been done by continued good living and a succession of heavy dinners, such as most Englishmen are accustomed to indulge in at Christmas time. The stomach and intestines, in all probability, also become disordered, and it would be hard to say what part of the condition in which the patient then finds himself is to be assigned to them and what to the bile; but this we can readily see, that all the symptoms that an excess of bile in the blood can produce, short of jaundice, will be occasioned; nor can these be removed by any purgative medicine, which, like aloes, will merely act on the large intestine. The colon may be cleared of its contents, but the bile will go on undisturbed in its accustomed round. Very different, however, will be the result if a purgative be administered which will act on the duodenum, as we will assume mercury to do, more especially if it be combined with such an one as sulphate of magnesia, which will act on the rest of the bowels. The mercury stimulates the duodenum to peristaltic contraction, the bile is hurried rapidly downwards, the remainder of the intestine is likewise contracting vigorously, and in a short time all chance of reabsorption is gone, for the bile has been finally evacuated. All excess of bile has thus been got rid of, and, as far as it is concerned, the liver, duodenum, and other organs may now go on performing their functions in the normal way, until some fresh indiscretion on the part of the patient again causes a disturbance.

In the account we have just given of the action of a mercurial purgative, we have assumed that it acts on the duodenum. Now, this we cannot at present directly prove; but we have the indirect proof afforded by the fact, observed by Radziejewski, that leucine and tyrosine, which are products of pancreatic digestion, appear in the fæces after the administration of mercurials, as well as that yielded by the large evacuations of bile which calomel produces, and which, as Buchheim has shown, really give their characteristic green colour to the so-called "calomel stools". By thus causing elimination of bile, and lessening the amount circulating in the blood, calomel acts as a true cholagogue, in the sense in which the word was employed by those physicians who looked upon the liver merely as an excreting organ, although, as modern experimenters have proved, it may lessen the amount actually secreted; and this it may do in a double fashion, for not only does it diminish the quantity which has to be excreted by the liver in the manner already explained, but, as the Edinburgh Committee of the British Medical Association have shown, it likewise lessens the formation of bile. In their experiments, the diminished secretion which followed mercurial purgation could not be due to the prevention of reabsorption, for the whole of the bile was regularly removed from the body as quickly as it was secreted, and we are, therefore, obliged to attribute it to diminished formation. What the cause of this may be, we are not at present in a position confidently to state; but we know that fasting lessens the formation of bile, and if the food be hurried out of the intestine by a purgative before it has time to be absorbed, it might just as well not have been eaten at all.

We have now seen how an excess of bile may be present in the blood without the liver being either "sluggish" or torpid; and it seems to us that the difference of opinion which has hitherto prevailed regarding the action of mercurials is in great measure due to attention having been directed to the amount of bile poured out from the liver, instead of to what is of much more importance in reference to "biliousness"—viz., the quantity which remains in the blood after a dose of blue pill or calomel.

SHAM DIPLOMAS.

WHEN the Pennsylvania Legislature revoked the charters of certain diploma-selling institutions in Philadelphia, on the 20th of March last, there were perhaps some of the simple-minded who thought that the trade was destroyed, and that those who had plied it would be driven either to honest occupations, or to some other branch of pocket-picking,

but the *Philadelphia Medical Times* explains how it is that the trade is still carried on. Our contemporary says :

"One of these 'colleges' has indeed ceased to exist as such, and, with a sort of grim humour, an 'intelligence office' has been set up where its Dean used to carry on his nefarious traffic. The other, at 514, Pine Street, is in full blast, and an advertisement of it appears on the same page with that of the Hahnemann Medical College of Chicago, in Braithwaite's Advertising Department. Forty dollars is the sum demanded for a course of lectures in this seat of learning, which certainly seems cheap, as the homœopathic school charge eighty-five ; but perhaps, the quality of the article furnished being taken into the account, even forty dollars would be too much.

"We are also in receipt of a letter from Poitiers, in France, asking what is the value of the diplomas of this forty-dollar college, and saying, 'It is true that this university has had its charter revoked by the General Council of Pennsylvania, and it is yet able to deliver degrees and diplomas.'

"Another letter, now also before us, will explain how and why this business of selling diplomas can be carried on. It is dated Hong Kong, October 12, 1872, and reads as follows :

"*To the Secretary and Registrar, College of Surgeons and Medicine, Philadelphia.*—Sir, being an English qualified medical practitioner, I have the honour to request you will grant me an American diploma of medicine, in order that I may be enabled better to practise under the American flag. Satisfactory proof of my qualifications may be had, and the Oriental Bank will accept any draft at sight that may be necessary to draw to cover fee, expenses, etc.—I am, Sir, yours obediently,

"JAMES WILKINSON, M.D., F.R.C.S."

"So long as there are men who are willing to pay for diplomas irregularly obtained, there will always be men ready to furnish them. The above is only a sample of numerous similar applications we have seen. It is the demand which creates the supply ; all that is necessary is to print the certificates and to sign them, and then to arrange for their transfer, which is a matter of no difficulty.

"The only puzzle which remains is, how an institution, the charter of which has been revoked, can be maintained in full career, under the same name, and without any apparent change. Is a charter unnecessary? We believe the spleen has been occasionally removed from some of the lower animals, seemingly without harm ; and perhaps a charter, in the lower forms of medical colleges, can be in like manner dispensed with. We cannot very well ask 'Dr.' Joseph Sites, the Dean of the American University of Philadelphia, about this, but we wish he would tell us, if he knows."

RELAPSING fever has appeared again in London, and is on the increase.

MR. HENRY LEE will begin his course of Lettsomian Lectures on Urethral and Syphilitic Discharges on Monday next.

WE are informed that Mr. Holmes Coote, whose decease we last week recorded, had been removed to a private asylum ; and that friends were prepared to maintain him there, had his life been longer spared.

THE President and Council of the Harveian Society of London gave a *conversazione* in their rooms, Titchbourne Street, Edgware Road, on Thursday evening. The President delivered an address.

THE Board-room of the Middlesex Hospital, on Christmas-eve, was the scene of a brilliant tree-entertainment. There was almost a plethora of gifts, useful or amusing, for every inmate of the hospital.

THE new Hospital for Women, in Vienna, was opened on December 15, in the presence of the Statthalter of Lower Austria, the Burgo-master of Vienna, the Rector of the University, and other distinguished personages. Its medical officers are Dr. Beigel, who was, until lately, for some years resident in London ; Dr. Schlesinger, and Dr. Lott.

ON Friday, January 9th, Mr. Jeaffreson will commence a course of lectures on Diseases of the Eye at the Eye Infirmary, Newcastle-upon-Tyne. These lectures, which will be accompanied by demonstrations, will be continued on each Friday evening at 7 P.M. until further notice. Members of the profession and students will be admitted on presenting their cards.

WE have received the programme of the Christmas amusements devised for the inmates of the Sussex County Asylum, which are, as usual, on a very liberal scale.

A NEW HOSPITAL.

ON Christmas morning, Mr. James Shaw of Fenchurch Street, and the Moor Ironworks, Stockton-on-Tees, presented the handsome donation of £500, in aid of the funds now being collected to build a hospital suitable for the rapidly-increasing district of Stockton. In addition to this, £3,000 has already been collected. The movement is supported by Dr. Foss and Mr. Trotter of Stockton. The working-men have resolved to devote the whole of one day's pay to it.

A NEGLECTED TOWN.

THE epidemic of small-pox at Whitehaven has aroused those in power to a sense of their danger, but hardly to a sense of their neglected duties. A special meeting of the Whitehaven Town and Harbour Trust was called on December 15th, "to meet a deputation from the Infirmary, and generally consider the sanitary state of the town." The Rev. Mr. Lynass and Mr. William Wilson were deputed to lay before the meeting the following resolution of the Committee of the Whitehaven and West Cumberland Infirmary, held December 3rd, 1872.

"That this Committee, deeply impressed with the terrible epidemic now raging in the town, deem it a duty to take every step open to them to arrest its progress ; they therefore naturally apply to the authorities of the town, hoping that they will use their utmost efforts to obtain, what on all sides is declared to be absolutely necessary, increased accommodation for the housing of the inhabitants, especially of the poor."

Mr. Lynass drew the attention of the meeting to the overcrowding in Whitehaven. Though within the last few years there had been an increased number of sources of employment and a large addition to the population, the area of the town had not been extended. One cause of this, Mr. Lynass pointed out, was, the board, having deferred to carry out the article of the Health of Towns Act forbidding cellar-dwellings. The result of this disobedience to sanitary laws is seen in the degree in which every epidemic which visits the town is intensified, and in the present prolonged and severe epidemic of small-pox. Mr. Lynass expressed a hope that, by making this state of matters formally and publicly known, the public (meaning probably men of wealth and position, or men of sufficient earnestness) might combine to build suitable habitations for the working population. From the discussion that followed, it appears that Whitehaven, by means of Hospital and Infirmary and by medical efforts, has done all that is possible in curative means ; but that—in allowing the filthy state of the streets, the heaps of refuse lying for hours in the open air, and in permitting the open spaces of the town to be built upon, and the crowded unhealthy dwellings—it has not used the preventative measures in its power. The general opinion of the Board, however, was that, though they acknowledged and deplored the cause, they could only fold their hands resignedly and do nothing to remedy it. The land around Whitehaven was in private hands ; and, though private interests were opposed to the public weal, they could not do or recommend anything that would interfere with private interests. They, however, declared themselves assured that, if a proper representation were made by someone, ground might be obtained on which to extend the town, and on which to build cottages for the housing of the workmen employed at the ship-building yard, the new dock, the iron-works, and many other places ; but

Their's not to cleanse the sty ;

Their's not to aim so high ;

Their's but to see and sigh.

And thus these worthy citizens, who hold in their hands the sanitary welfare of Whitehaven, agreed that they could do nothing. They deeply regretted the inroads made by epidemics, they plainly saw and deplored the cause ; but, after hours of grave discussion, they could suggest no better means of stemming the evil than that of exhorting the clergymen to use persuasive means for inducing the poor people to practise more cleanly habits.

THE CHOLERA IN EUROPE.

THE cholera continues to make victims in Hungary. At Ofen, on December 20th, there were 32 cases under treatment. From the 20th to the 21st, there were 4 new cases in the garrison, which had already furnished 15. From the 20th to the 21st, at Pesth, there were 10 new cases, and there were 163 under treatment. From the onset of the epidemic, 914 cases had been reported, of which 367 were fatal, 386 cured, and 161 under treatment.

THE LICENSING ACT AND CHRISTMAS INTEMPERANCE.

TO the house-surgeons of a large town hospital, Christmas week is not much of a holiday. At Christmas time there is an inordinate desire for drink, and with intemperance accidents often go hand-in-hand. It is cheering, therefore, to hear that the Christmas week now past has, in the experience of many of the metropolitan house-surgeons, been less fruitful of intemperance and bodily injury than usual. Mr. Bruce has been much abused by the publicans. This, together with our present reports from metropolitan hospitals, is reassuring, and really speaks well for the future influence of the Licensing Act on the morality and health of the public.

REPEATED SMALL-POX.

The *Boston Medical and Surgical Journal* says that a woman recently died in Boston, of small-pox, who had only twelve weeks previously recovered from an attack of the same disease. In the first instance, she gave the disease to several others in the family; in the second, it took on the hæmorrhage form. Not many months ago a child, not over a year old, died in Boston, of a well authenticated second attack of small-pox. These cases show that recurrence depends upon individual susceptibility, and not on the length of the interval between the two exposures to contagion. In other words, it is not a "wearing out" of protection which causes the second attack.

THE DENTAL HOSPITAL OF LONDON.

WE understand that the scheme of removing the Dental Hospital of London to Leicester Square is being pushed forward. Three houses on the south side of the square, which would afford ample accommodation for the purposes of the hospital and dental school, are offered to the authorities, and it appears likely that they will close with the offer.

CANADIAN BUTTER.

MESSRS. E. KELLY and Co., proprietors of a butter dépôt, were on December 18th, summoned at the Liverpool Police-court, under the Adulteration Act, on the charge of selling adulterated butter as unadulterated. A pound of sevenpenny "Canadian" butter was bought of them by the inspector, and taken to Dr. Brown for analysis. After analysing it, Dr. Brown gave the following certificate: "This butter contains a quantity of stearin and palmitin; it is, therefore, largely adulterated by the admixture of fats containing these substances; the most common of which are lard, tallow, dripping, palm oil, and the fat from certain seeds. This adulteration is not necessarily injurious to health." After the necessary examination, Mr. Raffles, the magistrate, decided that, "if there was to be a conviction it must be under the second section, which must be read in the light of the third section, and he was convinced that Mr. Kelly did not know the butter was mixed with other substances. The summons would therefore be dismissed." A few weeks ago, a man named Smith was summoned for selling adulterated milk. Mrs. Smith said that "the milk was purchased by her husband from other persons, and if it was adulterated it was adulterated before it was sent to the dairy." Mr. Raffles then told Mrs. Smith that "an Act had been passed making any person who sold adulterated food, whether they knew it was adulterated or not, liable to a penalty of £20, and the person who caused it to be adulterated to a penalty not exceeding £50." We do not say that either decision is wrong; but, as both butter and milk are food, it is difficult to see why a milk-seller should be liable to a fine of £20 for selling adulterated milk in ignorance as to its quality, when a vendor of butter may sell adulterated but-

ter without subjecting himself to any penalty, so long as the prosecution fails "to prove an actual representation on the part of the defendant that the article was unadulterated, together with a guilty knowledge that it was fraudulently mixed."

THE CLINICAL SOCIETY.

THE Clinical Society was particularly unfortunate in Christmas week. The Council appear to have considered it desirable to hold a meeting during the week; but the social arrangements of this country not unnaturally resented their decision. On the 27th ult., Dr. A. P. Stewart, who occupied the chair, was supported by no larger number of members than eleven. Mr. Callender very properly proposed an adjournment, pointing out that it was scarcely fair to those who had papers to bring forward to be compelled to read them before such a thin meeting. Dr. Symes Thompson seconded the motion, which was carried unanimously.

PATHOLOGICAL SOCIETY OF LONDON.

THE Annual General Meeting of the Pathological Society will take place on Tuesday, January 7th, when the following list of officers and council will be proposed for election for the year 1873:—*President*: Sir W. Jenner, Bart., K.C.B., M.D., D.C.L., F.R.S. *Vice-Presidents*: W. H. Dickinson, M.D., R. Quain, M.D., F.R.S., J. Burdon Sanderson, M.D., F.R.S., J. Cooper Forster, J. Hilton, F.R.S., J. W. Hulke, F.R.S., Jonathan Hutchinson, John Wood, F.R.S. *Treasurer*: C. Murchison, M.D., F.R.S. *Honorary Secretaries*: W. Cayley, M.D., H. Arnott. *Council*: W. H. Broadbent, M.D., W. Cholmeley, M.D., W. S. Church, J. Langdon H. Down, M.D., A. B. Duffin, M.D., T. H. Green, M.D., J. Hughlings Jackson, M.D., C. R. Nicoll, M.D., F. W. Pavay, M.D., F.R.S., J. F. Payne, B.A., M.B., R. D. Powell, M.D., F. Robinson, M.D., W. M. Baker, W. Fairlie Clarke, M.A., H. J. H. Lawrence, F. Mason, A. B. R. Myers, H. Cooper Rose, M.D., Henry Smith, John Way, M.D.

MEDICAL FEES IN AUSTRIA.

AT a meeting of the Medical Association in Vienna, on December 18, a report, from a committee appointed to inquire into the subject of medical fees, was presented. Reference was made to the insufficient payment which medical men received for the performance of medico-legal and sanitary duties; this, however, was a matter which would have to be dealt with by the legislature. With regard to fees from private patients, the following conclusion was arrived at after an animated debate. Considering the change of circumstances, and the remarkable increase of price of all necessities of life, the society is of opinion that the fees at present paid to medical men are totally insufficient, and that they ought to be at least doubled.

THE USE OF SALT IN BREWING.

THE secretary of the Manchester Brewers' Central Association states that, from time immemorial, small quantities of common salt in brewing had been used alike by public and private brewers. The new Licensing Act prohibits its use by the former, classing it with such deleterious ingredients as "cocculus indicus," "strychnine," etc. In compliance with the law, the trade, as a rule, ceased to add salt, and in the majority of cases the public, although ignorant of the cause, complained strongly of the deterioration of the quality of the ales, and large quantities were returned to the brewers as unfit for use. Under these circumstances the Manchester Brewers' Central Association caused samples of the justly celebrated ales of Messrs. Bass and Allsopp to be analysed, and also the waters used by them in brewing. In each instance the best ales contained upwards of forty grains per gallon, and the waters respectively thirteen and ten grains; on the other hand, the Manchester water showed only two grains per gallon. In October last, a deputation from this association submitted these facts to the authorities at the Home-office, and so successfully, that the point was referred for the consideration of the Commissioners of Inland Revenue, who caused numerous samples of ales and water from the different localities to be analysed at the laboratory at Somerset House. As a result, a

letter from the Home Secretary, dated December 14th, has been received by Mr. Thomas Clowes, chairman of the association, authorising the use of salt to the extent of fifty grains a gallon, including the quantity contained in the water used.

A DANGEROUS MISTAKE.

OUR Liverpool correspondent writes:—An action of some interest to the profession was tried at the recent assizes. A highly respectable druggist was sued for damages by a hair-dresser, for supplying him with nitric instead of sulphurous acid, which, being applied in a spray to his throat, had burnt his lips and face, and so injured him as to render his life uninsurable. The defence was that, the defendant had been in the habit of supplying the plaintiff with nitric acid to use in his business, for bleaching hair, and a girl came to the shop with a dirty bottle, with an old illegible label upon it, and asked for threepenny worth of "acid" for her master. Naturally enough, the druggist supposed it was the usual order, and gave nitric acid, labelling the bottle with a poison label, and cautioning the girl to be careful as the liquid would burn her if she touched it. The defendant had expressed his regret, and sent the plaintiff a £5 note which he accepted, but subsequently brought this action. The jury gave a verdict for the defendant.

THE USE OF ETHER AS AN ANÆSTHETIC.

OUR Liverpool correspondent writes:—The use of ether as an anæsthetic appears to be gaining ground in Liverpool. Although we have been singularly fortunate here in avoiding accidents from chloroform, the profession have no doubt been strongly impressed by the statements published in the JOURNAL and elsewhere, and seem disposed to give the original anæsthetic a fair trial. We have lately seen ether administered in several operations, capital and minor, and in the lying-in room. In every case it has completely succeeded, its action being, in all respects, as satisfactory as that of chloroform, with the additional advantage of causing no tendency to sickness. The principal drawback appears to be the large quantity of ether required. In two cases nearly a pound of ether was used, but further experience may overcome this difficulty. Contrasting the effects of what is called Robinson's anæsthetic ether, a very expensive article, with dry anhydrous ether prepared from methylated spirit, at about half the price, no difference was perceptible. A practical difficulty in the administration of the liquid is to prevent the intense cold generated by evaporation; the sponge in the napkin becomes frozen hard in a very short time.

FIBRO-CYSTIC UTERINE TUMOURS.

OUR Paris correspondent writes:—At the last meeting of the Academy of Medicine at Paris, M. Demarquay discussed the advisability of gastrotomy in cases of fibro-cystic tumours of the uterus. In twenty operations he had had eight cures and twelve deaths; the mortality being greater than that caused by ablation of ovarian cysts. The cause of death in these cases was almost always due to hæmorrhage, peritonitis, phlebitis, etc. He went on to say that until 1862 the majority of operations of this kind were performed in consequence of errors of diagnosis; surgeons, believing they had to operate on ovarian cysts, unexpectedly found fibro-cystic tumours of the uterus, which the science of diagnosis had not then enabled them clearly to distinguish. Since 1862, surgeons, aware of this cause of error, have practised partial or total ablation of the uterus. An incomplete table of the results of this operation since 1866, includes forty-two cases of partial uterotomy, of which thirty-three died and nine were cured. The cause of death was generally hæmorrhage and peritonitis. Lately, more fortunate results of this operation have been published by Spencer Wells, Kœberlé, and Péan. In spite of these successes, M. Boinet rejects the operation and doubts the results obtained, and in this opinion M. Demarquay agrees. In fact, fibro-cystic tumours of the uterus can remain long stationary, ending even by becoming atrophied; in one word, they are compatible with life, which cannot be said for ovarian cysts. It is exceptional to see tumours develope to such a size as to endanger life. The ablation of an uterine tumour, whatever its size, is always a serious undertaking,

unless there be a long and narrow pedicle. Even in the case where the life of the patient is menaced, M. Demarquay agrees with M. Boinet in rejecting the operation, for the following reasons: 1. The uncertainty of being able to conclude the operation; 2. The chances of fatal hæmorrhage; 3. The length of the operation; 4. The serious consequences which ensue—nervous shock, consecutive peritonitis, secondary hæmorrhage, and death. Those cases of success obtained by various surgeons, amongst others by Kœberlé, Péan, etc., prove nothing. Conscientious statistics should be kept of a certain number of well attested facts.

DEATH FROM A SPONGE-TENT.

A PRACTITIONER of medicine in our neighbouring city, Covington (says the *Ohio Clinic*, December 14th), inserted a sponge-tent into the uterus of a young girl said to have been affected with obstructive dysmenorrhœa. The tent, it is stated, was permitted to remain *in situ* for forty-eight hours. Violent inflammation set in, which soon extended to involve the entire perinæum, and death ensued in a few days. A coroner's inquest was called, a *post mortem* examination held, and the results of general peritonitis and metritis verified. A suit for damages by malpractice was entered at once, but before the case came to trial the physician was arrested on a criminal charge and released on \$1000 bail. This is simply the newspaper account of a case which has produced considerable excitement in the city of its occurrence. We await the development of the trial for more reliable data.

A COMPLIMENT TO BRITISH DENTISTS.

THE authorities of Harvard University, United States, have requested Mr. Charles S. Tomes to deliver the annual address on February 16th, on the occasion of the conferring degrees in dental surgery at that University. Mr. C. Tomes has contributed numerous excellent papers on dental science, which promise for him a position likely soon to rival that of his distinguished father. Mr. Tomes has decided to accept the honour offered by Harvard University. The compliment paid to British dental science will, we are sure, be fully appreciated by dental surgeons in this country. Mr. Tomes has a difficult task before him. An address has been only once previously delivered on the conferring of dental degrees, and on that occasion by Dr. Oliver Wendell Holmes, the well known and talented author of *The Autocrat at the Breakfast-Table*.

LONDON INTERNATIONAL EXHIBITION, 1873.

THE second meeting of the Committee on Surgical Instruments and Appliances was held on December 23rd, at three o'clock, in the offices, Gore Lodge, South Kensington. Letters received from the Royal College of Surgeons and the Royal Medical and Chirurgical Society were read; and it was stated that many of the leading surgical instrument makers in London, Dublin, Paris, and other capitals, had signified their intention to contribute. It was suggested that the Exhibition should be brought before the notice of the British Medical Association at its meeting in August 1873. The Committee resolved to recommend the Royal Commissioners to invite corresponding members in foreign countries, and, after the transaction of general business, adjourned till Monday, January 20th, 1873. We believe that it is possible that arrangements will be made by the authorities to avail themselves of the services of the great body of leading provincial physicians and surgeons who are expected to attend the meeting of the Association in London, so as to bring the exhibition of surgical instruments under their notice at an evening *soirée*.

NEW ENTOZoon IN THE DOG.

IN the Eighth Annual Report of the Sanitary Commissioners of the Government of India, which has just arrived in this country, we notice with pleasure the large amount of space devoted to the consideration of parasites and parasitic diseases. The volume contains an important memoir on the Bladder-Worms found in Beef and Pork, and also a scarcely less valuable contribution on a *Hæmatozoon* inhabiting Human

Blood. In addition to these, and included in a special report on Microscopical and Physiological Researches into the Nature of the Agent or Agents producing Cholera, there is an interesting notice of a trematode entozoon which is said to be "not unfrequently met with in the bile-ducts of dogs" in India. Without a doubt, the parasite in question is the *Distoma conjunctum* which Dr. Cobbold first discovered in the liver of an American Red Fox which had died at the Zoological Society's Menagerie in 1858. Mr. Timothy R. Lewis, M.B., who appears to be the author of all these papers on the entozoa, has rightly conjectured that this would be the result of the investigation. An additional interest attaches itself to this discovery in the fact that hitherto the only fluke known to infest the dog was the somewhat aberrant form known as *Holostomum alatum*. Mr. Lewis's woodcut illustration of the fluke is excellent, and to our minds much more satisfactory than the micro-photographs which have been employed by him to illustrate his account of the bladder-worms. In this last named memoir, he alludes to an experiment by Professor Leuckart; but he seems to be unaware of the extent and character of the researches which have been successfully conducted by Dr. Cobbold and Professor Simonds in this country at the Royal Veterinary College.

GRATUITOUS MEDICAL RELIEF.

WE observe, according to an advertisement, that a meeting has been called for next Thursday, to which general practitioners alone are invited, for the purpose of considering the "depreciating effect on professional services arising from the action of the numerous gratuitous medical institutions", and "of devising what means of redress are in their power". The meeting is to be held in the London Tavern, Bishopsgate Street, and the chair will be taken at 7 P.M.

OBSTETRICAL SOCIETY OF LONDON.

THE following officers for 1873 were elected on Wednesday, January 1st:—*Honorary President*: Sir Charles Locock, Bart., M.D. *President*: E. J. Tilt, M.D. *Vice-Presidents*: John Clay (Birmingham); E. Copeman, M.D. (Norwich); H. Gervis, M.D.; H. M. Madge, M.D.; W. S. Playfair, M.D.; John Scott, F.R.C.S. *Treasurer*: G. C. P. Murray, M.D. *Honorary Secretaries*: J. J. Phillips, M.D.; J. H. Aveling, M.D. *Honorary Librarian*: A. Wiltshire, M.D. *Honorary Members of Council*: W. Tyler Smith, M.D.; H. Oldham, M.D.; R. Barnes, M.D.; J. Hall Davis, M.D.; Graily Hewitt, M.D.; J. Braxton Hicks, M.D., F.R.S. *Other Members of Council*: J. Watt Black, M.D.; J. M. Bright, M.D.; G. B. Brodie, M.D.; J. Brunton, M.D.; W. H. Day, M.D.; J. Duncan, M.B.; A. W. Edis, M.D.; J. Ellison, M.D. (Windsor); J. Fowler, M.R.C.S. (Wakefield); S. Day-Goss, M.D.; J. R. Kirkpatrick, M.B. (Dublin); D. Mackinder, M.D. (Gainsborough); W. Newman, M.D. (Stamford); J. B. Potter, M.D.; A. A. F. Rasch, M.D.; L. W. Sedgwick, M.D.; Heywood Smith, M.D.; H. W. Sharpin, F.R.C.S. (Bedford).

HOSPITAL SUNDAY.

COLLECTIONS have this year for the first time been made for the Stamford Infirmary in most of the places of religious worship within a radius of fifteen miles from the Infirmary. This movement has been in answer to an appeal from the Committee. More than £200 have been so collected, and the greater part on the one special day—the second Sunday in October.

TYPHOID FEVER AT MOSELEY.

THE alarming prevalence of typhoid fever in the district of Balsall Heath and Moseley, suburbs of Birmingham, has led to the holding of a public meeting of the inhabitants of Moseley. It was stated that there were nearly fifty cases of fever in the four hundred houses which are comprised in the district of Moseley, and that there were at least thirty cases in Balsall Heath, the district adjoining. Fresh cases were occurring every day. The sanitary precautions were characterised by a leading local surgeon to be as defective as they could be. There was no drainage worthy of name, and the cesspools and waterclosets caused

incalculable mischief. A member of the local sanitary authority was present, and defended the course of action taken by that body. Several speakers, however, expressed a total want of confidence in the local authority, whose officers were powerless to meet the requirements of the district, viz., efficient drainage. A resolution was adopted by a large majority, appointing a committee of residents to deal with the matter, and directing that a memorial be forwarded to the Secretary of State, praying for a special commission to inquire into the bad drainage of Moseley. A guarantee fund was subscribed, and a movement fairly set on foot to deal with the evil. On the 31st ult., a suitable memorial was sent to the Local Government Board.

THE HULL QUACKERY CASE.

LAST week, Henry Jackson, the quack doctor of Hull, who was charged with fraudulently obtaining £250 from a farmer by pretending to sell him medicines of great efficacy, was finally examined and committed for trial. It was shown by Mr. Walton that some medicine, for which £50 had been paid, was quite valueless. A portion of it, labelled "For the blood", consisted of water coloured with cochineal.

THE DOCTRINE OF SIGNATURES.

ACCORDING to M. Gubler's recent report to the Academy of Medicine in Paris, on the Chinese Materia Medica, the belief in the specific action of drugs seems to have strongly influenced medical practice in China, as it did but lately that of Europe. Besides, the Chinese believe, as the Europeans did in the middle ages, that the appearance of a substance will give a clue to the services it may render to man, i.e., the doctrine of signatures. Thus the luciole is recommended for affections of the visual organs; a madder (*Rubia mungista*), having a red root, is given for amenorrhoea; *Polygonum tinctorium*, which yields indigo, is reputed efficacious for eruptive fevers; the reniform fruit of the *Kadsura chinensis* is said to possess aphrodisiac properties; while ginseng with its bifurcated root resembling the legs of a man, is looked upon as restoring virile powers to the sick and aged. Considerations of the same kind are, doubtless, the foundation of the reputation of the *Cordiceps sinensis* as exciting the genital organs; that of the *Bidens parviflora* as infallible in making the nails grow; of the *Vitex incisa* in making the beard grow; and of the *Apocynum juvenis* as a rejuvenescent. These are strange illusions, but they merit indulgence from those whose ancestors administered the lungwort to cure phthisis, the gromwell to cure the gravel, and the carrot for the jaundice.

SUGGESTIO FALSI.

THE following advertisement appears in the daily papers, and our attention is drawn to it by a correspondent, who very reasonably suggests that the main sentence of the appeal is either a *suggestio falsi* or something worse. It is, of course, not at all true that all the London hospitals are not open and do not exist for the purpose of relieving fistula; and, if the Secretary labour under any delusion on the subject such as his advertisement seeks to propagate, a visit to any metropolitan general hospital will undeceive him.

"*St. Mark's Hospital for Fistula, etc., City Road, E.C.*—The Committee have lately made a considerable outlay in warming, lighting, and ventilating the hospital. This outlay, and the expenses of the current quarter, will leave a deficiency of upwards of £1,000; and the Committee most earnestly appeal to the public to supply this sum at once. *This hospital is the only one existing for the relief of a painful and distressing form of disease.* Contributions received by R. B. Martin, Esq., Banker, 68, Lombard Street; or by the Secretary, at the hospital."

Begging under false pretences is not favourably viewed by judicial minds, and the form of this advertisement ought certainly to be altered at once.

SCOTLAND.

DR. THORPE has been appointed Analyst to the City of Glasgow.

MEDICAL SCHOOL FOR DUNDEE.

THERE is some prospect that a long talked-of scheme—the removal of the Medical School of St. Andrew's University to Dundee—may be carried out. A large field for medical instruction is to be obtained in connexion with the Dundee Royal Infirmary; and a similar step, that of the University of Durham, which established a Medical School in Newcastle, has not been without success.

ROYAL INFIRMARY, DUNDEE.

IT has been proposed to return to an old arrangement at the Dundee Royal Infirmary, and to appoint a resident medical superintendent with a paid assistant under him. At a recent meeting of the Governors of the Infirmary, the motion was unanimously carried. It is proposed that the superintendent should have the entire charge of the patients, and that he should undertake the sanitary arrangements of the house. For these services he is to be boarded in the house, and to receive a salary of from £200 to £250 *per annum*.

LEGACIES TO THE EDINBURGH ROYAL INFIRMARY.

A LARGE number of very handsome legacies have been lately intimated to the managers of the Royal Infirmary: two of £4,000 each are from the late Miss Dickson of Hassendeanburn; the other from the late Mr. John G. Anderson of Viewfield, Trinity. The residue of the estate of the late Mr. Buchanan of Dura has been left to the Infirmary, and amounts to fully £13,000. The late Miss Amy Hamilton (London) has bequeathed to the institution the fourth part of the residue of her estate, estimated at about £700. The legacies paid to the Infirmary during the three months beginning 1st October last, when the accounts for the past financial year were closed, together with those intimated but still outstanding, now amount to the large sum of £26,397 8s. 10d.

THE LADY MEDICAL STUDENTS AND THE EDINBURGH ROYAL INFIRMARY.

THE desire of the contributors to the Royal Infirmary, Edinburgh, that female medical students should be admitted to instruction in the wards, is now being carried into effect. Regulations for the admission of female students to the wards have been drawn up and approved by the managers, and tickets of admission have been already issued to several lady-students, on which is printed the following special notice.

"*Conditions on which Tickets are issued.*—1. Clinical instruction to be given at a separate hour from that at which male students are admitted. 2. Female students to confine their clinical visits to a stated number of wards, containing not less than eighty beds.—P. BELL."

The medical instruction will be at present limited to the wards of those members of the staff who are willing to undertake the work; but the question of attendance on operations will not be settled until the new board of management be appointed.

EPIDEMIC SCAVENGERING.

THE municipal worthies of Edinburgh are displeased with the managers of the Royal Infirmary, because they refuse any more to do the epidemic scavengering of the city. Refuse to admit the enormous number of fever-stricken poor thrown on our hands! The thing is preposterous, and the funds of the Infirmary ought to suffer for it. Notwithstanding the preposterous character of the proposal to diminish the number of fever-beds from 150 to 36, and the desire of the Managers thus to make the Infirmary no longer a town's midden, to the great danger of the other inmates, we trust that the step is one which will be speedily carried out. It is high time that the custom, so prevalent in most of our large towns in Scotland, of utilising the wards and administration of our general hospitals for epidemics, and the other results of municipal negligence, mismanagement, and miserliness, should be put a stop to. The custom of receiving numerous infectious patients into a general hospital is most dangerous to the other inmates, and interferes in many ways with the utility of the institution. If the municipal authorities of a town like Edinburgh permit the existence of the filthiest habitations in the world before their eyes, the trouble and full expense of meeting the consequent epidemics should be thrown on them and on the

ratepayers who appointed them their public guardians. This is being everywhere recognised and acted up to; and it is very depressing to observe that the authorities of Edinburgh are so far behind in their knowledge on this point, and are not alive to their duties in affording the proper accommodation for meeting epidemics, for the appearance of which they are largely responsible.

SMALL-POX IN GLASGOW: HOSPITAL ACCOMMODATION.

AT a meeting of the Police Board on the 30th ult., Dr. Russell, the recently appointed Medical Officer of Health for Glasgow, brought forward his first report as to the sanitary condition of the city. The perspicuous language and the direct practical nature of this report seem to argue well for the future of this department under Dr. Russell's supervision. The first part of the report has reference to the small-pox epidemic; and it seems to be proved therein that, while small-pox has been, by the action of the authorities, almost stamped out in Glasgow, yet it has been always more or less prevalent in the suburban burghs, and now seems to tend to spread inwards from them; nearly all the cases, which have increased from twenty-six to forty-two during the last fortnight, being from the neighbourhood of the municipal boundaries. Considering this portion of the report, as well as the danger of infection involved in transporting small-pox cases through the city, the Board has resolved to receive no more cases from districts beyond the municipal boundaries. The local authorities in these various districts must, therefore, provide accommodation for themselves. It may be remarked, in passing, that this resolution of the Board may place the Royal Infirmary in a somewhat awkward position in reference to small-pox cases. It may be remembered that, about a year ago, the Infirmary directors resolved to admit no more cases of small-pox, but to send these to be treated by the hospital belonging to the city, and to pay for their treatment there. At the same time, there was some opposition to this resolution, and the readers of this JOURNAL may remember our comments on the subject. The Royal Infirmary, as a benevolent institution, stands in a rather peculiar position. With a few exceptions, every patient is admitted on a line from a subscriber to the institution; and the subscription thus entitles each subscriber to recommend a patient to the hospital. The patient in this way stands on a somewhat independent footing, his treatment being already paid for; and this all the more if the patient be a workman in some public work, and have regularly subscribed to the institution. In this view of it, the refusal of the directors to admit a certain class of cases assumes a somewhat serious aspect; and if now, as appears certain by the resolution of the Board, the Infirmary cannot get some of its patients treated in the municipal hospital, the seriousness of the position is much enhanced. Many subscribers reside outside the boundaries, and many public works are in a similar position; and, if the domestic servant of such a subscriber, or an artisan in such a work, should take small-pox, the lack of accommodation will be a very grave question. It will also be remarked that small-pox is exactly the disease, above all others, which the persons involved will be most anxious to have removed to the hospital. We know not how the Infirmary directors will solve the difficulty; but meanwhile, the resolution of the Board to treat no small-pox cases which have occurred outside the boundaries seems likely to lead to serious complications. The rest of Dr. Russell's report is chiefly taken up with pointing out how he has distinctly traced localised outbreaks of enteric fever to defective house-construction, chiefly in relation to the water-closets.

IRELAND.

THE "IRISH HOSPITAL GAZETTE."

THE first number of the *Irish Hospital Gazette* appears this week. The great Irish schools of medicine, surgery, and obstetrics, have for some time suffered from the want of any adequate representative of the kind, and this promises to fill the want. It contains some excellent hospital reports and lectures by leading physicians and surgeons; and well prepared reports of the Dublin societies. Its matter is exclusively scientific, and we have seldom seen a more interesting and promising first number.

REPORTS

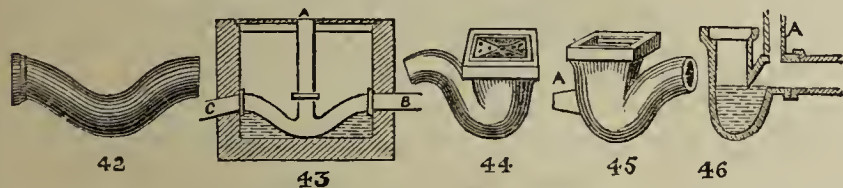
ON

SANITARY ENGINEERING IN HOUSES,
HOSPITALS, AND PUBLIC
INSTITUTIONS.

By WILLIAM EASSIE, C.E.

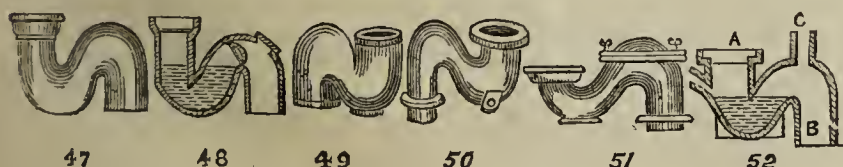
III.—TRAPS AND TRAPPING.

PERHAPS in the whole history of sanitary matters no article can be found which has more perplexed the British householder than the article known as a trap. Each inventor, vendor, and fitter-up, has lauded such and such a contrivance; and, believing that the artisan knew better than himself, the householder has patronised it, persevered in its use—nay, in some cases, even argued enthusiastically in its favour, although really ignorant of its exact working. Now, it may be taken for granted that more disease is traceable to injudicious draining than to aught else in the way of sanitary neglects. And first of all “in pride of place” amongst the many defaults of drainage, sits what we will term *imprudent trapping*. How can it be otherwise, when, as is mostly the case, the cesspool is unventilated, the sewer insufficiently so, the house portion of the drain boxed up, and there is no escape for the compressed gases, unless they bubble up through the water contained in the trap? The consequence of this is, that, independently of the suction which the house fires will exert under ordinary circumstances upon the drains, the germs of disease will find their way, with the offensive and other gases, into the very bed-rooms. Honestly speaking, traps are dangerous articles to deal with: they should be treated merely as auxiliaries to a good drainage system. If the house be disconnected from the sewer in any of the ways pointed out in my last article, a trap to all else than the closet *might* safely be dispensed with. Nevertheless it will be found very convenient to use traps in the sink, the lavatory basin, the bath overflow, and the kitchen waste, if only to prevent the rush of cold air. Some little effluvium may also escape from the portion of the drain on the house side of the disconnection, and other contingencies might arise, where a barrier of water, however slight, would be advisable. I will now indicate the various species of traps which are used in and around buildings, and point out their merits.



What is called a syphon for insertion in a line of drain-pipes is drawn at fig. 42; and this is relied upon to prevent the return of foul gases from a sewer or a cesspool. If properly laid and frequently flushed out, it will be found serviceable; but, if badly laid, or if it become clogged, it proves very troublesome, and even mischievous. It would be preferable to adopt in all cases the inlet syphon, shown at the lower portion of fig. 43. If the syphon were used just as drawn, with a brick wall surrounding it, the well-hole ventilated, and with an upright pipe rising from its inlet to the ground line, it would form the very best house-drain disconnector. No gas from the pipe (C) which leads to the sewer could enter the house by way of the house-drain (B), because it would be withdrawn by the ventilating pipe (A), which stands over the water-trap inside the syphon.

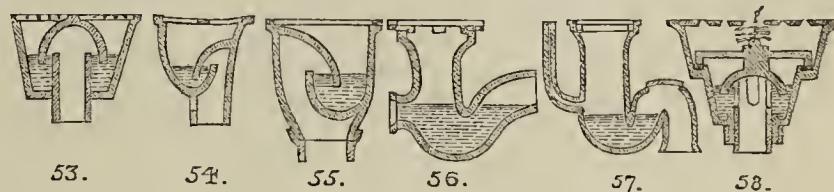
A sink-trap of pottery ware, on the close syphon principle, is represented at fig. 44, and is found extremely useful, provided the drains are disconnected from the sewer. In certain cases—as, for example, in a laundry—it should have an aperture at the back, in order to connect with a ventilating pipe, leading to the exterior of the house (see fig. 45). The drain would, however, be more effectually ventilated if the effluvium-pipe were fixed perpendicularly over the drain, as at fig. 46. In the former case the gas is waited for, until it has risen through the trapping water, and in the latter it is withdrawn beforehand.



Besides the common, the outlet, and the close syphons, just described, there are S-shaped ones, a few of which it will be necessary to illustrate. The common earthenware closet-syphons are drawn at figs. 47 and 49; the former being less compact in shape than the latter. An iron trap of the same construction is given at fig. 50; but, unless properly enamelled, this is not such a cleanly article as the glazed earthenware syphon. The above class of traps will work very satisfactorily, provided that the soil-pipe is efficiently ventilated. A refinement in the shape of an access, with cover situated at the highest point of the sigmoid, is exhibited at fig. 51. This pattern is intended for more effectually removing obstructions, and for the better cleansing of the trap. It is a desideratum, but it is one very difficult to obtain upon an earthen-ware syphon. On an iron one, as may be noticed at fig. 51, a good screw with proper packing would replace a light cover, which could not be screwed firmly down, and which would have to rely upon cement or other luting.

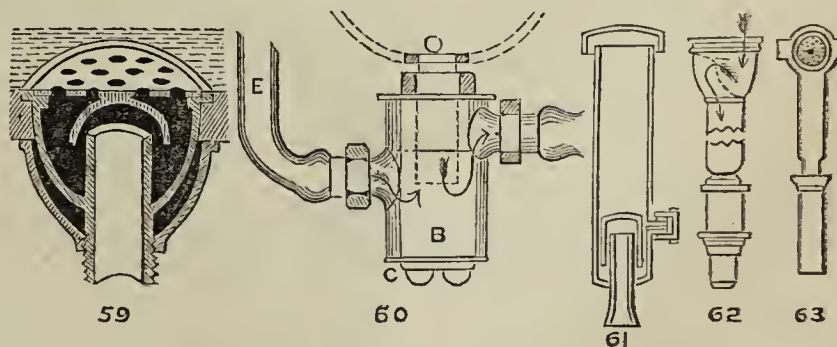
Fig. 52 represents Dr. Taylor's syphon-trap—that which is used in his closet-pan, and it embodies all the requirements of modern times. The pan of the closet, which is fitted into the socket (A), is ventilated by a pipe, which joins the ventilating pipe (C), and goes up to the roof. A two-inch supply-pipe from the cistern divides behind the closet-pan, and one moiety enters the pan above the opening (A), whilst the other enters the syphon-trap under the opening (A) through the inclined channel. These two streams of water act simultaneously when the water-valve is raised, and scour out both the pan and the trap beneath down the pipe (B) into the drain. Apart from the value of this improved syphon as a closet-fitting, its use as a large ventilated sink or other trap must be obvious.

The design, fig. 48, represents a sink syphon-trap, with a flap-trap, or rather valve, inside, by which it is intended to prevent the sewer-air from entering a building. If a partial vacuum arose in the sewer, the valve would open sewerwards and establish an equilibrium, but the sewer-air could not pass into the house, unless at the moment when the waste-water of the sink was rushing through the opened valve to the drain below. A proper ventilation of the sewer would render such a complicated arrangement quite useless.



Proceeding now to the kitchen or scullery sink-traps, I illustrate at fig. 53 the common house bell-trap, or, rather, the common domestic air-poisoner. If the majority of houses were inspected at a given hour in the day, the cover with the inverted cup—which when down forms the slight and only trapping—would be found to be taken up by the servants in order that the water should drain more quickly away and carry with it the multitudinous scraps of meat and other food-refuse; or, the cover would be removed because the trap-chamber was filled up with the accumulated grease, and would not work when it was down in its proper place. The result of this uncovering would be that the drain-gases would rise unobstructedly up through the pipe and disperse over the house. If the house-drain were in direct connection with the sewer, and the latter poorly ventilated, a lighted candle held over the uncovered pipe would be speedily blown out.

One remedy for this state of things would be the substitution of a trap like fig. 54, in which the diaphragm composing the trap is attached to the side of the trap-body. If this cover were lifted up, the trap



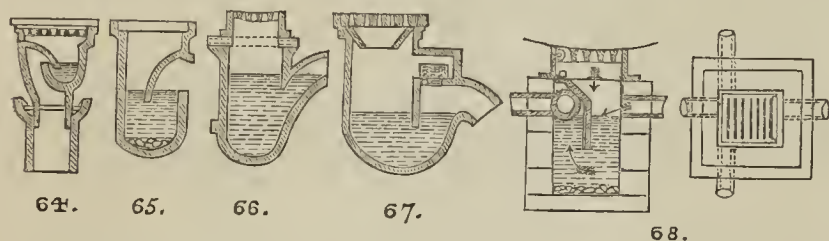
would still retain its hydraulic seal. An improved form of trap embodying this precaution, and known as the Antill trap, is given at fig. 55, and a cover which can be *locked* is placed above it. Another locking grate syphon-trap, known as Tye and Andrews's, is exhibited at fig.

56. This is more suitable for the sinks of some large establishment, and renders admirable service there. A ventilated syphon sink-trap, with a removable cover to afford inspection and admit of removing obstructions, is drawn at fig. 57.

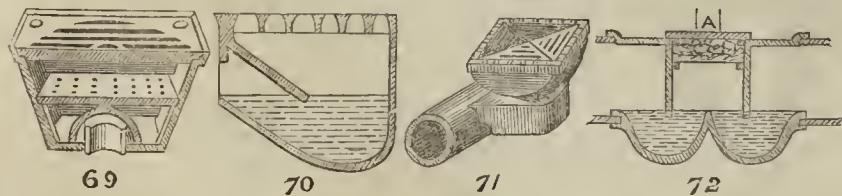
What I consider an uselessly complicated sink-trap is exhibited at fig. 58. Here there is a bell-trap at the bottom, and above that again a flange fits flatly on an India-rubber packing, the whole being pressed down from the top, when not in use, by a chain with a pin made to pass through its last link. But, if servants cannot be entrusted with a common bell-trap, of what service would be such a trap as this? The only traps suitable for kitchens and similar places are automatic ones, similar to those drawn at figs. 54 to 57.

Another class of bell-trap is drawn at fig. 59, and this is a sort which is screwed into the bottom of a bath in order to remove the wastewater. It will not be needful to describe this pattern, as the section sufficiently explains its action. Provided the cover were firmly screwed on, and the drains disconnected and ventilated, there would be little objection to its use; still, an Antill trap or a proper syphon in the waste-pipe itself would be preferable. The object drawn at fig. 60 is an article intercepting trap, and is indispensable in a butler's sink. The overflow-pipe of the sink or basin is depicted at E, and the waste-pipe to drain is shown opposite to it. Should a silver-spoon, for instance, pass down the plug-hole in the basin bottom, it would fall into the water-trap chamber (B), and be recoverable by turning the thumb-screw underneath.

Two traps for the overflow-pipes of a drinking-cistern are drawn at figs. 61 and 62. The former acts partly as a filter, and the latter is merely an adaptation of the Antill trap. They might prevent the influx of cold air into the cistern. No cistern overflow, even with traps affixed, should be soldered into a soil-pipe or waste-pipe of any description, but should be led downwards by a separate pipe and be made to deliver on the ground, or over the disconnecting trap-chamber of the drain, as drawn and explained in a preceding report. Fig. 63 exhibits Lovegrove's air-supply post for the drains, and I figure it here, because it will sometimes be found useful.

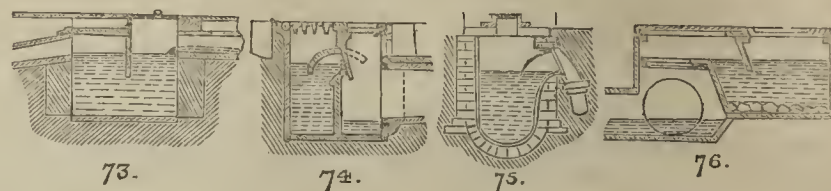


Passing from the interior to the exterior of a house or public building, we enter upon the necessary question of yard- and road-traps. A good trap for a back yard is the large sized Antill trap, drawn at fig. 64. A still larger one, suitable for a court-yard, and one which affords a resting-place for silt or gravel until these are removed, is shown at fig. 65. These two traps would merely have thin cast-iron or earthenware gratings, and would not be useful where there was much traffic. The road gully-trap (fig. 66), however, is made suitable for building in a paved or flagged roadway, and is sold with a strong dished-out iron grating of the depth of the road foundation. These three traps would ventilate the drain or sewer into the yard or road if the water in them were evaporated, as is sometimes the case in the summer time when the drain or sewer is otherwise unventilated. It might, happen, too, that the surface-water was drained into one common tank, for flushing or gardening purposes, and, if so, bad smells would struggle up to the ground-surface and disperse over the gratings. A cure in such a contingency would be afforded by placing a box of charcoal over the grated aperture in the shelf inside the dip-trap, as illustrated in fig. 67. An excellent kind of trap for the paths of hospital or other recreation grounds, and one that admits of cleaning, is given in plan and section at fig. 68. It may be seen in use at the Brompton Hospital.



A third form of the everlasting bell-trap, made with an overhead movable grating, and one which is used in stables, is exhibited at fig. 69. A ten-inch cast-iron Antill trap, with a wrought-iron perforated cover, would, however, be much better than either this or the special trap, No. 70. Traps of the Antill pattern may be seen at work at the

Brown Institution, London. Where the drainage of a stable runs in closed surface channels inside the stalls and loose boxes, specially constructed horse-pots are rendered necessary, or some such a contrivance as is shown at fig. 71. A stable-trap, with a disinfecting tray over a double syphon chamber, is drawn at fig. 72, and is highly efficient. If kept well flushed with water, the ammoniacal and other gases from the drains could never escape to taint the atmosphere of the stable or cow-house, but would be led off by the ventilating pipe (A).



There remains just a word to be said concerning an improper form of road-trap. Such an article, lately used in Edinburgh, is drawn at fig. 73. There is little or no ventilation, and too much evaporating surface.

Fig. 74 exhibits an improved road-trap, with a valve or flap inside, and with half its area (on plan) fitted up with a hinged access plate. A road gully-trap, on the reciprocal ventilating system mentioned in the letter-press to fig. 48, is given at fig. 75. The last trap I require to figure is the ball valve-trap, seen at fig. 76. The ball rises up and fits into the overhead circular opening every time the tide rises and fills the lower drain. In ordinary practice, an use for such a contrivance would rarely if ever arise.

The above may be said to represent, eclectically, all the more useful traps. I have examined and engraved elsewhere* some scores of others, but have chosen the foregoing as representative ones, and as likely to fulfil all ordinary requirements. The next paper will contain a list of rules relative to drainage, and to the ventilating of drains and kindred places, which I hope will prove useful.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE next meeting of this Branch will be held at the Midland Institute, Birmingham, on Thursday, January 9th, 1873.

T. H. BARTLEET, F.R.C.S. } *Honorary Secretaries.*
BALTHAZAR W. FOSTER, M.D. }

Birmingham, January 2nd, 1873.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: ORDINARY MEETING.

AN ordinary general meeting was held in the Music Hall Buildings, Aberdeen, on Wednesday, December 4th; Dr. HARVEY in the Chair. Present, fourteen members and two guests.

New Members.—The proposals for admission of ten new members were laid on the table for next meeting, which was fixed for the 8th of January.

Mr. Vincent Jackson's *Spring-eyed Needle* and Dr. Aveling's *Apparatus for Transfusion of Blood* were exhibited by Messrs. De Lessert and A. Ogston.

Sarcoma.—Dr. DYCE DAVIDSON read a case of tumour of the upper jaw (spindle and giant cells) growing from the infraorbital canal. It was removed by partial excision of the superior maxilla. Drawings, and sections exhibited under the microscope, illustrated Dr. Davidson's paper.

Lipoma.—Dr. WRIGHT narrated the case of a man from whose thigh he removed a myxomatous lipoma which had been attached there by a pedicle for many years. The tumour weighed twenty-four ounces.

Diet of Seamen.—Dr. VANS BEST read a paper on the diet of the seamen in various services of various countries, pointing out the hygienic causes contributing to scurvy, and suggesting means for improvements in the inspection and dieting of seamen.

Spontaneous Version or Evolution.—Dr. BARCLAY (Banff) communicated a case of spontaneous evolution during labour in a multipara, where the pains produced the version, the shoulder receding as the feet came down.

* *Healthy Houses.* Second edition. London: Simpkin and Co. 1872. Price One Shilling.

Fatal Varicella.—Dr. DYCE BROWN gave the history and appearances of an undoubted case of varicella, with slight hæmorrhagic tendency and large vesicles, which ended fatally.

REPORTS OF SOCIETIES.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, DECEMBER 13TH, 1872.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

Comparative Merits of Ether and Chloroform as Anæsthetics.—Dr. R. McDONNELL, who had moved the postponement of the discussion on Dr. Morgan's paper at the last meeting, referred to the use of anæsthetics in America. In Boston, ether was exclusively used. At the Massachusetts General Hospital, ether was given with the most absolute freedom, confidence, and apparent recklessness: in fact, when patients were brought to the hospital after accidents, the porter was in the habit of etherising them even before they were seen by the house-surgeon. In New York, much diversity of opinion existed as to the relative merits of ether and chloroform. Dr. Marion Sims preferred nitrous oxide to either of these agents. In Philadelphia, both ether and chloroform were used—the former in cases of debility and prostration, thus showing that its stimulant effects were recognised and appreciated. Dr. McDonnell regarded Dr. Morgan's proposal to administer ether vapour without any admixture of air, as most original and very important. In the choice of any anæsthetic, four indications should be as far as possible fulfilled—the safety of the patient, the facility of respiration permitted by the agent employed, avoidance of hysterical symptoms, and rapidity of action. From observations made on himself, he considered chloroform to be more respirable than ether. In conclusion, he recommended that the Society should undertake the compilation of accurate statistics for a period of one year—these to form a basis for a trustworthy solution of the question under discussion.—Mr. H. WILSON had been giving ether four months, and exclusively. It produced under his observation perfect muscular relaxation, but in adults a large quantity was required to effect this end. He believed that idiosyncrasy sometimes rendered the production of insensibility a very difficult matter. It was necessary that ether should be administered while the patient was fasting, as nausea otherwise almost invariably occurred, and it was generally greater than after chloroform; excitement was also greater. The time in which insensibility was effected varied from one to twelve or fifteen minutes. Children came rapidly under its influence. Patients gave contrary opinions as to the agreeableness of ether, and the persistence of its odour was a drawback. He had used it in about forty cases, and always gave it on a sponge wrapped up in a towel.—Dr. JACOB had perfect confidence in Dr. Morgan's inhaler, which obviated nearly, if not quite, all the drawbacks attending the use of ether. Before Dr. Morgan brought forward the present question, he (Dr. Jacob) had altogether discarded the employment of anæsthetics in ophthalmic surgery. Now, however, he was in the habit of using ether repeatedly—since July 17th, in thirty-seven operations on the eye. He had found that the quantity required was always small, that nausea only once occurred, that there was no excitement, and that ether was a most safe anæsthetic. He recalled the statistics of Dr. Richardson (of London) on the subject.—Dr. KIDD said that a very important question arose as to the relative mortality from ether and chloroform. He would regard statistics with much suspicion. A death from ether had occurred in Edinburgh shortly after anæsthetics had first attracted attention there. Deaths had also been reported from America. Chloroform had been given in Dublin for twenty-five years, and four or five deaths had been attributed to its use during that time. Of these, one was certainly due to the entrance of air into the veins, and not to the effects of the anæsthetic itself. Sir James Simpson had had but one fatal case from chloroform. He thought that Dr. McDonnell's proposal that anæsthetic cases should be tabulated, was a most useful one. Even Dr. Morgan's inhaler did not avert nausea. With respect to the relative mortality in England and Ireland after ovariotomy, alluded to in Dr. Morgan's paper, he considered that the difference arose not from the anæsthetic used. Mr. Spencer Wells had had no greater success in Ireland than fell to the lot of home surgeons, and the causes of the difference were still obscure. He called attention to the danger of being carried away by impulse in a discussion like the present.—Dr. ATT-HILL brought forward an instance in which he had administered different anæsthetics to the same patient, at intervals of about three weeks. He began with chloroform; there was nausea. He next used ether; the patient was sick, but in a less degree. Lastly, at the suggestion of Mr. B. W. Richardson of Dublin, he used a mixture of equal parts of

chloroform and rectified spirit, after Dr. Snow; there was no nausea, and the patient much preferred the last mentioned fluid. His own opinion was, that neither chloroform nor ether was absolutely safe.—Dr. B. F. McDOWELL bore evidence in favour of ether. He alluded to certain French experiments with chloroform on dogs, death being caused by the introduction into the veins of a very small quantity of that substance. Out of nearly a hundred cases of etherisation, he had observed nausea to follow on only one occasion. Anæsthesia was always produced in less than eight minutes, and he had seen its influence kept up for forty-five minutes with complete safety.—Dr. MACNAMARA would claim for Dr. Morgan the priority of bringing forward the subject. As a general rule, he objected to statistics; for there was sometimes a tendency to a partisan spirit in their compilation. He considered that idiosyncrasy was sometimes the cause of death, and not chloroform. In his own practice, one death, perhaps of this kind, had occurred under the influence of chloroform. Excitement was often great in etherisation. It should be remembered that such a thing as death from shock had existed before the introduction of anæsthetics. He believed that meteorological conditions should be taken into account in compiling statistics of chloroform-deaths; for, so far as he had observed, they were more numerous in summer, when the warmer air had a greater capacity for chloroform-vapour; and so a larger dose would unintentionally be given. As yet, we possessed no perfectly safe anæsthetic.—Dr. H. KENNEDY agreed with the final observation of the last speaker. To him the state of the patient seemed a matter of more importance than the nature of the anæsthetic employed. The condition of fatty heart was often productive of the worst results after the use of chloroform; and it was difficult to determine the state of the right heart from the character of the radial pulse. It was a question worthy of being pondered, whether oxygen should not be at hand as a means of resuscitating a patient apparently dead from chloroform. In such cases, the blood was universally dark-coloured.—Dr. GRIMSHAW had been much struck with the sphygmographic tracings appended to Dr. Morgan's pamphlet. They showed remarkably the beneficial action of ether on the pulse. Again, the blood was not altered in colour by ether, which contained oxygen, while chloroform did not. He could not but regard therapeutical statistics, such as were usually collected, as utterly valueless.—Dr. DARBY more than twenty years ago had said that all the pain prevented by the use of anæsthetics would not condone for one death produced by them. He still held this view, and so avoided the employment of such dangerous weapons.—Mr. FLEMING suggested that a representative Committee, composed of surgeons attached to the various hospitals, should be formed, for the purpose of collecting and tabulating cases of death from ether and from chloroform; said Committee to hand in a report to the Society. He referred to the beautiful effects of chloroform when administered to the young. In his practice, he was thankful to say, no death from it had occurred. In strangulated hernia accompanied with great depression, it also acted well; and its uses in chest-affections were well known.—Dr. STOKES, in reference to Mr. Fleming's concluding statement, detailed a case of agonising cardiac asthma in which the attacks used to recur six or eight times in the twenty-four hours. Copious inhalations of chloroform-vapour were followed by much relief. For four or five weeks, during which the case went on, the patient may be said to have lived on chloroform. After death, the heart was found in a state of extreme fatty degeneration, the right side being especially disorganised. Complete anæsthesia, however, had never been produced.—Mr. RICHARDSON was accustomed to use a mixture of chloroform and spirits of wine, with excellent results. Recently, no fewer than five fatal cases from ether had been recorded. Vomiting often followed the use of this drug.—Mr. F. T. PORTER called in question the applicability of the experiments described by Dr. McDowell. Surely, if atmospheric air were injected into the veins, it too would cause death; and yet it could scarcely be called a poison.—Mr. TUFNELL asked Dr. Morgan if the inhaler was necessary in etherisation, and if the administration of the inflammable vapour of ether was safe at night.—Dr. MORGAN answered both of Mr. Tufnell's questions in the affirmative. The risk of conflagration was overcome by the use of the inhaler, which also ensured success by the shutting out of air. He proceeded to give an able reply to the various speakers, and expressed himself much pleased with Dr. McDonnell's and Mr. Fleming's proposal respecting a Committee of inquiry.—It was then resolved that Mr. Fleming, Dr. Morgan, Dr. McDonnell, Dr. Jacob, and Dr. Macnamara, should constitute a Committee for the purpose of making such preliminary arrangements as might be necessary for the carrying out of the proposed plan.

ROYAL COLLEGE OF SURGEONS OF IRELAND.—At a special examination held on December 18th, Mr. Thomas McClure was admitted a Fellow of the College.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

APPOINTMENTS.

AT a recent meeting of the Carnarvon Board of Guardians, Mr. Richard Williams and Dr. Arthur Jones were elected medical officer for the Llanrwg District and medical officer for the workhouse, these offices having been left vacant by the death of Dr. Maugham. In the course of the discussion previous to the election, the salary of the medical officer was mentioned. This salary, which is £60 *per annum*, was declared to be "very high", and it was proposed "to at once reduce it".

THE PUBLIC HEALTH ACT.

SIR,—In continuation of the extracts from letters forwarded me in reference to the appointment of Poor-law medical officers as sole health-officers, I beg to submit to you for publication the following copy of a letter received by me on Christmas-eve from a very intelligent district medical officer resident in a large but distant town on the west coast. He writes as follows.

1. "I feel I should like to be at hand to aid you in the Barnes controversy, because I feel that it is an attempt, on the part of a small body, to set aside the deliberately expressed views of the entire Association. Your correspondent (No. 4) is quite right, I am perfectly certain, that, in rural districts, not one medical officer in a hundred will dare to lift up his voice against the great men of the locality. It is all very fine talking clap-trap about public duty; but why should a man offer himself and his family upon the altar of public duty, when that will be recognised by a grateful country to the extent of five or ten pounds a year? There is no *kudos* thrown in to make weight. In everything that Government asks medical men to do, the same element of nominal payment is introduced; and doctors are unwise enough (in an age when everything has a money value) to be entrapped in a sentiment. I do not deny that the district officers are good men for the post—in fact, the best; but they cannot afford to do their best, unless their pay is on such a liberal scale as to make them independent of the local magnates; and, as it would be contrary to all our experience that they should be so paid, then the only thing is *protection* in the shape of a higher officer. This is the ground I have always taken in this matter, and I can see no reason for abandoning it in favour of any of the schemes proposed on the other hand, which only pander to one's vanity by calling one the health-officer instead of deputy—a dignity which looks very fair, but will be very Dead-Sea fruit to the taste, I opine."

I have also received the following from a medical gentleman residing in a large rural union.

2. "I was fourteen years medical officer of the largest district of this union, and remember two distinct threats of 'changing their doctor' (subsequently carried into effect). I was attending poor people with typhoid fever in the cottages of one of my patients in the first instance, and wearing my life out in attendance during a severe cholera epidemic in the second: in each case, because I had simply performed my duty to my poor patients in matters which will now devolve on the medical officer of health. I think that several unions ought to combine to employ one competent officer restrained from private practice, to whom the district medical officers should simply report the cases of zymotic disease at stated intervals, and such other matters within his department as they thought proper."

3. "I hold a small district in the Willston Union. On referring to the *Medical Directory*, the population, I see, is 749 (very poor and scattered); the acreage, 5,377; and the nearest point to my house two miles and a half. I was offered the appointment of public health officer the other day at a salary of £5 a year; as I thought the expenses would probably be greater than the pay, to say nothing of the trouble, I declined the honour. I have not heard who the happy individual is (if any) who has accepted it."

4. "Much is said and written about the stigma implied in the term *deputy* health-officer. There is no necessity whatever that any such objectionable phrase should be used; let each district officer be health-officer, and the superior, appointed over a large area, be called chief officer of health. *Voilà tout!*"

The extracts I have given cover, in my estimation, the whole ground occupied by the controversy.

I am, etc., JOSEPH ROGERS.

33, Dean Street, Soho, December 26th, 1872.

ORMSKIRK, WEST DERBY, AND PRESCOT UNIONS.

A CONFERENCE of the guardians of the Ormskirk, West Derby, and Prescott Unions has recently been held, to consider the suggestion of the Local Government Board that the three boards should unite with each other and with the rural sanitary authorities in the appointment of one medical officer of health for the district. Mr. Corbett, the Government Inspector, urged amalgamation as the best means of checking centralisation and of securing economy; but much difference of opinion on both points was expressed by various guardians. Ultimately, the principle of several authorities uniting was adopted, leaving details to subsequent arrangement.

DEBELLARE SUBJECTOS.

THE burgesses of conquered towns were sometimes compelled to appear before their masters with halters round their necks. The Warminster Guardians have improved upon the hint. At their meeting on Monday last, after refusing to increase the salary of a relieving officer, they resolved that in future, before any application for increase of salary from any officer or official can be entertained by the Board, such application shall in all cases be preceded by the resignation of such officer.

OBITUARY.

JAMES STARTIN, F.R.C.S.

MR. STARTIN, who died on December 24th, 1872, began to fail in health about five years ago, at which time a stone was detected in his bladder. Several lithotripsy operations were performed by Sir Henry Thompson without any complication. After the last, however, which it was hoped would be a final one, he became very ill. Symptoms of cystitis came on, and several abscesses formed in the scrotum, near the vas deferens of one side and in the prostate. Lithotomy became necessary, in spite of his very critical state. He recovered fairly good health after this operation, and remained tolerably comfortable till about four months ago, when symptoms of renal mischief showed themselves. These developed into evidences of abscess in connection with the left kidney and ureter, and an exploratory operation about a fortnight before his death resulted in the escape of an enormous quantity of pus, and the removal of a calculus from the pelvis of the kidney. Considerable relief followed, and for some days his condition improved, and hopes of his recovery were entertained; but, in about ten days, he began to suffer from diarrhoea, and this speedily carried him off. He was under the professional care of Mr. Hutchinson, in conjunction with Dr. Bunce of Woodford, during this last illness, residing at his country house at the latter place. He was also seen by Sir William Fergusson, Dr. George Johnson, Mr. Curling, Mr. Pollock, and Mr. Marshall, the last two of whom and Dr. Johnson were present at the operation.

James Startin was born at Moseley, near Birmingham, in 1806, and was the eldest son of a merchant there. His father intended that he should be an engineer; but, as the boy wished to be a surgeon, he was apprenticed to a gentleman in large practice at Atherstone. The late Mr. Hodgson soon afterwards offered him a dressership at the Birmingham Infirmary, and subsequently gave him much help in many ways. In due time he entered the school at St. Bartholomew's, where he became Mr. Abernethy's prosector. After two years of this work he was still too young for his diploma, and consequently returned to Birmingham, and for about a year had charge of a large colliery practice. He then came back to London as Mr. Vincent's pupil, and attended Dr. Clutterbuck's class for Medicine, and the lectures of Mr. Quain on Anatomy, and of Sir Charles Bell on Physiology and Surgery. He took the licence of the Apothecaries' Society in 1827, and the diploma of the College of Surgeons in 1828, and was elected as resident surgeon to the Birmingham Town Hospital, which post he retained for three years; afterwards becoming resident medical officer to the General Hospital in the same place. For the latter position he had to compete severely with Mr. (now Professor) Owen. Mr. Startin and Mr. Owen had been fellow-students, and remained firm friends to the end; but this contest had the effect of directing each to the work for which he was best fitted. Two years later Mr. Startin set up in practice at Warwick, and rapidly gained good success, his aim being to secure chiefly operative and consultative practice. In a few years he married a lady with property, and was unfortunately himself persuaded to take shares in the bank of which she was also a shareholder. The concern failed, and he became not only penniless, but liable to indefinite claims. This led him to sell the practice, and live in France and Algeria; and during

this time he first struck upon the idea of endeavouring to imitate the St. Louis Hospital of Paris, by setting up a Skin Hospital in London. It was in the autumn of 1841 that he opened the London Infirmary for Skin-Diseases in London Wall, having at that time very little external help, and being himself very far from well-to-do. The new institution fortunately came under the notice of the late Mr. Samuel Gurney, who, after most careful and painstaking inquiries, and personal investigation as to the character of the man and the good of his work, ended in promising to give most substantial aid to the infirmary so long as it should be carefully conducted. In a few years the hospital was transferred to a large house at Blackfriars. Mr. Startin succeeded wonderfully in private practice from this period.

His success, both in founding the hospital and in gaining a singularly lucrative practice, is no doubt in a large degree attributable to his great practical skill in the use of remedies. His mind was eminently practical, and he cared much more about the results of his treatment than for investigating the character and nature of skin diseases. From this concentration of energy on one end, he attained great skill in the use of drugs, and unusually good results in curing his patients, and, for this reason, they became very numerous. He remembered minute details of treatment by which certain cases had been cured, and had a great knack of combining various remedies together so that neither he nor anyone could, in many cases, tell which part of the treatment or which ingredient in a prescription had done the most good. As a consequence of his skill having thus grown up gradually with him, it was comparatively incommunicable to others in a dogmatic form, and so much of the good he did has died with him. It was probably owing to this want of generalising power that Mr. Startin owed his somewhat limited success as a clinical teacher; although he was always willing to tell as much as he could to others, it is evident that a good deal of his knowledge could be gained only by the students really going over the same ground again. Nevertheless, for some time a good class might generally be found in his out-patient room at Blackfriars; and many who have since become specially skilled in the treatment of skin-diseases, are doubtless able to recall many things for which they are directly or indirectly indebted to Mr. Startin.

He never published much or engaged much in formal teaching. He gave a course of thirty-six lectures, which were published in the *Medical Times and Gazette*; and from time to time published short papers, which usually had reference to some new mode of treatment or fresh use of a drug. When very young, he invented a new mode of felting hats. He introduced glycerine into medical use, brought forward a new method of treating nævi, the elastic spiral bandage, and the stearine apparatus.

Mr. Startin was a very kind-hearted, genial man, fond of doing kind acts for others. He liked country life and country pursuits, and for the last thirty years was never without a house in the country, to which he went generally two days a week.

HENRY DOUGLAS CARDEN, F.R.C.S., CONSULTING SURGEON TO THE WORCESTER INFIRMARY.

THE profession at large, and the city of Worcester has, as we last week announced, experienced a great loss in the death of Mr. Henry Douglas Carden. He expired at his residence on Sunday, December 22nd, from an attack of apoplexy. Till a week before his death he was actively engaged in the duties of his profession, to which he was sincerely attached. Mr. Carden is known to the profession as the introducer of amputation of the thigh by the "single-flap" or "single skin-flap" operation, which he first described in this JOURNAL. He held the office of surgeon to the Worcester Infirmary for twenty-three years, and had an extensive practice in Worcester, and a first reputation of being a skilful and masterly operator. The *Worcester Chronicle*, in recording his death, speaks thus of him from personal knowledge:—"He was gentle and gracious in manner, though, when it was needed, he could be firm and steadfast as a rock. Perhaps no one ever combined what some one once declared were the great requisites of an operating surgeon—a lady's hand, a lion's heart, and an eagle's eye—more happily than Mr. Carden, certainly no one was ever more humane and considerate, or more anxious to dispose of every means which art and science could command for the alleviation of human suffering and the relief of all those evils which flesh is heir to. Certainly few, if any, ever dispensed the ordinances of medicine with profounder skill and judgment, or ministered remedies to the cure of disease with superior discernment or more penetrating knowledge."

ARTHUR H. WALPOLE, M.R.C.S.

MR. WALPOLE commenced the study of his profession as a pupil of Dr. Dodd, of Whitby. He matriculated at Durham in 1865, and entered

at the Newcastle-on-Tyne College of Medicine the same year. In the Newcastle-on-Tyne Infirmary, he filled the offices of Clinical Assistant and House-Surgeon, with great skill and ability. On leaving the Infirmary, he became Surgeon to the Ridsdale Ironworks, and afterwards joined in partnership Dr. Andrew Bolton, who for many years was house-surgeon to the Newcastle Infirmary. After successfully working together for upwards of two years, Mr. Walpole was called to attend a case of typhoid fever in one of the lower parts of the town. The patient recovered, but the medical attendant (as is unfortunately too often the case) succumbed. After an illness of fourteen days' duration, he died on December 1st. Seldom has the death of a member of our profession been more keenly felt, not only by his professional brethren, but by the inhabitants of the town and neighbourhood generally, and much sympathy is felt for his widow and child.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 26th, 1872.

Brailey, William Arthur, Cambridge
Gregory, John, Rusholme, Manchester
Heane, William Crawshaw, Cinderford, Gloucestershire
McCaw, John Dysart, Nottingham
Prothero, David George, Llandilo, Carmarthenshire

The following gentleman also on the same day passed his primary professional examination.

Crowther, Arthur Bingham, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BOLNESS and CARRIDEN, Linlithgowshire, united Parishes of—Medical Practitioner.
- CHEADLE RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum.
- CHORLTON UNION, Lancashire—Medical Officer for District No. 5: £100 per annum.
- COLERAINE UNION, co. Londonderry—Medical Officer and Public Vaccinator for the Portrush Division of the Bushmills and Portrush Dispensary District: £70 per annum, and vaccination fees.
- DORSET LUNATIC ASYLUMS, near Dorchester—Assistant Medical Officer for the Forston Asylum: £100 per annum, board, and apartments.
- GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.
- GENERAL LYING-IN HOSPITAL, York Road, Lambeth—Physician-Accoucheur.—Physician-Accoucheur for Out-patients.
- DENTAL HOSPITAL OF LONDON—Dental House-Surgeon: £40 per annum.
- GERMAN HOSPITAL, Dalston—Honorary Assistant-Physician.
- HOLBORN UNION—Public Vaccinator.
- HONITON UNION, Devon—Medical Officer for District No. 4: £112 per ann.
- HOSPITAL FOR DISEASES OF THE SKIN, Stamford Street—Surgeon.
- INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
- INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
- INISHOWEN UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clonmany Dispensary District: £90 per annum, and fees.
- KILRUSH UNION, co. Clare—Medical Officer for the Carrigaholt Dispensary District.
- LAMBETH, Parish of St. Mary—Medical Officer for District No. 7: £75 per annum, and extra fees.
- LEITH HOSPITAL—House-Surgeon.
- LONDONDERRY DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent.
- MANCHESTER ROYAL INFIRMARY, DISPENSARY, LUNATIC HOSPITAL, or ASYLUM—Two Assistant-Physicians.—Two Assistant-Surgeons.—Obstetric Physician or Surgeon.—Ophthalmic Surgeon.—Dental Surgeon.
- MERCHANT SEAMEN'S ORPHAN ASYLUM—Consulting Surgeon.
- METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Assistant-Physician.
- NAAS UNION, co. Kildare—Medical Officer for the Newbridge Dispensary District.
- NANTWICH UNION, Cheshire—Medical Officer for the Bunbury District: £40 per annum.
- NATIONAL HOSPITAL, Newman Street—Consulting Physician.—Physician.
- NAVAL MEDICAL SERVICE—Assistant-Surgeons.
- NEATH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
- NEW WINCHESTER UNION—Medical Officer for the A. Division of the Winchester District: £70 per annum.
- NOTTINGHAM, Borough of—Medical Officer of Health.
- RADCLIFFE, Lancashire—Medical Officer of Health.
- ROYAL NAVAL HOSPITALS—Dispensers.
- ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL—Surgeon.
- ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
- ST. BARTHOLOMEW'S HOSPITAL—Surgeon and Lecturer on Surgery.
- SUNDERLAND GENERAL INFIRMARY and DISPENSARY—Physician.
- SWAFFHAM PRISON—Surgeon: £60 per annum.
- TRANMERE, Cheshire—Medical Officer of Health.
- VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea—Registrar and Pathologist.

WALLASEY DISPENSARY—House-Surgeon; £100 per annum, furnished residence, coals, and gas.
WANDSWORTH DISTRICT—Public Analyst.
WIGAN, Borough of—Public Analyst.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Henry Lee, Lettsomian Lectures on Urethral Discharges. No. I: Syphilitic Discharges.
TUESDAY.—Pathological Society of London, 8 P.M. Annual Meeting for the Election of Officers. The following specimens will be exhibited. Mr. Wagstaffe: A Milk-yielding Tumour of the Breast. Dr. Charles Carter: Supernumerary Pulmonary Valve. Dr. Thompson Dickson: Microscopical Specimens of the Spinal Cord from a Case of Amputation of the Thigh. Mr. Gay: A Varix. Mr. Gay: An Unusual Form of Femoral Hernia. Dr. King: Stomach from a Case of Poisoning by Hydrofluoric Acid. Dr. Robert Living: Aneurism of the Thoracic Aorta. Dr. Peacock: Diseased Heart. Dr. Peacock: Diseased Liver with Thrombosis of the Portal Vein.
WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Buchanan, "On the Concurrence of Epidemics"; Dr. Squire, "On the Periods of Infection in Epidemic Disease."
FRIDAY.—Clinical Society of London, 8.30 P.M. Annual Meeting for the Election of Officers and Council. Mr. Callender, "On a Mode of Dressing Wounds"; Dr. Lockhart Clarke, "On a Case of Cysts in the Cerebellum"; Dr. Edis, "On a Case of Right Hemiplegia occurring during Pregnancy, with rapid Recovery after Parturition."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

MR. HOLMES COOTE.

SIR,—I find that, in the notice given in the BRITISH MEDICAL JOURNAL of this date of the death of Mr. Holmes Coote, it is stated that he "breathed his last this week in a public lunatic asylum." Allow me to say that this is incorrect. Mr. Holmes Coote has been for some time the inmate of a private lunatic asylum (Blacklands House, Chelsea), and it was in this establishment that he breathed his last.

I am, etc., EDWARD THOMAS HALL, Medical Superintendent.
Blacklands House, Chelsea, S.W., December 28th, 1872.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

NEMO (Manchester).—We will shortly commence a series of papers on the whole subject, in which this will be included.

ERRATUM.—By a typographical error in the communication from our Liverpool correspondent in the JOURNAL of December 14th, two pathological specimens, exhibited by Dr. Carter at the Medical Institution, were represented as belonging to the same subject; namely, cancer of the liver, and aneurism of the thoracic aorta.

WATER-BEDS.

SIR,—As I find that there is an inconvenience attending water-beds (more especially the larger sized ones, after being used some time), from the air and water tending to raise the parts not pressed upon to an undue height, I have been thinking it would be desirable to connect the inner surfaces of the beds by means of ligaments. I am not aware that such a thing has been tried, and shall be obliged if you can kindly afford me any information on the subject, or refer me to a manufacturer.

I am, etc., WALTER LATTEY,
Medical Officer, Southam Workhouse, etc.

Southam, Rugby, December 23rd, 1872.

*** The water-beds of Mr. Hooper, Pall Mall East, are constructed with internal ligaments, to obviate the objection referred to. Some attention to the filling is necessary, for which he has specific printed directions. Mr. Hooper writes to us: "If I can assist your correspondent, it will give me pleasure to do so."

DR. DALTON, Cheltenham, requests us to publish the following letter, a copy of one which he has addressed to Sir William Fergusson.

Dear Sir William,—I congratulate the members of the British Medical Association on having secured your services as President for the annual meeting for 1873. Allow me, Sir William, to suggest to you that, with the aid of the Council and of the profession generally, and also with the assistance of a generous public, you may have the will and be enabled to announce to our Association, at the annual meeting for 1873, that sufficient funds have been collected to enable the Council to determine on the establishment of a British Medical College for the education of the daughters of medical men, to be conducted on similar principles as the school at the Royal Medical Benevolent College at Epsom. Let every registered member of our profession be invited, through the press and otherwise, to subscribe to a fund for this object. Also let the Council be invited to appoint Honorary Local Secretaries for this purpose, throughout the United Kingdom, to canvass for subscriptions and donations, not only from the members of our profession, but also from the general public, so largely indebted to us for an amount of gratuitous services rendered by no other profession. That you will succeed in establishing a British Medical College for the daughters of medical men I cannot doubt, if supported, which I firmly believe will be the case, by a good staff of officers: the keel of such a noble structure of benevolence may be laid at the next annual meeting. The urgent demands of our sons excited my sympathy for the education of their numerous sisters, and this I offer as an apology for bringing this much required charity under your notice as President of our world-wide Association for 1873. Pray use your best efforts to effect so desirable an object, one that, I am sure, will give your personal feelings more satisfaction than the honour of a peerage could confer (in my humble opinion).—I am, dear Sir William, yours faithfully,

WM. DALTON.

To Sir Wm. Fergusson, Bart., President-elect of the
British Medical Association for 1873.
Cheltenham, Dec. 30th, 1872.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Dec. 28th; The Manchester Guardian, Jan. 1st; The Ulster General Advertiser, Dec. 28th; The Scotsman, Dec. 31st; The Bath Express, Dec. 28th; The Birmingham Daily Post; The North Wales Chronicle; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. W. S. Savory, London; Dr. Latham, Cambridge; Dr. Dickinson, London; Dr. G. Johnson, London; Dr. Shingleton Smith, Bristol; Dr. Arldridge, Stoke-upon-Trent; Mr. Hopgood, Sunderland; Dr. W. Carter, Liverpool; Mr. Domville, Exeter; Mr. Cuffe, London; Mr. Booth, Sheffield; Dr. Johnson, Kilkenny; Mr. Brigstocke, Calne; Dr. Gibbon, London; Dr. Finch, Colchester; Mr. Hall, Chelsea; Dr. Fothergill, London; Mr. Ll. Thomas, Dudley; Dr. Dalton, Cheltenham; Dr. Foss, Stockton-on-Tees; Dr. Broadbent, London; Mr. W. Rigden, London; Dr. Inglis, Worcester; Nemo, Manchester; Mr. G. S. Thorn, Devonport; Mr. Lawton, London; Mr. Lewis, Northampton; Mr. Hartley, Cheltenham; Mr. Hopkins, Bath; Mr. De la Motte, London; Mr. Humphreys, Guildford; Mr. Biggs, Salisbury; Mr. Ravenhill, Wolverhampton; Mr. Plowright, King's Lynn; Dr. Haining, Chester; Mr. Carruthers, Runcorn; Mr. Settle, Hammersmith; Mr. Archer, Weston-super-Mare; M.D.; Mr. Sharp, Derby; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. A. W. Edis, London; Mr. J. W. Langmore, London; Mr. Lewis Mackenzie, London; Mr. H. Langdale, Brighton; The Secretary of the Pathological Society; Mr. R. B. Hogg, Aylesbury; Our Glasgow Correspondent; The Secretary of the Pathological Society; Mr. Hinton, Warminster; Mr. Hickman, Shrewsbury; Dr. Corfield, London; Mr. Marsh Jackson, Smethwick; Mr. John Manson, Aberdeen; Mr. J. R. Baumgartner, Norwich; Mr. C. E. Hardyman, Worcester; Dr. E. Thomson, Colchester; Mr. W. L. Roberts, Bradford; Mr. J. W. Plaxton, Hull; Dr. Alexander Ogston, Aberdeen; Mr. J. Keen, London; Mr. McClure, Wellow; etc.

BOOKS, ETC., RECEIVED.

English Midwives. By J. H. Aveling, M.D. London; 1872.
Hospitler und Wohlthtigkeits-Anstalten. Mit 60 Abbildungen. Dritte Auflage.
Von Dr. Franz Oppert. Hamburg; 1872.

LECTURES ON THE PATHOLOGY, DIAGNOSIS, AND TREAT- MENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,
Physician to King's College Hospital; Professor of Medicine in King's
College, London; etc.

LECTURE I.—*Concluded.*

Bright's Disease.—History and Definition of the Term.—General Propositions relating to Bright's Disease. I. It is of Constitutional Origin: Proofs of this. II. The primary and chief Changes occur in the Gland-Cells of the Kidney. III. Changes in Basement-Membrane of Tubes and Malpighian Capsules often misinterpreted. IV. Changes in Vessels of Kidney and other Organs later and less constant. V. Morbid Products appearing as Tube-Casts in the Urine are of great diagnostic value.—Mode of examining Urinary Sediments.

HAVING made yourselves acquainted with the structure and functions of the kidney, you are prepared to enter upon the study of its diseased conditions; and I now propose to give you some account of a most important and interesting class of cases which are usually included under the name of Bright's disease. The history of this term may be very briefly told. Before the time of Dr. Bright, it was known that dropsy and disease of the kidney were sometimes associated. It was also known that some dropsical patients had albuminous urine. (See *Observations on the Nature and Cure of Dropsies*, by John Blackall, M.D., 3rd ed., 1818.) Dr. Bright's great merit and originality consisted in this, that he pointed out the frequent association of dropsy and albuminuria with very striking pathological changes in the kidney. In the first volume of his *Reports of Medical Cases*, published in 1827, he described and represented by beautiful coloured drawings various morbid appearances in the kidney; some kidneys being large and congested; others large and anæmic; and others, again, contracted and granular. He showed that these forms of renal disease are of everyday occurrence; that they are frequently associated not only with dropsy, but with many other formidable secondary diseases; and thus he opened up the great field of renal pathology, which had previously been, for all practical purposes, an almost unknown region. These morbid conditions of the kidney having been made known, it became necessary to give them a name, and various names have been proposed. Rayer used the term "néphrite albumineuse" to designate this class of diseases. The objections to this term are, first, that every form of inflammation of the kidney may be associated with albuminous urine; and second, that some forms of the disease under consideration are not of an inflammatory nature. Dr. Christison called the disease "granular degeneration". The kidneys, it is true, are often granular; but in some of the most characteristic cases they are quite smooth, and not at all granular. Each of these terms, then, being insufficient and objectionable, it has become the custom to designate the morbid states of the kidney by the name of the distinguished physician who discovered them; and so the term "Bright's disease" has come into very general use both in this country and abroad. The term is sufficiently convenient and unobjectionable, if only we can agree upon a definition. The designation Bright's disease seems to involve the idea of unity; and some pathologists have maintained that all the morbid changes in the kidney to which attention was directed by Dr. Bright are the result of a single morbid process in different stages and of various grades of intensity. I shall have no difficulty in convincing you that this view is erroneous. Meanwhile, however, I must ask you to bear in mind that under the name of Bright's disease are included various forms of acute and chronic disease. In the new nomenclature of the Royal College of Physicians, the term is thus explained: "Bright's Disease. *Synonym*: Albuminuria. *Definition*: A generic term including several forms of acute and chronic disease of the kidney, usually associated with albumen in the urine, and frequently with dropsy, and with various secondary diseases resulting from deterioration of the blood."

Accepting this definition of Bright's disease, we shall find that it is nearly synonymous with albuminuria—nearly, but not quite. For, on the one hand, in some quite exceptional cases, both acute and chronic, albuminuria is sometimes absent; and, on the other hand, albuminuria may be unassociated with Bright's disease. For example, the mixture

of blood or pus with the urine of course renders it albuminous; but hæmaturia and purulent urine, although often associated with Bright's disease, may result from other and quite distinct pathological conditions, either general or local. And, again, in the advanced stages of valvular disease of the heart, and in some cases of extreme emphysema of the lungs with bronchitis, albuminuria may be caused by passive congestion of the kidney resulting from an impeded circulation through the heart and lungs, and a consequent engorgement of the whole systemic venous system; yet albuminuria thus originating from purely mechanical causes would not be correctly designated a form of Bright's disease. With these limitations, however, the terms albuminuria and Bright's disease may be looked upon as practically synonymous; and, to avoid wearisome reiteration, I shall employ sometimes one and sometimes the other term.

Now let me impress upon you that, according to the nomenclature and definition of the College of Physicians, Bright's disease is not always and of necessity a hopelessly incurable malady. Under this common designation will be included on the one hand cases as curable as a simple catarrh or a slight pneumonia, and on the other hand cases as intractable as an advanced phthisis. The first great division of cases of Bright's disease is into acute and chronic; and, in any case that comes under your notice, there always arises this most important practical question, Is the disease acute, and therefore probably curable? or is the case one of chronic and advanced degeneration of the kidney, and therefore probably irremediable? A careful study of the entire history of the disease, and of each particular case that comes under your observation, will alone enable you to give a true and trustworthy answer to this question.

Before I proceed to discuss the various forms of Bright's disease, I wish to direct your attention to certain general propositions which are true of all forms of the disease.

Proposition 1. Bright's disease is not a merely local malady, but a disease of constitutional origin; and the proximate cause of the renal disease is, in all probability, a morbid condition of the blood.

The proofs of the blood-origin of Bright's disease are to be found in the entire physiological history of the disease. Much of this evidence will come under our consideration hereafter; but some facts bearing upon the question may with advantage be referred to now.

First, then, the disease is a bilateral disease. The rule is, that both kidneys, receiving the same morbid blood, are both affected, and both by the same form of disease, although the degeneration is sometimes more advanced in one kidney than in the other. The exceptions help to prove the rule. For example, one kidney may be absent or undeveloped; or it may have been destroyed by an abscess or by the impaction of a calculus. Bright's disease occurring in such cases would of necessity be unilateral. But the most instructive case of unilateral Bright's disease that I am acquainted with has been published by Dr. Moxon in the *Pathological Transactions* (vol. xix, p. 268). In a woman aged 34, who died of dropsy, the right kidney had the characters of a large, pale, granular Bright's kidney. "The left, on the contrary, was rather small, and of the colour and appearance of a healthy kidney." A microscopic examination showed the large kidney to be much diseased; the smaller "practically healthy". The explanation of this remarkable difference was found in the fact that the left renal artery was plugged by a very old fibrinous coagulum, probably derived from the interior of the heart. Dr. Moxon, in his interesting comments on this case, suggests that, while one kidney was saved by a diminution or rather a suspension of its function, the other was destroyed by an excess of function. We know, as he says, that an excess of normal function (as, for instance, when one kidney is destroyed by an impacted calculus) is not Bright's disease, but simple hypertrophy of the other. In this case, the result was to aggravate a disease which probably had already commenced. But, with reference to the theory of blood-poisoning, which I am now endeavouring to illustrate, I would suggest that the fibrinous plug saved the left kidney by excluding morbid blood, while it damaged the right by diverting to it a double supply of the same morbid blood. This case, therefore, confirms and helps to explain the rule that Bright's disease is bilateral. The bare nutrition of the left kidney in the case referred to was probably maintained by anastomoses between the renal artery and other branches from the aorta. The kidney may be partially injected from the aorta after ligation of the renal artery. Secondly, confirmatory evidence of the blood-origin of Bright's disease is derived from the fact that the malady occurs in association with constitutional states in which a morbid condition of blood may confidently be assumed to exist. Albuminuria, varying in degree and in duration, has been found more or less frequently associated with scarlet fever, diphtheria, measles, small-pox, erysipelas, pyæmia, typhus and typhoid fever, rheumatic fever, malarious fevers, cholera, purpura, scurvy, dia-

betes, syphilis, certain forms of pneumonia, pregnancy, the absorption of secretions from the interior of the uterus after parturition, gout, the abuse of alcoholic liquors, excessive eating, certain forms of dyspepsia resulting, as may be supposed, in the passage of crude materials into the circulation, a poor and insufficient diet, purulent and other exhausting discharges, and, lastly, suppressed action of the skin by exposure to cold, and especially to cold and wet combined.

Proposition II. The morbid blood, which is assumed to be the proximate cause of Bright's disease in all its forms, exerts its influence primarily and chiefly upon the gland-cells which line the convoluted tubes. Look at a Bright's kidney, or at one of Bright's beautiful plates, and you see at a glance that the cortex or secreting portion of the kidney is the seat of the disease, while the medullary cones, even in the advanced stages of the malady, are left comparatively intact. Analyse the diseased gland with the microscope, and you find that the morbid process has been concentrated, and, as it were, focussed upon the secreting cells within the uriniferous tubes. The kidney, as a great blood-purifier, forms an outlet and a means of escape for many useless and noxious materials which have been developed within the system or introduced from without; and, in the discharge of this excretory function, the gland undergoes the degenerative changes which are designated Bright's disease. The blood in the vessels of the kidney probably contains no more noxious materials than an equal volume of blood in any other tissue—that of the voluntary muscles, for instance; but, during the process of excretion, these products are withdrawn from the blood and concentrated within the gland-cells of the kidney, where they effect the morbid changes in question.

Proposition III. The structural changes which occur in the basement-membrane of the tubes and in the Malpighian capsules are direct results of the intratubular cell-changes.

These changes in the basement-membrane are often very obvious and striking, but they have frequently been misinterpreted. For example, thickening and corrugation of the membranous walls of the tubes have been mistaken by Virchow and his followers for a formation of connective tissue *between* the tubes, and thus all the phenomena of the disease have been misunderstood.

Proposition IV. During the progress of chronic Bright's disease, the blood-vessels in the kidney and in many other tissues and organs undergo very interesting changes, but these occur later and less constantly than those which effect the secreting tissues of the gland.

Proposition V. The pathological products of the structural changes within the tubes, being carried out by the liquid secretion, escape with the urine and appear in the form of cylindrical casts of the uriniferous tubes; and a microscopical examination of these tube-casts affords most interesting and valuable information as to the nature and the stage of the renal disease. I shall hereafter show you the various forms of tube-casts, and explain to you their diagnostic significance.

Let me remind you that the examination of urinary sediments of all kinds is much facilitated by allowing the urine to stand for a few hours in a four-ounce conical glass. Then a portion of the sediment is to be taken up with a pipette and put into a glass cell, and this, covered with thin glass, is placed beneath a quarter-inch object-glass. The most convenient cell is made by cementing with marine glue a circular flat ring of glass upon the ordinary microscopic slip of glass. These cells are sold by all microscope-makers. One cell, with ordinary care, will last for months. It is a waste of time to hunt for tube-casts in a drop of urine placed between two flat pieces of glass. The glass cell before mentioned holds several drops of sediment, and therefore greatly facilitates the investigation.

DEVONSHIRE HOSPITAL, BUXTON.—The Committee of Management report the increasing usefulness of this hospital. The number of in-patients admitted to the hospital has been more than doubled since the first and the second years of its existence; and the number of in-patients received is greater year after year. During the past year—1872—1,403 in-patients have been admitted to the hospital, or eighty-five more than in 1871. The total number of beds has been raised to 150; and more satisfactory arrangements have been made for the out-patients, the dispensary, and the administrative departments.

TREATMENT OF CHOLERA BY CHLORAL.—In an article in the *Allgemeine Medic. Central Zeitung*, Dr. Blumenthal states that he and two of his colleagues treated eight cholera patients in the Riga Hospital with hydrate of chloral. With the exception of two, all recovered. In one of the fatal cases, the patient was moribund when the chloral was given; the other death occurred in a pregnant woman aged 35. The most obvious effect of the chloral in the cases that recovered was early arrest of the vomiting and diarrhoea.

ABSTRACT OF A LECTURE ON THE THERAPEUTIC USES OF ELECTRICITY.

Delivered at Guy's Hospital.

By SAMUEL WILKS, M.D., F.R.C.P., F.R.S.,

Physician and Lecturer on Medicine at the Hospital; Examiner in Medicine at the Royal College of Surgeons; etc.

AT this hospital very little was accomplished with electricity as a therapeutic agent, until Dr. Golding Bird, in the year 1836, had our present room fitted up with an electrifying apparatus, consisting of a cylinder machine, Leyden jar, and insulating stool. He published in the *Guy's Hospital Reports* a valuable series of cases, in which he had used the method successfully. These were followed in after years by a description of other cases, from the pens of Drs. Addison and Gull. The Leyden jar was used to stimulate a lethargic organ, and was, therefore, employed in such cases as amenorrhœa and aphonia. The stool was more usually employed. By its means, the patient who sat upon it was isolated, and, by his holding a chain which was attached to the prime conductor, became charged with electricity; sparks were then drawn from his limbs or spine, according to the part wished to be operated upon. After the introduction of electro-magnetism or faradisation, frictional electricity fell into disuse; but I feel confident that it was not successfully superseded by the new method. For instance, the application of the faradic current to the back was not productive of the same good effect as the withdrawal of the sparks from the same region of the body; and it appears, indeed, that it was the very class of patients, suffering from various forms of paraplegia, and now obtaining good from the continuous battery current, who were benefited in former years by frictional electricity. I therefore feel confident that, by allowing faradisation to supersede instead of supplementing franklinism, we were abandoning a valuable therapeutic agent. We cured by its means cases of paralysis of the legs, chorea, and neuralgia—a class of cases but little benefited by the induced current, and which are now again often cured by the primary battery current. The latter, as well as frictional electricity, appears to arouse the dormant nervous centres.

I think it very questionable whether the discharge of the Leyden jar was of any value in amenorrhœa; and, indeed, it could scarcely be expected, seeing that the arrested function of the uterus is often due to some more general change in the system. As regards its use in aphonia, it no doubt cured many cases of the hysterical form of the complaint, for I have seen it applied on more than one occasion, and the patient has immediately screamed out. I do not for a moment, however, attribute the result to any special attribute of electricity, believing that a good slap in the face would have been equally beneficial. I do not recommend this treatment, as it might be considered barbarous and rouse the anger of newspaper editors, whereas the treatment by a machine and bottle would be *secundum artem*.

Franklinism, or frictional electricity, after having done good service for many years, was thrown into the shade by the brilliant discoveries in electro-dynamics; for it was found that, besides its other properties, the induced current possessed a most powerful effect in exciting contraction of the muscles. The two forms of machine came into use—the magneto-electric and the volta-electric apparatus—according as a permanent magnet or a temporary magnet was employed. It has not yet been decided to which we must give the advantage. In hospital practice, we use a machine where the secondary current is induced in a coil of wire by one or two small galvanic cells; and this is the instrument preferred by Duchenne. It has the advantage of being self-working, and therefore requiring the use of one pair of hands only, besides developing a current which is less painful to the patient. The other, or magneto-electric machine, is in more favour with the public, since it is far easier to find in a dwelling-house a person competent to turn a handle than to understand the mysteries of a galvanic cell.

We are indebted almost entirely to Duchenne of Boulogne for introducing faradisation (as the induced current is now called) to professional notice, and proving its great utility in various forms of paralysis. His services, too, were equally great in demonstrating by its use the

normal action of the muscles. By applying wet sponges, to which were attached the poles of his battery, he caused each particular muscle to contract and display its physiological use. He thus gave us a fresh insight into their actions, and showed also how in various forms of paralysis, as in that arising from lead or progressive atrophy, particular muscles were primarily affected in these diseases. Duchenne's mode is to press his wet sponges firmly down on the ends of the muscle, and by this means he believes that he directly causes their contraction. This is doubted by some, who consider that the electric current is carried by the motor nerve to the muscle; and by others, who, doubting the existence of so direct an influence, believe that the effect is transmitted indirectly through numberless cutaneous nerves. It does seem true that there are points of selection where the current acts more efficiently, as witnessed in the more vigorous contractions of the trapezius muscle, when the current is applied near the entrance of the spinal accessory nerve. After the introduction, then, of the induced current or faradisation into practice, it began to be very generally employed, and for many years it was the only form of electricity used. The success attending its use was of the most varied character; and, as I before said, judging from my own experience, it failed to do what franklinism had done in paraplegia by the method of withdrawing electric sparks from the spine: in fact, it failed in those cases where we have had of late such marked results from the simple continuous battery current. We found, indeed, that in some cases it was a very useful remedy, whilst in others it was valueless. It must be said, however, that even in a class of cases where faradisation has been successfully superseded, and in which no immediate effect was produced on its application to the muscles, yet by its constant use, in the absence of all other suggested means of treatment, a cure was finally effected. In these it has been surmised that the electricity acted beneficially by stimulating the blood-vessels to increased action, and so improved the nutritive processes: we, therefore, made use of it in all classes of cases, and met with varied success. It was found beneficial in some forms of paralysis with atrophy, highly useful in hysterical paralysis, and in some old cases of hemiplegia by stimulating muscles which had become inert from disuse. I cannot say that I have ever seen any advantage accrue from the adoption of the methods recommended to the public, as are pictured on the lids of the electro-magnetic machines—as, for example, by allowing the current to pass through the body by grasping the poles of the battery, or by holding one electrode in the hand whilst the other is placed in a basin of water, in which the foot is immersed. I constantly meet with people who buy these machines and go through the performances above named, but apparently with little good. In fine, whilst we possessed only these instruments, and could make use only of the faradic current, we employed it in all forms of paralysis, at the same time feeling quite uncertain as to its success in very many of them.

A fresh impulse was then given to the subject of galvanism by Remak, who demonstrated the great advantage of the simple continuous battery current over the induced or secondary current, known as faradisation. Remak asserted that in experiments on animals the effects of the two forms of galvanism were very different; and his statements as regards paralysed muscles were soon verified. We therefore at once procured for our electrifying room a galvanic battery of a hundred cells, which was capable of being used of any strength. Our assistant, Mr. Sandy, made also a portable machine, which could be carried through the wards. It was very soon apparent that we had made a very important addition to the therapeutic value of galvanism, for we found that the current passed down the spine would influence the condition of the lower limbs where faradisation had altogether failed; and we found, also, that in various forms of paralysis an effect was not only produced where faradisation was inert, but that in some cases the muscles were more susceptible to its influence than in health. In the first case in which it was employed the effects were most striking; it was that of a man who had a paralysed arm, with a gradually progressing wasting of the muscles. It was quite unaffected by faradisation; but, immediately the continuous battery current was used, contraction of the muscles took place, and from this time a gradual cure was effected. It was exactly the same with a case of lead-paralysis. Here no effect was discernible on the application of faradisation; but, on the other hand, there was an extreme susceptibility to the influence of the primary current.

You must understand that the simple transmission of the current along the spine or limbs produces apparently no result—or at least it has to be yet discovered that a current continuously flowing through any part of the body has any effect either on the muscular or the nervous system. It is only when the circuit is broken or closed that an effect is seen. Thus, in the case of the man mentioned just now with the paralysed arm, one pole was placed on the shoulder and the other was stroked down the deltoid, when, on lifting it from the surface, an immediate

contraction of the muscle and elevation of the shoulder took place; and the same occurred again on replacing the electrode. In the case of lead-paralysis, in like manner, one pole was placed on the back of the fore-arm over the upper part of the extensors, and the other pole lower down; when contact was made or broken, contraction of the muscle immediately took place. In this case, as in similar ones, a smaller amount of galvanism roused the irritability of the muscle than would have been required for a healthy arm. If the hand, also, be placed in a basin of water, and one pole of the battery continually dipped in and taken out, whilst the other pole is fixed on the back of the arm, contractions likewise take place. By using the continuous current in these ways, we are now curing very rapidly our cases of lead-paralysis. As severe an example of this disease as you could well see was that of the woman who lately left our wards, and whose muscles were so wasted that she was obliged to keep her bed, and was unable to lift her arms to feed herself; yet by persevering in this form of galvanism for three weeks she completely recovered. It is the continuous current which is probably most useful in infantile paralysis.

As regards its application in cases of paraplegia, we place one pole on the upper part of the spine towards one side of the neck, and the other pole on the lower dorsal region, and as often as the circuit is opened or closed a sensation is experienced. At first the effect is stimulating, and afterwards it is soothing. A sensation of warmth is experienced through the whole body, followed sometimes by sweating; and if the current be powerful, it may excite headache and stimulate all the nerves of special sense, causing noises in the ears, sparks in the eyes, metallic taste in the mouth, and at the same time often producing an urticarious rash on the back. In a short time the patient feels soothed; if he has had pains in his limbs they are relieved, and he is inclined to sleep. The simple battery current appears to rouse the dormant power of the cord, and is thus curative in various forms of paraplegia where no organic disease is present. Thus it has been found to be most valuable in some cases of paralysis of motion or akinesia; but it is more especially in cases of want of control or ataxia that its effects have been most marked. In some very severe and chronic cases, where there was reason to believe, from the duration and intensity of the symptoms, that some degeneration of the posterior column of the cord must have existed, a complete cure has been effected. In one case where progressive muscular atrophy had commenced, the disease was arrested by the same means; and in one case of paralysis agitans, where galvanism has hitherto failed to produce any benefit, it seemed as if the patient were deriving good from its use.

The soothing effect of the battery current is most striking. Thus, in the cases of ataxia of which I speak, pains in the limbs exist as a common symptom, and these are much relieved by its use. In other cases where the paralysis is irremediable, the sedative effect of galvanism has been sufficient to determine its continued use. Thus, in a man now in the hospital with a permanent contraction of the legs from chronic meningitis, from which it is not likely that he will ever recover, so much relief is obtained by the application of the galvanic current to the legs, that the man asks for it in order that he may procure sleep. I can recall several cases of various forms of paralysis where galvanism was most useful in relieving pain and restoring sleep. In simple and pure neuralgia, I can quite corroborate what others have said as to the value of galvanism, and more especially of the primary battery current. I have known faradisation to cure lumbago, but it is the other form of galvanism which has been attended by the most marked success. The relief obtained is generally immediate, and in some cases of frontal neuralgia one application has been sufficient. In longer standing cases, as in that of a woman who was in the clinical ward, a neuralgia of the face, of months' duration, was cured in a fortnight. Since this, we have had two somewhat similar cases.

The greatest disappointment which I have experienced hitherto has been in spasmodic affections of the muscles. In old cases of contraction of the limbs, due to organic change in the centres or nerves, no cure could be expected; but in the temporary and functional forms it might have been hoped that in galvanism we had a speedy means of relief. This has not been so, however, in my experience. I have had the case of a contracted arm in a girl which, for want of a better name, we called hysterical, and in her we used galvanism most perseveringly; we tried both forms, and in various modes, reversing the currents and operating on both the affected and unaffected muscles, but with no success. It was just the same with the case of wry-neck lately in the hospital. The man had galvanism most unremittingly applied to the contracted muscle as well as to the healthy ones. It was used in various modes by Mr. Sandy, but only with temporary benefit. If he appeared better for a day or two, he again relapsed into his former state.

We have, therefore, much yet to learn in reference to the uses of galvanism—as to the value of its different forms, as to the intensity and

quantity of the force used, and as to the direction of the currents. Since every nerve in a limb contains fibres of two functions—motor and sensitive—whose forces are travelling, we suppose, in opposite directions, it follows that, if a galvanic current be made to run along the nerve, it may favour the action of one of these streams of force and oppose the other. This seems to be the case by experiments on frogs and other creatures, where a galvanic current passed down the leg will cause contraction of the limb, whereas if the poles be reversed the animal will cry out, and every muscle of the body will start. This experiment would seem to show that direction should vary according as we wish to affect a motor or sensory nerve. At present we simply test the different modes of application on our patients, and treat them accordingly.

As regards the different effects of the primary and secondary currents, it has been suggested that these are due simply to the fact that the one is continuous and the other interrupted; therefore, that if the battery-current were broken, it would be found that a muscle or nerve could take cognisance and be affected by it (supposing the susceptibility to faradisation had been shown), whereas if it flowed simply through these structures it would pass unfelt. We have tried the experiment, but hitherto without the result expected; and therefore for the present we have been obliged to regard the two forms of galvanism as practically different. Then, again, it is said that the battery-current acts directly on the nerves, whilst the faradic current acts immediately on the muscle; but a discussion of this matter involves the larger inquiry as to the dependence of the muscle upon the nerve for its contractility. The question has not yet been settled. On the one hand, we observe the contraction of muscle on the application of a stimulus when it is entirely severed from the nerves of the body; and, on the other hand, we know that the muscle gains some kind of stimulation through the nerve, since we observe the dropped face in paralysis of the portio dura, and the falling of the head if sleep overtake us in our chairs. Dr. Marshall Hall believed that whilst a muscle retained its connection through a nerve with the spinal cord its contractility remained, but if the connection were severed this quality was lost. He thus by means of galvanism endeavoured to show the nature of the paralysis. In all probability some of his observations were correct; and no more important question in relation to galvanism can be studied than this, for by making experiments on muscles and discovering the connection between their condition under the influence of electricity, and the integrity of the nerve-centres, we shall be able to use the therapeutic agent as a test. By observing the behaviour of muscles under the influence of galvanism, we may form an opinion as to the state not only of the muscle itself, but of the nerve-centre from which some of its qualities are derived. Of course, when Marshall Hall used the expressions “cerebral and spinal paralysis”, he meant in the one case, where a limb was paralysed because cut off from its connection with the brain; and, in the other case, where it occurred from disease of the cord itself. There is no such thing as cerebral paralysis in the sense in which he used it. As a matter of fact, we find, as he asserted, these different effects. Thus there are now in the wards two cases of paraplegia in which the continuous current, whilst exciting contraction in the one, has no effect on the other.

Another question which we want solved is this: Is the continuous flow of galvanism or electricity through the body of any service? It has been thought that the current passes simply over the surface of the body, and thus must be quite ineffectual in influencing the deeper structures; but I believe such a view has been found to be erroneous, and that a current of electricity may, for example, be made to pass quite through the brain. We require often not only to put more life into a portion, but into the whole of the body, as, for example, into that of a little child who may be lying completely powerless after an attack of chorea. Now I believe Pulvermacher's chains are supposed to act in this manner—that is, by simply supplying a stream of electricity to the body. I have seen these instruments much in use, but I cannot say from my own observation that I have ever witnessed much good accrue from them. We are, however, about to make a machine which the patient can wear on his back, and thus I hope we shall soon be able to solve the problem. Since the effect would not be immediate, the method must be long continued. We have also been making experiments with an electric bath, but at present the results are doubtful. With respect to other uses of galvanism, as in cure of aneurism, as an actual cautery, etc., I leave them to be treated of in their special departments.

THE will of the late Dr. Cavendish Lister Wall, of Addison Road, Kensington, has been proved under £35,000.

THE Monmouth Rural Sanitary Authority has appointed the Poor-Law Union Officers Medical Officers of Health.

ON THE VARIOUS MODES OF APPLYING REMEDIES TO THE INTERNAL SURFACE OF THE UTERUS.

By ROBERT BARNES, M.D.,

Obstetric Physician to and Lecturer on Midwifery at St. Thomas's Hospital; Examiner in Midwifery in the University of London; etc.

THE treatment of morbid conditions of the body of the uterus by *intrauterine injections* is a subject that calls for earnest discussion on account of its utility and its dangers. If we treat morbid conditions of the eye, mouth, throat, larynx, bladder, rectum, and vagina, by injection, with such manifest advantage that we have come to look upon this method as in many cases indispensable, it seems reasonable to expect equal advantage from its action on the mucous membrane of the cavity of the uterus. Experience amply justifies this expectation. Topical applications to the diseased mucous membrane are in many cases essential to cure; but, in the form of injected fluids, they are not free from danger. Almost every author who has written upon the subject refers to cases of accidents attending intrauterine injections ranging from severe pain to shock, collapse, metritis, perimetritis, and death. It is desirable to refer to some of those cases which best illustrate the conditions of danger.

Dr. Henry Bennet relates a case which occurred under Jobert. A girl aged 24 had a large fibroid of the uterus. Jobert made an astringent injection into the cavity of the neck. Almost immediately there arose shiverings, agonising pains in the abdomen, then fever, then death in a few hours from metro-peritonitis. Bennet performed the necropsy. He found nothing besides the marks of peritonitis.

In my work on *Obstetric Operations* (2nd ed., 1871), I have related a case which occurred in the London Hospital after I had left that institution. The history was supplied to me by Mr. Hermann, the resident accoucheur at the time; and the account of the necropsy by Dr. Sutton. A woman aged 48 had had six children and five abortions. For eighteen months she had suffered from menorrhagia. On admission, there was decided retroflexion of the uterus. An injection of perchloride of iron, in the proportion of one part of the saturated solution to six of water, was used. About half a pint of this was injected through a double-channel catheter attached to a Higginson's syringe, the patient lying on her left side. The fluid appeared to flow out as fast as it entered. The catheter was kept half-rotated, so as to keep the uterus in its proper axis during the injection. The os uteri had been well dilated. Immediately after the operation, the patient complained of intense pain in the abdomen. In the evening, the pain was worse, and she had vomited. The pulse and temperature rose, and she died in collapse fifty-eight hours after the injection. In the peritoneal cavity was found a quantity of blackish-green opaque puriform fluid. Much of the peritoneum covering the intestines around the uterus was of a black colour. There was a quantity of pus in the pelvis. The left Fallopian tube was enlarged, and the vessels on its peritoneal surface highly injected. The outer half of the tube was much dilated, and filled with dirty pus-like fluid. There was marked retroflexion of the uterus. Dr. Sutton's opinion was, that the fatal peritonitis was caused by the iron-solution escaping through the Fallopian tube into the peritoneal cavity.

Dr. v. Haselberg relates an instructive case (*Monatsschrift für Geburtskunde*, 1869). A *puella publica*, having had an abortion six months before, came under treatment with antelexion of the uterus to such an extent as to render the passage of the sound difficult. She suffered from profuse menorrhagia, and it was determined to try injection of perchloride of iron. It was only after repeated trials that the syringe was made to pass beyond the seat of flexion into the cavity of the uterus. The patient suffered no pain at the time, but at night had a severe rigor. On the fifth night, rigor was accompanied by severe vomiting, and abdominal pains immediately followed. On the following night, this was repeated; thereupon she fainted and died. The intestines were found united by recent exudation. The lower parts of the pelvis were filled with stinking pus; the source of this was discovered in a cyst in the right ovary, which through a small opening gave issue to like matter. The right tube was permeable throughout its whole length by a large sound. The mucous membrane of the uterus was stained as if with ink, and the same appearance extended along the right tube. The black patches showed iron by chemical tests. One fact at least is clear from this case, that perchloride of iron, like other fluids, may run along the Fallopian tubes. But it is not so

obvious that the fatal result was due to this accident. No immediate symptoms followed the injections. The signs of intra-abdominal injury seem due to the perforation of the ovarian cyst under the pressure of vomiting.

Hourmann of Lourcine relates the following. A girl aged 19 had profuse leucorrhœa. He injected a decoction of nut by a *clyso-pompe* into the uterus. At the first stroke, she cried out and put her hand to the left iliac region. Severe shivering set in, and lasted several hours; then febrile reaction followed. The pain spread to the abdomen, indicating metropéritonitis. Hæmorrhage appeared in two days, and she was relieved.

The danger of fluids running along the Fallopian tubes seems to depend upon undue patency of these canals. This undue patency in its turn is due, in many cases at least, to obstruction at some lower part of the utero-vaginal canal. Thus in von Haselberg's case, and in the one at the London Hospital, there were decided flexion of the uterus and dilatation of the tubes.

It is not enough to know that patients occasionally die after injections are thrown into the uterine cavity: we want to know why they die. Knowing this, we may learn how to avoid the causes of danger without abandoning the use of a mode of treatment which renders in a great number of cases incontestable service.

Many experiments have been made on the dead body to ascertain the behaviour of injections. Hennig, Klemm, Guyon, Fontaine (on puerperæ), Alph. Guérin, Guichard, and others, have done this. These experiments generally show that there is extreme difficulty in making fluids run along the tubes, especially if the injecting syringe do not completely fill the os uteri internum. I will not relate or analyse these experiments, because they appear to me to be of little practical value. The conditions of the dead and of the living tissues are essentially different. For example, in the dead body there is no muscular contractility, no irritability under stimulus, no response of the nervous centres to peripheral injury. Yet these are conditions which come into play when injections are thrown into the living uterus. It may, indeed, seem at first sight that these experiments would, at any rate, illustrate the problem of the permeability of the Fallopian tubes; but even here their value is small. They may prove that great force is necessary to drive fluid along these canals; and that, unless the cavity of the uterus be closed below, as at the cervix, fluids will rather regurgitate than run onwards. But it is certain that, in some of the cases where fluid injected into the living uterus ran along the tubes, the accident could not be accounted for by the very small amount of injecting force employed. Another force, therefore, must have been in action; and this could be no other than that exerted by the uterus itself, contracting spasmodically upon the irritating fluid thrown into it. This force, the lower or cervical orifice of the uterus being closed, would pump the fluid onwards into the tubes.

Again, it is not necessary for the production of alarming or even fatal accidents that the fluid should run along the tubes. The fluid injected into the cavity of the uterus may cause metritis, and the inflammation may spread to the adnexa and to the peritoneum; or severe pains, shock, and collapse, may be the immediate and simple result of the irritation produced on the uterine superficies by the contact and retention of the fluid. The agony attending some cases of dysmenorrhœa is simply due to the irritation set up by retained blood causing uterine contractions or colic. The pain, the prostration, the other nervous phenomena attending dysmenorrhœa, are sometimes as severe as those attending the intrauterine injections.

In some unfortunate cases—as in one related by Tessier—the fluid injected has been not simply of styptic and coagulating power, but actually caustic. It ought to be needless to point out so fundamental an error; but it has been committed more than once, and the fault of the operator has been assigned to the method.

It is not even necessary that fluids should be injected into the uterus at all. I have seen pain and collapse so severe, as to cause the utmost anxiety for the result, follow an ordinary injection of weak sulphate of zinc into the vagina. This occurred in the case of a lady whose maid was administering, as she had often done before, a zinc solution by means of a Higginson's syringe. The cervix in this case was patulous, but it is certain that the pipe of the syringe was not inserted into it. She recovered in a few hours, no inflammation supervening.

It will further be remembered that the mere touch of a sound or bougie against the fundus uteri will in some cases produce severe pain, and even prostration.

Again, symptoms resembling in character and severity those caused by injected fluids are occasionally observed after the use of solid or unctuous substances, which cannot, from their nature, flow along the tubes—which must, in short, act *in loco*. Thus Aran says he has known three cases of fatal peritonitis from actual cauterisation of the os uteri, and one

case of fatal ovaritis from the application of Vienna paste. I have known the most severe pain and prostration, followed by hæmorrhage and metritis, caused by the application of solid nitrate of silver to the interior of the uterus.

The severity of the accidents is not explained by the nature of the fluids injected. Alarming symptoms have followed the use of comparatively weak solutions. It has been supposed in these and other cases that the untoward phenomena were due to the forcible propulsion of air along with the fluid. In some cases this hypothesis may be well founded; but I think its importance has been exaggerated. It is even doubtful whether a quantity of air at all calculated to produce serious distress can be driven into the vessels or tissues of the unimpregnated uterus; and the small quantity that might possibly run along the Fallopian tubes into the peritoneal cavity could hardly do much harm.

Dr. Cohnstein gives (*Beiträge zu chronischen metritis*, 1868) a careful historical survey of the practice and opinions of those who have related their experience upon this subject. The general conclusion arrived at is, that injection of very powerful caustics is likely to excite inflammation of the uterus and peritoneum, or severe prostration and uterine colics; and that these dangers are less urgent if care be taken first to dilate the cervix. Dr. Lente (*New York Journal of Medicine*, 1870) discusses this question, passing under review the various topical methods of treating disease of the cavity of the uterus. Iodine in solution he has known cause intense pain and alarming collapse, which, however, passed away, no further bad effect ensuing. The leading gynaecologists of New York have also discussed this question: instances of serious accidents were adduced. The general opinion seemed adverse to the use of intrauterine injections; whilst Dr. Thomas was especially emphatic in his condemnation.

To avoid the dangers of intrauterine injections, several precepts have been enjoined. The great object aimed at is to avoid or lessen the risk of the fluid running along the tubes. This it is sought to attain—
1. By securing free dilatation of the cervix uteri before injecting, so that the fluid may readily run back into the vagina. For this purpose the preliminary use of laminaria-tents is advised. 2. By using only graduated quantities of fluids, and injecting very gently and slowly. 3. By using a double cannula, so as to secure a return-current. To effect this the more surely, the openings of the cannula at the uterine end are made at different levels.

I have not much faith in the double cannula. The end which should serve for the return-current is liable to be choked. The preliminary free dilatation of the cervix, and the use of gentleness in propelling the fluid, should never be omitted: but I do not believe that the observance of these precautions is an absolute guarantee against accidents. It is probable that the mere forcible impact of any fluid striking upon the inner surface of the uterus, especially upon the fundus, may cause severe pain and prostration. Since nothing is gained by forcible injection, this consideration affords additional reason for injecting with all possible gentleness; hence it is well to use injecting-pipes having lateral opening of very fine calibre, so as to "pulverise" the liquid.

I strongly advise not to use injections at all in cases of marked flexion of the uterus. Even if we dilate the cervix first by tents, and maintain the uterus erect during the injection, we cannot always be sure that the flexion will not be reproduced, so as to prevent the issue of the fluid; and it must not be forgotten that it is especially in these cases that the uterine cavity is likely to be enlarged, and the Fallopian tubes dilated.

The general conclusion at which I have arrived, is to restrict the use of intrauterine injections within the narrowest limits. I rarely employ them now, except in cases of urgent danger from menorrhagia.

We may obtain almost all the advantages that injections are capable of giving by other means. For example, the same agents which are useful in the form of solutions for injection, may be employed either by swabbing, or solid, or in the form of ointment. Thus, where the use of chromic or nitric acid, or perchloride of iron, or iodine or bromine is indicated, these agents can be applied soaked on a sponge or piece of cotton, or on a glass- or hair-pencil, the cervix having previously been well dilated. Nitrate of silver is far better applied in the solid form: even then it is liable to cause severe colic. The risk of this may be lessened by reducing the caustic, by fusing it with an equal part of nitrate of potash. The ordinary way of using the solid nitrate of silver—that is, by holding a piece of the stick in a forceps or porte-crayon—is objectionable. The piece may fall out or break, and a fragment left behind in the cervix or body of the uterus may give rise to intense agony, and even metritis. To avoid this accident, I have for many years adopted a contrivance I learned from Sir Benjamin Brodie, who armed the ordinary probe by dipping the end into nitrate of silver, fused in a watch-glass over a spirit-lamp. I use special probes of pla-

tinum or silver, mounted on handles of convenient length. These probes may be curved to follow the course of the uterine canal. This is far the best way of applying nitrate of silver to the os and cervix uteri; and it is the only safe way of applying it to the interior of the uterine cavity. The armed end of a probe may be passed into the uterus without the speculum, although the aid of this instrument is sometimes convenient. For example, unless the armed probe be protected by a cannula, the caustic will first touch the vulva and vagina in its passage, which is apt to leave unpleasant effects, and the guiding finger of the operator will be stained.

One of the most widely useful topical applications to the mucous membrane of the cervix and body of the uterus is sulphate of zinc. The value of this agent, when applied to the relaxed or morbid mucous membrane of the vagina in the form of injections, is familiarly known: how to apply it to the uterine mucous membrane is, therefore, a matter of great interest. This has been accomplished by Messrs. Johnson, the well-known assayers, on the suggestion of Dr. Braxton Hicks, who prepared small cylindrical sticks of fused sulphate of zinc weighing three and five grains. These can be carried quite into the uterus without having touched the vagina by the way, by means of a cannula, first made on my design by Messrs. Weiss, and now generally sold by instrument-makers. It consists of a silver cannula of the size of a No. 8 or 9 catheter, gently curved, open at the end, and supplied with a stilet or piston. The stick of sulphate of zinc or other material is placed in the uterine end of the cannula; the instrument is then passed into the uterus just as the uterine-sound is passed, the patient lying on her left side; and the operator's finger, placed on the os uteri, guides the instrument. It is a great advantage of this contrivance that the use of the speculum is quite unnecessary after it has aided in establishing the diagnosis which supplies the indication in treatment. When the instrument has gone the proper depth, the piston pushes out the stick, and the instrument is withdrawn, leaving the stick to dissolve. This it soon begins to do, and, by its speedy effect in constringing the mucous membrane, it keeps itself *in situ* until it is completely dissolved.

Nitrate of silver, reduced by admixture with nitrate of potash, may be used in the same way; so may persulphate of iron, but this should be considerably reduced. When used nearly pure, I have known it cause severe colic and bleeding.

A most precious way of applying astringents, caustics, solvents, or alteratives to the interior of the uterus, is in the form of ointment or pasma. In this way almost any substance can be applied. Where grease is objectionable as a vehicle, a pasma of suitable consistence may be made by aid of glycerine or other matters. In this form we may use substances which cannot easily be applied in any other way. For example, we can hardly use bromine, or iodine, or mercury, in a solid shape; and to use them in liquid form is open to the objections already discussed. Almost anything can be made into an ointment or pasma, and thus we get a complete practical command over a large range of useful agents.

To introduce ointment into the cavity of the uterus, Messrs. Weiss have made from my design a very convenient instrument, also capable of being used like a sound without the speculum. The instrument is easily charged by dipping it into the ointment—a sufficient quantity of which is carried into the uterus, and, by pushing up the piston, is deposited there.

If it be desired to apply a powerful liquid caustic, as chromic acid or strong bromine, to the interior of the uterus, this can be done by the ointment-carrier. A few shreds of asbestos may be packed in the space between the eyelet-holes and charged with the fluid. On ramming down the piston, the fluid will be squeezed out.

In discussing the action of powerful styptic injections in arresting flooding after labour, the conditions under which the practice I have recommended is indicated have not always been accurately appreciated. The great agent, of course, in stopping hæmorrhage, is the constriction of the uterine vessels by the muscular wall in which these vessels run. All the ordinary means of arresting hæmorrhage are aimed at producing muscular contraction. But muscular contraction depends on nervous power. Thus cold, grasping the uterus, introducing the hand, galvanism, all depend for their efficacy upon the spinal cord being able to respond to the peripheral call. When, therefore, these means prove sufficient, the inference is *generally* warranted that the case, although serious, is not desperate. The condition is very different when the excito-motor function is suspended; when neither by peripheral excitation, nor by centric stimulus, the nerve-force can be drawn or sent from the spinal cord to the uterus in sufficient intensity to cause contraction. At this point, unless the bleeding is arrested by syncope, or by temporary enfeeblement of the circulation, the patient is in the most imminent danger of death. The slightest shock or disturbance will extin-

guish the flickering spark of life. Under such circumstances I have known death follow, to all appearance immediately caused by, the injection of cold water, or passing the hand into the uterus. If, instead of cold water, we inject a solution of perchloride of iron, the same catastrophe may ensue. Is it more likely to ensue? Very careful observations are required before this question can be answered in the affirmative. People are apt to think that cold water is so simple a thing that it cannot do any harm. But if it cannot do any harm, is it not probable that it is, under the conditions discussed, equally powerless to do any good? Harmless remedies, as a rule, fail in great emergencies. Now, cold water fails not because it is harmless, for the shock and depression which it causes are extremely dangerous; but it fails because, nervous power being exhausted, it cannot excite uterine contraction, and it has no other virtue in arresting hæmorrhage.

Here, then, it is that styptics come to the rescue. The emergency is extreme, and would be desperate, but for the new power invoked. If blood be still running, it is instantly seized at the mouths of the vessels, which become sealed up by coagula. It also constricts the inner surface of the uterus, and thus further closes the vessels. The system then has time and opportunity to rally, and by and by the contractile power returns. In estimating the relative value, then, of cold water and perchloride of iron, we must reflect that iron acts and saves life when water is inert or injurious. If occasionally death follows, and is apparently accelerated by, the iron injection, we have, on the other hand, to remember, that it was used as a last resource, when the patient was likely to die even if nothing were done, and that even under these unpromising conditions *many lives, to all appearance doomed, have been saved.*

The great lesson to learn is to take courage to use the styptic in time; that is, before the vital power has sunk too low. It was not to be expected that a remedy powerful enough to save under the last extremity should be altogether free from danger. But I have seen so many women bleed to death, and have seen so many saved by the timely use of the iron injection, that I am much more afraid of the bleeding than of the remedy.

In some cases, there is reason to believe that the iron enters the uterine vessels. I have known intense pain in the uterus follow immediately on the injection. How is this explained? If blood were present in the vessels, it is a chemical necessity that contact with the iron would cause coagulation. I infer, then, that in some cases the vessels are for a time nearly empty; and that there is a certain amount of suction-action induced by the relaxed state of the uterus, and by the lateral or semiprone position of the patient. I would therefore urge that the patient be placed on her back, and that the uterus be grasped firmly between the two hands of an assistant during the injection.

In some cases, it is easy to carry a swab of sponge soaked in the iron solution into the uterus. In this way probably some of the risk attaching to injection is avoided. The persulphate of iron, which is preferred by our American brethren, may have its advantages. Its styptic force is probably greater. It may be used in the form of one part of the liquor ferri persulphatis of the *British Pharmacopœia* to six or eight of water. The proper strength of the perchloride solution is one in ten.

ARTERIO-CAPILLARY FIBROSIS.

By LIONEL S. BEALE, M.B., F.R.S.,

Professor of Pathological Anatomy in King's College, and Physician to King's College Hospital, London.

WITH reference to the observations of Dr. Johnson in the last number of the JOURNAL under the above heading, I beg permission to remark that my colleague is altogether mistaken in the inference which he has drawn concerning my opinion as regards the results of his labours, for nowhere have I even hinted that Dr. Johnson had "*mistaken amyloid disease or other forms of degeneration for true muscular hypertrophy*". My words are: "It has, I think, been too hastily assumed that the thickening is really hypertrophy of the muscular coats of the arteries. If this thickening is to be regarded as *hypertrophy*, it is unquestionably associated with great change and degeneration of the normal tissue." And then follows the paragraph quoted by Sir William Gull in the JOURNAL of the week ending December 28th, 1872. These extracts are taken from the last edition of my book on *Kidney-Diseases, Urinary Deposits, and Calculous Disorders*, pp. 71-72, and were written nearly five years ago. The book was published in October 1868.

The difficulties under which I then laboured have not been removed; and Dr. Johnson must pardon me for remarking that, as far as I am able to judge, there is, so to say, still plenty of room for differences of opinion upon the question at issue. My friend speaks of "true mus-

Jan. 11, 1873.]

cular hypertrophy" of the arterial walls; but how is one to feel sure that the appearance one sees is really due to "true muscular hypertrophy"? Is this not, in fact, a question of interpretation?

Dr. Johnson feels convinced that the drawing he gives (fig. 2, p. 4, BRIT. MED. JOURNAL, January 4th, 1873) has been copied from an artery the muscular tissue of which was "hypertrophied"; but I venture to think that some who have studied the small arteries in health and in disease with great care will not acquiesce in that opinion: at any rate, the appearances delineated may be accounted for in more ways than one.

If by "true muscular hypertrophy" is to be understood an increase in the amount of muscular tissue, associated with a corresponding increase in contractile power of the vascular coats, I think it will be very difficult for any one to feel perfectly convinced that he has seen a true example of such a change. To decide such a question affirmatively, it seems to me, would be no easy matter. It is an unquestionable fact, that a *healthy artery* may be so contracted in part of its course as to be indistinguishable from an artery of less diameter, but with thicker coats. If such a specimen were examined only in this contracted part, the observer might reasonably infer that the vessel was a small artery, the contractile coat of which had become considerably hypertrophied; while, if he followed the vessel a little further, he might find that the tube expanded to three or four times the diameter of the contracted portion, its walls being reduced proportionately in thickness. I am speaking now from actual observation: indeed, one or two specimens illustrating this fact were shown by me at the *soirée* of the Royal Medical and Chirurgical Society.

I have not succeeded in obtaining a single specimen which seemed to me conclusive in favour of the view that the muscular tissue of the artery was really hypertrophied: nor do I feel satisfied, looking at the question either from the physiological or from the pathological side, that such a change ought to be regarded as one likely to occur under any supposable circumstances. These are, of course, but conclusions and opinions of an individual—arrived at, however, only after a good deal of careful investigation and thought. They may be altogether erroneous; still it appears to me that the questions discussed can be determined only by careful individual research, and repeated observation and discussion.

I am sorry to learn that the questions in dispute are to be referred to a "scientific committee", which will, I suppose, have to decide or come to a conclusion of some sort upon the evidence presented to it. I venture to think that, if the Fellows of the Society who are interested in these inquiries would work in their own way and in their individual capacities, and publish the results of their labour, they would add much to our knowledge. But science can gain nothing by opinions authoritatively expressed by committees, while the interests of individual observers may be unfairly promoted or damaged by the decision arrived at, without the cause of truth being in any way advanced. Why cannot those who have formed opinions express themselves freely and openly, and accept the responsibility of their statements? Scientific committees might, and I believe would, act very injuriously, by repressing individuality and discouraging work which happened to be contrary to the "tendencies of thought" at the time; while, on the other hand, it is difficult to see what good could possibly result from their deliberations. Some seem to think that opinions of little value in themselves acquire authority, and perhaps infallibility, by being expressed in a formal way, and endorsed as the opinion of the majority of a committee. The tendency of scientific committees would be to repress liberty of opinion and liberty of thought. What is now much to be desired in every branch of science is the encouragement of individual work and thought in every possible way—not the promulgation, by authority, of opinions concerning the work done by individual workers.

CASE OF HÆMORRHAGE INTO THE PERITONEAL CAVITY.*

By A. WELLESLEY TOMKINS, M.D. Dubl., Leamington.

A YOUNG woman, aged 24, eight months married, retired to rest on the night of September 18th, apparently in good health. She had not menstruated for three periods, and believed herself to be pregnant. In an hour afterwards she awoke her husband, complaining of sharp pain principally referred to the left iliac region. Her usual medical man saw her soon afterwards, and diagnosed internal hæmorrhage. She continued to sink; the surface of the body rapidly blanched; the pain was general over the entire belly. She was conscious to the

last, and expired about thirteen hours after the commencement of the attack.

Sixty hours after death we made an examination of the body, the results of which, being totally negative, may be summed up in a few words. The entire abdomen was distended with blood, fluid and in immense clots. Each viscus was separately and carefully examined; the intestines throughout their entire extent; and finally, and especially, as being the most probable source of the mischief, the uterus, ovaries, and Fallopian tubes. The uterus itself was found to be normal, unimpregnated, and free from any sign of congestion or inflammation. The left ovary was slightly larger than its fellow; but neither in them nor in the Fallopian tubes could the slightest lesion be discovered to account for the hæmorrhage, which in a few hours had drained the entire system. The thoracic viscera were healthy, with the exception of a slight adhesion towards the apex of the right lung.

The following facts have since come to my knowledge, and seem to throw some light on the subject. The deceased was the second of a family of four. The eldest, a young man, had been from a child subject to epistaxis, and is now hemiplegic from an apoplectic attack at the age of seventeen. The deceased commenced to menstruate at thirteen years, and the discharge was almost invariably so profuse as to necessitate medical advice. Her two sisters present the same tendency to hæmorrhagia, and she and they had been subject to violent epistaxis upon little or no provocation.

The following queries present themselves.

1. Had the hæmorrhage any connection with the tendency to lose blood, as shown by the hæmorrhagia and frequent epistaxis?
2. What degree of influence had the amenorrhœa of the past three periods upon this tendency?
3. What was the source of the hæmorrhage?

TRICÆLIAN HUMAN HEART.*

By S. MESSENGER BRADLEY, F.R.C.S., Lecturer on Comparative Anatomy in Owen's College, Manchester.

AMONGST the rarer cardiac abnormalities, are those in which there is a deficiency in the usual number of cavities: thus, instances have been recorded by Wilson,† Standert,‡ Farre,§ and Ramsbotham,|| of hearts composed of but two chambers, an auricle, and a ventricle—a form similar to the condition of the organ in fishes, and known as *dicælious* heart (Hunter). The instances of three-chambered hearts (*tricælious*) are still rarer: their occurrence is even doubted by Dr. Todd (in his article on the Abnormal Conditions of the Human Heart, in the *Cyclopædia of Anatomy and Physiology*), the cases related by Breschet¶ and by Wolff** being considered by him to belong rather to the former category of *dicælious* hearts, as the auricular septum was in each case present, although imperfect. The specimen I have the pleasure of now showing to the Society, is a good illustration of a *tricælious* heart, a condition which is persistent among the Batrachia.††

The history of the case—for which, together with the specimen, I am indebted to Mr. W. O. Jones of Bowdon—is as follows. N. F., born at 8 A.M. on April 22nd, 1872, appeared to be perfectly healthy and well nourished; his breathing was, however, noticed from the first to be hurried. He took the breast, and the nurse gave him some weak gruel occasionally in consequence of the scantiness of the mammary secretion. About eleven o'clock, on the morning of the 23rd, his breathing was more hurried, and he was unable to suck; the bowels acted naturally, and there was a copious excretion of urine. About two o'clock, some gruel was given; and at three he had an attack of vomiting, immediately after which the skin assumed the characteristic hue of cyanosis, and symptoms of suffocation showed themselves. He lingered till mid-day on the 24th, when he died. The *post mortem* examination was made hurriedly, and unfortunately the heart alone was removed, the vessels being cut off close to their attachment. The

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

† *Phil. Trans.*, 1798. In this case, the *dicælious* heart was situated on the convex surface of the liver. The child lived for seven days.

‡ *Phil. Trans.*, 1805.

§ On the *Malformations of the Human Heart*. London: 1814. Dr. Farre relates a case very similar to mine, in which the child lived seventy-nine hours, and thirty after respiration was effected.

|| *London Medical and Physical Journal*.

¶ *Rep. Gén. d'Anat.*, tom. ii.

** In Kreysig's *Die Krankheit. Herz.*, B. iii.

†† Life, for a considerable period, appears to be compatible with a very similar cardiac condition. Dr. Elliot of Carlisle relates a case (in *Med.-Chir. Trans.*, 1868), in which there was an absence of the ventricular septum, where life was prolonged to the nineteenth year. There are other cases of a like character on record.

* Read before the Birmingham and Midland Counties Branch.

history shows that the child appeared tolerably well, circulation and respiration being perfectly established and efficiently carried on for twenty-seven hours, and that he lived for fifty-four hours.

Description of the Heart.—The heart, which was normal in size, weight, and situation, consisted of two auricles and but one ventricle, from which a single artery arose, giving off, first of all, two pulmonary arteries, and then, pursuing its course in the ordinary direction of the aorta, gave origin to the usual number of aortic branches. The single emergent vessel, which was both pulmonary artery and aorta in one, was larger than either vessel at birth taken singly, and arose from the right and anterior border of the ventricle. It was furnished with three well formed semilunar valves, and gave origin to the two pulmonary arteries, half an inch after leaving the heart: the pulmonary arteries were situated close together, the left, however, being at a slightly higher level than the right. The right auricle was larger than usual, the left extremely small; the foramen ovale was large and patent; the right auricle received the caval, and the left the pulmonary veins, in the ordinary manner. There was no trace of a ventricular septum, but the left wall of the single ventricle was double the thickness of the right. The auriculo-ventricular valve communicated with the right auricle alone; it was neither clearly bicuspid or tricuspid, but approximated the mitral valve in character rather than the other.

descending aorta to supply the lower parts of the body; the blood from these various sources being all returned in the customary mode by the two caval veins into the right auricle.

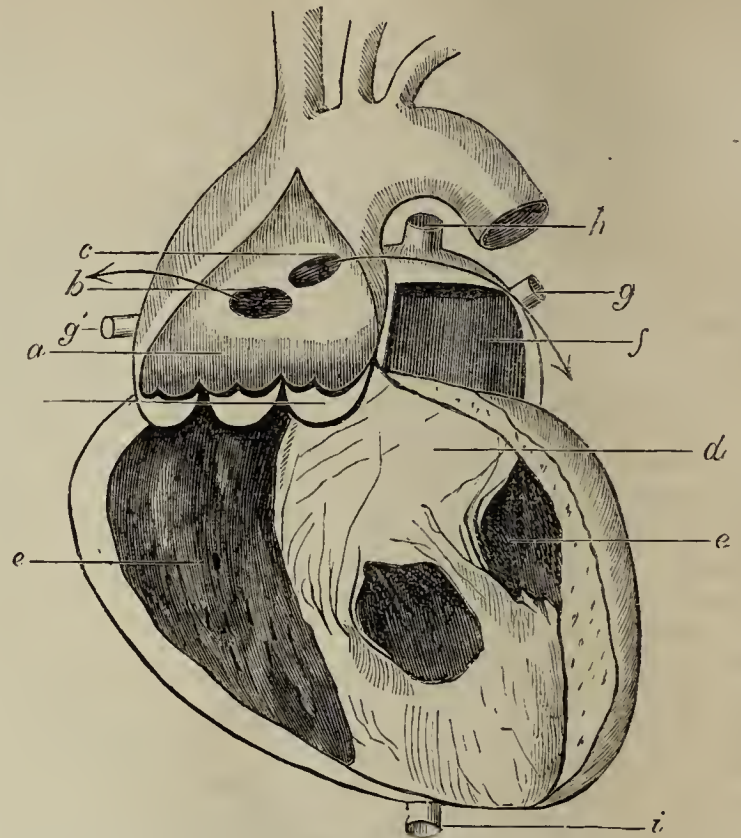


Fig. 2.—Internal view of Heart. *a*. Single emergent Vessel. *b* and *c*. Orifices of Pulmonary Arteries. *d*. Auriculo-Ventricular Valve. *e*. Cavity of Single Ventricle. *f*. Cavity of Right Auricle. *g* and *g'*. Pulmonary Veins. *h* and *i*. Superior and Inferior Venæ Cavæ.

Comments.—This case is one of arrested cardiac development about the ninth week of intrauterine growth. At this period, the aorta and pulmonary arteries are composed of a single tube, which subsequently becomes divided into two by a spiral fold, the anterior portion (pulmonary artery) becoming connected with the right ventricle, the posterior (aorta) with the left ventricle. At this same epoch, viz., the ninth week, the ventricular septum is commencing to be formed, but there is frequently no trace as yet of a divisional wall between the auricles. In this case, however, the auricular septum has become developed, whilst there has been complete arrest of the development of the ventricular septum.

CASE OF DISLOCATION OF THE PATELLA ON ITS EDGE.

By W. F. MARSH JACKSON, M.R.C.S., Smethwick.

THE patella was turned on to its outer edge, and was firmly fixed between the condyles. Several hours had elapsed since the occurrence of the accident; but there was scarcely any swelling, the patient being a spare, middle-aged woman. The displacement was caused by direct violence—a blow against a door. There was great pain, which the slightest manipulation greatly intensified. I had no assistance whatever. The patient being in bed, I seated myself at the side, and, having raised the foot on my right knee, pressing at the same time with my left hand on the lower part of the thigh, I tried to replace the bone, but it was immovable. I then tried to flex the joint, but this occasioned such acute pain that I desisted at once. Being more than a mile from home, and so from chloroform, and being anxious to go to a labour, I thought I would try to push up the bone out of the groove. I had often noticed that, in my own person, when the foot was planted firmly on the ground the patella was movable upwards; so, raising the patient's foot as high as I could on my right knee as before, I applied the tips of my thumbs to the lower border of the patella, and the palmar surfaces of the two first fingers of both hands along the bone, and pushed up the bone. It readily ascended about half an inch, and then instantaneously righted itself.

In no surgical work which I have seen has this manœuvre of pushing up been noticed. I tried the only methods I had read of or been taught, and failed. Necessity is the mother of invention; so I tried pushing up instead of twisting or pulling down, and I succeeded to my

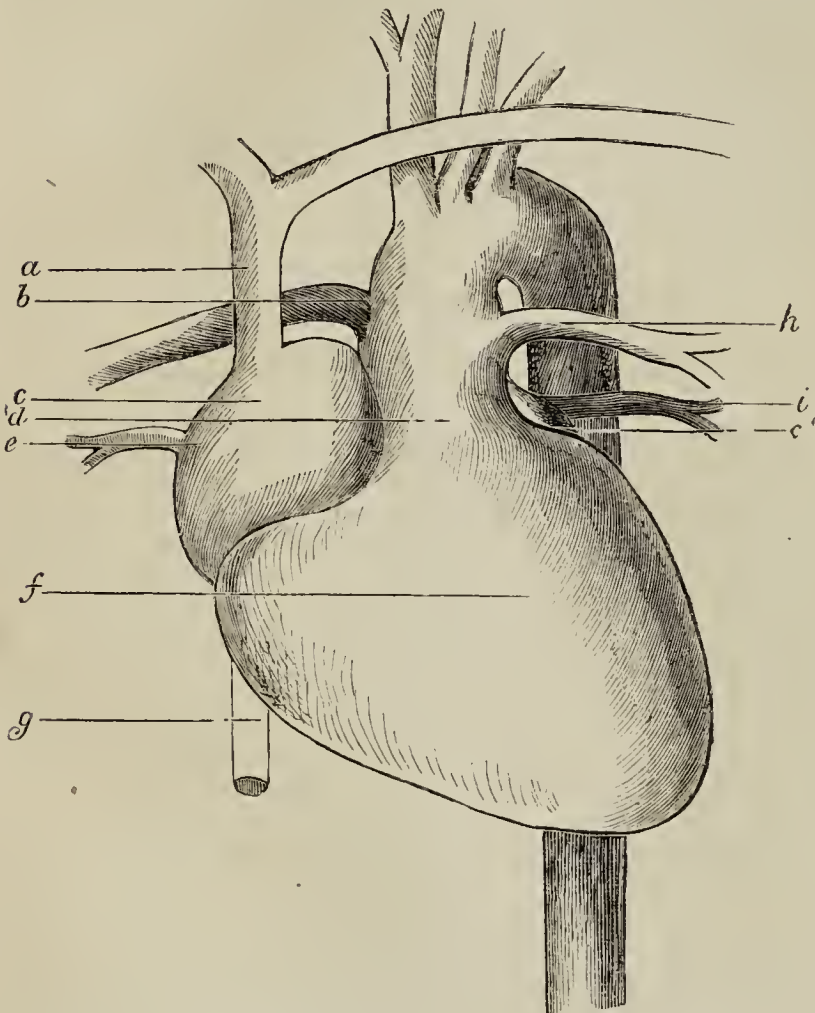


Fig. 1.—External view of Heart and Great Vessels. *a*. Superior Vena Cava. *b* and *h*. Right and Left Pulmonary Arteries. *c*. Right Auricle. *c'*. Left Auricle. *d*. Single emergent Artery, composed of both Aorta and Pulmonary Arteries. *e* and *i*. Right and Left Pulmonary Veins. *f*. Single Ventricle. *g*. Inferior Vena Cava.

The accompanying diagrams will perhaps make plain the foregoing description: they are of natural size; but in the first I have ventured to add more of the emergent artery than is seen in the specimen, in order to explain more clearly the course which the circulation would take in this singular case.

Course of the Circulation in the Tricalious Heart.—The blood, leaving the heart by the single vessel, would, first of all, pass into the pulmonary arteries and partially traverse the lungs, whence it would be returned, in the usual manner, by the pulmonary veins, into the left auricle; here, however, it would find but one channel open to it—viz., that of the foramen ovale, through which it would travel, first into the right auricle, and then into the single ventricle. The greater part of the blood, however, would never reach the lungs at all, but would continue along the vessel to be propelled, partly into the three arteries supplying the head and upper extremities, and partly through the

great satisfaction. It seems to me, now, that to attempt the reduction of these cases by force is very much like attempting to extract a child with the long forceps, regardless of the pelvic configuration. I am not aware whether any one has already recorded a similar plan of treatment, or whether I may claim to be the first to suggest "pushing up" as the proper treatment of these difficult cases.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE ADMINISTRATION OF ETHER AS AN ANÆSTHETIC IN HOSPITALS.

THE administration of ether as an anæsthetic is gaining ground, as may be seen by the following reports. No long time has elapsed since we first prominently directed the attention of the profession in this country to the many advantages of ether over chloroform as an anæsthetic agent, the most important being its greater safety. We drew repeated attention to the alarming number of deaths from chloroform, and called on surgeons throughout the country to give ether a fair trial. We ventured to hope that an anæsthetic which had been generally adopted throughout America and many parts of the continent, after extended experience in the use of chloroform, would meet with an impartial trial in this country. In this hope we have not been disappointed. At the same time, a little more interest and energy in so important an inquiry than has yet been shown is desirable. Every surgeon has it in his power to assist in the inquiry, and with very little, if any, extra trouble to him or anyone else. That he has not had a fatal case of chloroform inhalation, and being quite satisfied with that anæsthetic, is not a reason why a surgeon should not aid in solving the question of the relative advantages of ether and chloroform. Many surgeons are very far from being satisfied with chloroform, and dread its results. They would be delighted if it were proved that ether answers practically as an anæsthetic and at the same time that it is a much safer anæsthetic than chloroform. We trust that our appeal will lead to good results, and put us fairly in possession of the truth about ether as an anæsthetic agent.

MIDDLESEX HOSPITAL.

Mr. G. EVERITT NORTON, chloroformist to the hospital, writes:—For the past three months, ether has been generally administered at this hospital with satisfactory results. The longest time during which its inhalation has been continued was an hour, in a case of colotomy. The patient did not experience any inconvenience from the anæsthetic, and had no sickness. It is administered at this hospital mixed with air, passed over a vapour of ether at a temperature of about 70 deg. Patients find its inhalation by this method far more pleasant than by the ordinary methods. There appears to be by this plan less struggling, and the patients rapidly become insensible. The average time required for an adult is from three to four minutes, and for a child from one to two minutes. I administered ether in a case of ovariectomy last week. The patient was fully under its influence in three minutes and a half; the operation lasted thirty-five minutes, and, during that time, she only required two ounces and a half. Her pulse became very weak during the operation, and at times almost imperceptible. She was slightly sick about half an hour after the operation, and once again seventeen hours afterwards. She is doing well. The sickness after ether is not more frequent than after chloroform; and, when it does occur, it does not continue so long, but is more severe while it does last. Ether also sometimes causes great excitement a few hours after the operation, which, of course, in some cases—as delicate eye-operations—is a thing to be avoided. A little boy was operated upon at midday for hip-joint disease, ether being administered. In the evening, he became so excited that it was with difficulty he was kept lying down in bed. The rigidity with ether is not more marked than with chloroform, and is soon overcome by pushing the ether anæsthesia. The pulse varies a great deal during the administration of ether; in some cases it has been noticed as high as 140 in a minute, in others as low as 40. In some cases, during the inhalation of ether, there is an excessive secretion of saliva. Patients who have inhaled both chloroform and ether give the preference to chloroform as being far more

agreeable. Consciousness does not return more quickly after ether than after chloroform. In conclusion, ether does not appear to have any advantages over chloroform, unless it be proved to be safer. Patients often complain of the taste of the ether on the day following the operation, and generally smell strongly of it. I have now fixed to the expiratory valve of the inhaler which I use a long India-rubber tube, which conveys the expired ether to the floor. This prevents the operator and assistants from being annoyed by the vapour.

LONDON HOSPITAL.

Mr. LEWIS MACKENZIE, house-surgeon, writes:—Our four surgeons almost universally use ether now: Mr. Hutchinson makes the exception in the case of old people, for whom he prefers chloroform. Each house-surgeon has an "anæsthetic record"—that is, a book in which he enters the particulars of every case in which anæsthesia is produced, etc. Ether has been administered sixty or eighty times at this hospital with perfect success. The violence of the "excitement stages" has in certain cases been rather deleterious—as, for instance, to-day, in a case of compound comminuted fracture of the lower jaw, the muscular spasm and talking, during the recovery from anæsthesia after administration of ether, completely shifted all the apparatus, allowing the fragments to get out of position. In such a case, Mr. Hutchinson remarked, chloroform would be judiciously used to keep up a state of anæsthesia originally produced by ether. I have as yet seen no particularly good inhaler for ether. We generally use a towel, in form of a cone, with a sponge. I am not in a position to say anything definite about the circulation, respiration, vomiting, etc., at present.

UNIVERSITY COLLEGE HOSPITAL.

Mr. WALTER RIGDEN, resident medical officer, writes as follows.—I have as yet only administered ether twelve times, and consequently have not yet been able to form an opinion of much value. The plan of administration has been that recommended by Dr. Joy Jeffries—i.e., a towel folded into a cone and a piece of lint about eight inches square screwed up and put into the inside. I then pour on to the lint as much ether as I can get it to absorb without soaking through to the towel—generally about an ounce and a half—and tell the patient to breathe deeply. In about four or five minutes he has generally been sufficiently under for slight operations, such as opening abscesses, or examining sinuses; in from seven to ten minutes he has generally been thoroughly under for any operation. Patients have inhaled it well; there has been no more struggling than usually occurs with chloroform; it generally sets up more or less bronchial irritation and flow of saliva, and this may last a quarter of an hour after the operation, but this is not usual. The patients have not complained of more unpleasant sensations either during the administration or afterwards than are often noticed with chloroform inhalation. In three cases out of the twelve there was vomiting afterwards, and in these it was not protracted; one of the other patients felt nausea for an hour or two afterwards, but did not vomit, and two suffered from severe headache for twenty-four hours after the operation. I have used three or four ounces of ether for operations of fifteen or twenty minutes' duration; and in one operation for lacerated perinæum, which lasted seven minutes under an hour, I kept the patient well under with seven-and-a-half ounces. I have not noticed the ether to escape into the surrounding air to any disagreeable extent. From my limited experience, I think that ether answers very well: the chief objection seems to be, that one has to use much more of it than one would of chloroform.

CHARING CROSS HOSPITAL.

Mr. DE LA MOTTE, house-physician, writes on December 29th:—Ether, I believe, is to be tried shortly.

THE HULL INFIRMARY.

Mr. J. W. PLAXTON, house-surgeon, writes on December 29th:—Ether, so far as I can ascertain, has never been used as an anæsthetic in this infirmary. It will be so used, for the first time, on Wednesday next, January 1st, 1873.

BRADFORD INFIRMARY.

Mr. W. L. ROBERTS, house-surgeon, writes on December 26th:—We have not as yet used ether as an anæsthetic. I hope to do so, and I then may be able to give you some information.

YORK COUNTY HOSPITAL.

Mr. FRANK H. HODGES, house-surgeon, writes:—Ether as yet has only been employed in the operations performed by Mr. Husband (our other two surgeons being perfectly satisfied with chloroform) in four cases. The first was that of a child aged 13 months, in whom tenotomy was performed for talipes equino-varus. Anæsthesia was induced in three minutes. The child was very sick after the operation. One

and a half ounces of ether were used. The second case was one of necrosis of the sternum in a man aged 50. Anaesthesia was induced in six minutes. There was no sickness. The patient had been chloroformed for a previous operation, and much preferred the ether. Four ounces of ether were used. In the third case, primary amputation of the right leg was performed at the seat of election, and amputation of the left foot (Syme's), for railway injury. The patient was a man aged 18. Anaesthesia was induced in four minutes, and maintained thirty-three minutes. Four ounces of ether were used. This patient had been brought to the hospital a distance of upwards of twenty miles, and had thus lost a quantity of blood. Notwithstanding this, at the conclusion of the operation he had a remarkably good pulse and natural expression of countenance. He made a rapid recovery, and in four weeks was up, reclining on a couch. The fourth case was one of amputation of a finger in a man aged 55. Anaesthesia was induced in five minutes. Three and a half ounces of ether were used. This patient complained severely of pain when recovering from the ether; he was sick till midnight, and greatly depressed the whole day following. In a former amputation, chloroform had been employed, which agent the patient infinitely preferred. Mr. Husband is favourably impressed with the action of ether, and is resolved to give it a fair trial. I employ a large hollow sponge, four thicknesses of a towel being stitched round it; over this I place gutta-percha tissue, and carefully exclude all air till the induction of anaesthesia. I then keep up the action of the agent as it may be required. For the last two years I have kept a short record of all my anæsthetic administrations, and am of opinion that, were this universally adopted by house-surgeons, some valuable data would be obtained. This practice gives very little additional trouble, and, if of no other advantage, compels the anaesthetist to "carefully watch his patient". I enclose the headings of the book I use for this purpose, and am thankful to add that I have administered anaesthetics in nearly two thousand cases without one fatal result.

WORCESTER GENERAL INFIRMARY.

Mr. CHARLES E. HARDYMAN, house-surgeon, writes on December 26th:—We have not used ether by itself at this infirmary yet as an anaesthetic, though lately I have given it in conjunction with chloroform with good results.

DEVON AND EXETER HOSPITAL.

Mr. EDWARD DOMVILLE, house-surgeon, writes:—We propose to make a trial of ether in the course of the next few weeks.

BRISTOL ROYAL INFIRMARY.

Dr. R. SHINGLETON SMITH, house-surgeon, writes:—We have had very little experience of ether as an anaesthetic in this infirmary. It has been given in a few isolated cases, but its administration as a regular thing has not been adopted. In the instances where it has been used, it was found to be so slow in its action, and so large an amount of the agent was required, that chloroform or methylene bichloride was used after the inhalation of ether had been continued, with an unsatisfactory result, for a period of ten minutes or more. In a few cases, a mixture of methylene bichloride and ether has been employed, as recommended by Dr. Richardson, but the time required for the production of anaesthesia with this compound is longer than with pure chloroform or the unmixed methylene; accordingly, the latter agents are still preferred.

LINCOLN COUNTY HOSPITAL.

Mr. H. D. MALE, house-surgeon, writes:—"We have not yet tried ether as an anaesthetic, but intend doing so shortly."

WESTON-SUPER-MARE HOSPITAL.

Mr. ROBERT S. ARCHER, M.B., house-surgeon, writes on December 28th:—In the one case in which I have seen ether employed here, the result was most satisfactory. The patient was brought into as perfect a state of anaesthesia as I have ever seen from the use of chloroform, and I think in a shorter time. No bad consequences followed; no vomiting, nor even an inclination to be sick; nor was there any headache, or any uneasiness whatever. The patient recovered from the effects of it much more quickly than from those of chloroform. The patient was seventy-five years old, and the operation was amputation of the leg.

GENERAL HOSPITAL, WOLVERHAMPTON.

Mr. RAVENHILL, house-surgeon, writes:—Ether has only been used in this hospital twice during the last few years. On one occasion it acted well; on the other, although a large quantity was given, little or no anaesthetic effect was produced, and chloroform had to be resorted to.

GENERAL INFIRMARY, CHESTER.

Dr. WILLIAM HAINING, house-surgeon, writes:—I have not seen ether once administered. Here we have on two occasions, when ovariotomy was performed, used a mixture of chloroform and ether (1 to 3),

but in both cases sickness was produced, and recourse was had to pure chloroform. Lately, since the revival of ether administration has been advocated in some of the medical journals, we have had unusually few opportunities of practising it.

[To be continued.]

REPORT ON THE TREATMENT OF SICK-HEADACHE.

[Continued from p. 715 of number for Dec. 28th.]

LEEDS INFIRMARY.

Dr. CLIFFORD ALLBUTT has used guarana in several cases with results of so doubtful a kind, that he is not encouraged to make many farther experiments with it. In one case, however, the good effect has been so striking and so permanent as to deserve record. The patient was a lady's maid, of slight build, and nervous temperament; and she had been subject to headaches from early adult age. Her age when seen was about forty-two. The headaches had formerly been of a distinctly migrainous character, but latterly sickness had occurred only at rare intervals. They were either frontal or hemicranial, and had latterly become so frequent as to make her life a burden to herself, and useless to others. She had been placed under medical advisers, who had exhausted all ordinary remedies. Dr. Allbutt therefore ordered the guarana, and for many months thereafter he heard nothing more of the case. Within the last few days, however, he happened to meet the patient and her mistress, and was informed that the guarana had proved almost a perfect cure. The headaches still would return; but she keeps the powders at hand, and one or two of them almost invariably prevent their attaining any important degree of severity. This happy effect of the drug has restored her to usefulness and activity; before she obtained it her prospects seemed almost hopeless. It appears that the guarana suits certain cases only, and Dr. Allbutt is disposed to think that the less the abdominal derangement, and the more purely "nervous" the headaches, the better the guarana is likely to answer.

INFIRMARY FOR CHILDREN, LIVERPOOL.

EMPYEMA: PARACENTESIS THORACIS: REACCUMULATION OF FLUID AND SECOND TAPPING: RECOVERY.

(Under the care of Dr. OXLEY.)

FOR the notes of this case we are indebted to Dr. G. H. MacSwinney, house-surgeon.

William McD., aged 7, was admitted on February 13th. He had a fall a week previously, and had since complained of pain in the right side. The child had been very healthy previously. The mother's family was consumptive. The patient had been feverish since the injury. He lay on the affected side, and did not complain of pain on examination. Breathing was carried on almost entirely by the left side. The respiration was hurried. There was absolute dulness over the whole right side, and absence of vesicular murmur. There was increased circumference of the right side and marked bulging of the intercostal spaces. Pulse, 120; temperature, 99.6. On February 20th, the pulse and temperature having risen and other symptoms increased in severity, paracentesis thoracis was performed. The pneumatic aspirator was used and forty ounces of purulent fluid withdrawn. On February 21st there was increased vocal resonance; and a slight respiratory sound was heard over the whole lung, with the exception of a few interspaces about the middle lobe. The percussion-sound was still dull, but less so than before. The patient did well for several days, when the dulness again increased, and slight intercostal bulging was noticed. On March 11th the operation was repeated, and sixteen ounces of fluid, more sanious than the last, were withdrawn. The patient was discharged early in April, having done well since the last tapping. The right apex was now considerably flattened; dulness and vocal resonance were increased. Close to the spine behind, the respiratory murmur was audible, but was not clear elsewhere. The child's mother was requested to bring him occasionally as an outpatient. Two months after his discharge the right lung was in much the same condition. The flattening remained, and a small cavity was diagnosed in the apex. Otherwise, the boy appeared in very good health.

Forty ounces is, I believe, an unusually large amount in such a young child; and, as a second tapping was required a fortnight later, it is probable that a good deal remained in the pleural cavity after the first operation. Vocal fremitus and resonance were increased throughout, pointing to the consolidation which took place. It is possible that, had the operation been performed earlier, the right lung might have expanded more fully; but the history of phthisis in the family must be considered in connexion with this point.

LOCAL SECRETARIES will oblige by sending estimates of the number of new members, so that the proper number of JOURNALS may be ordered to be printed.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 11TH, 1873.

THE LATE EMPEROR NAPOLEON III.

THERE are probably few of our readers who have not been led by recent circumstances to pass in mental review the history and principles of lithotrity, and to apply their knowledge to the interpretation and illustration of the bulletins from Chislehurst, which have aroused sympathy for the sufferings, and interest in the prospects of recovery, of an imperial personage, whose sojourn in this country as an exile has been embittered by a severe illness of a kind which is never without peril, and which has in this case ended fatally in a sudden and unusual manner.

Lithotrity, as it is now practised, is one of the most recent and victorious achievements of surgical science. The idea and even the practice of introducing instruments, seizing the stone with those instruments, and reducing it to powder, so that it may in that form be expelled without any cutting operation, is indeed of early date. The extraction of vesical calculi after breaking them was, it is stated, practised in Egypt from time immemorial; and the French surgeons who accompanied Bonaparte in his Egyptian expedition saw the operation there. Indications of the practice of breaking small vesical calculi into pieces *in situ* are quoted from the writings of many ancient authors. Gruithuisen, a Bavarian surgeon, in 1813, and Elderton, a British surgeon, in 1817, first seriously discussed and devised means for performing the operation in a practical and advanced form. But their instruments were rude and unsuccessful. Civiale, in 1817, by his writings and by his subsequent persevering labours, first won for the operation a place in practical surgery. He was the first to perform the operation on the living subject, and deserves the credit of having, by the labour of forty years, firmly established the crushing operation in the first rank of surgical conquests. The percussion method of Baron Heurteloup, introduced in 1832, had some success, but proved inferior to that of crushing, and has been abandoned. British surgeons and mechanists have had a large share in perfecting the principles and practice of lithotrity. The sagacity, caution, and skill of Sir Benjamin Brodie, the successful practice of Coulson and Fergusson, and the great results achieved by Sir Henry Thompson, have carried lithotrity to a position of pre-eminent usefulness; and in these advances both French and English surgeons have been largely aided by the mechanical skill and invention of Mr. Weiss. The rules of practice now adopted all over the world are those of Civiale, perfected by Thompson.

In later years, the master lived to see himself surpassed by his pupil. It was after the repeated failure of Civiale that Sir Henry Thompson succeeded in relieving the late King of the Belgians of a portion of calculus, which was wearing out his life by intolerable sufferings which gave respite neither by night nor day, and barely allowed repose in the recumbent posture. Very soon after this triumph of the British surgeon, we had the opportunity of personally discussing its details with the veteran French surgeon, who bore frank testimony to the remarkable difficulties which had been overcome, and to the skill, tact, and firmness which had won a victory where he, the father of modern lithotrity, had despaired of success. The circumstances were of happy augury for the present case, although the conditions of difficulty were of another order.

The average age at which lithotrity is called for is very nearly that of the Emperor Napoleon. The late Emperor was in his sixty-fifth year. In 184 operations performed by Sir H. Thompson, of which he gave the details two years since (BRITISH MEDICAL JOURNAL, May 21st, 1870),

the average age of the patients was sixty-one; the youngest was twenty-two years old; only three were below thirty years; the oldest was eighty-four years. There were forty-six cases of seventy years and upwards. With very few exceptions, all stones of an ounce and upwards were reserved for lithotomy. All obviously below that were crushed. Not one case was refused operation, not one was left unfinished, and in no instance was an operation of lithotrity completed by lithotomy. The recoveries, reckoning every kind of casualty following the operation, were 93 per cent.; but, omitting five cases of death not by any means due to it, the mortality amounted to only 4 per cent. The author stated that "he had never lost a patient in the whole course of his experience, after crushing a stone which was no larger than a small nut; and this, he considered, was a size at which, with few exceptions, every stone ought to be discovered." It is thus seen that lithotrity is an operation which is applied with most advantage to calculi of small dimensions. The dimension of the calculus is an element of the first importance, and in connection with this, its chemical composition. "When lithotrity is employed", Sir Henry Thompson writes, "for a stone as large as a date or a small chestnut—and it is impossible to deny the excellent chance of success which this method offers to the subjects of such stones—a certain but still only small proportion of deaths must be expected; and the rate of mortality will correspond with augmentation in the size of the stone, and with the amount of disease and age on the part of the patient." With a large and hard calculus the danger is greater than with a large and soft calculus: inasmuch as more trouble arises in the crushing, the operation is the less readily applicable, and the fragments are more likely to cause mischief. The phosphatic or soft calculus may be crushed when it has attained more than the proportions indicated as drawing the line of suitability, with a better hope of success than either of the harder forms. The phosphatic form (that from which the Emperor Napoleon suffered) is, however, very likely to be accompanied by local catarrhal inflammation and distressing irritability, conditions which are also affected by the constitutional state of the patient, and which in any case render the delicate manipulations of the surgeon more difficult, the sufferings of the patient more considerable, and the prospects of a successful series of sittings less secure. The intervals between the sittings have to be determined by the results of each crushing operation; and the impression which can be produced on the stone on each occasion varies similarly with the immediate local conditions of stone and sensibility. When surgeons were less secure of their own erudite touch they believed themselves, as some still believe and perhaps rightly, to need the relative sensation of pain experienced by the patient during the operation to guide them during its progress; the experienced and thoroughly skilful operator does not fear to allow his patient the blessings of anæsthetic sleep when circumstances indicate it. The Emperor enjoyed this boon.

Collating the published bulletins and reading them by the light of the facts that the stone was large and of phosphatic composition, surgeons will be able to trace accurately the progress of the case in which surgical art is so largely interested. The first sitting was held on Thursday, the calculus being large and of no recent formation. The local conditions were of the somewhat unsatisfactory character which not unfrequently complicate large phosphatic calculi. The operation was successful, and an adequate progress was made in removal of portions of the foreign body. But on Saturday the local irritability and pain increased and caused suffering, and on Monday it was arranged to perform a further crushing, and to get rid of as much more of the detritus as possible. The results were satisfactory. In the words of the bulletin of January 6th, issued at 2 P.M., two hours after the operation, "The difficulties were greater than usual, but the results obtained were considerable. There is much suffering, together with some degree of constitutional disturbance, but the general strength remains good." On the morning of the 7th, a comparatively favourable announcement was made, the night having been fairly tranquil; but the symptoms of irritation again recurred, and the afternoon bulletin indi-

cated the persistence of unfavourable conditions. The morning of Wednesday opened unsatisfactorily, the night having been passed in much pain. In the words of the bulletin, "The local symptoms are more severe, but the general state remains as yesterday." Here may be traced the effect of an obstructing mass of calculus, which was so lodged as to cause local distress and much reflex irritation. Under these circumstances, measures were taken in preparation for a further sitting, intended to remove the obstruction and to give relief. The night of Wednesday passed very quietly, and Mr. Cooper Forster and Mr. Clover, who had been summoned to Chislehurst by Sir Henry Thompson, remained in view of an operation on the next day.

At eleven o'clock on Wednesday night, at 2 A.M. and 6 A.M. on Thursday morning, the Emperor was found, when visited by his medical attendants, to be sleeping naturally and soundly, and to be altogether better than on the previous days. At a little before ten, he was still in a state of comparative ease, and everything promised well. The proposed sitting was accordingly arranged for noon. But at 10.25 he was found to be suddenly sinking; he became unconscious; the pulse, which had previously been at 84, rapidly fell; and the heart failed in its action.

The signs of sudden prostration and rapidly approaching dissolution appeared. Nor were any means which could be employed in any degree successful in averting a suddenly fatal result. It was evident that death was occurring, either from a rapid failure of action of the heart or from arrest of the circulation by a blood-clot. Death followed within twenty minutes from the first seizure, the Emperor having been unconscious throughout, and of course also insensible to pain and spared from the pangs of death. It was hard, even for those who are taught by professional discipline to preserve their whole powers intact and alert during such emergencies, to realise the sad truth. For the agonised wife, to whom such bereavement seemed physically as well as morally incredible and overwhelming, its suddenness and tranquillity may well have seemed to add an additional pang to her moral suffering. "*C'est impossible*" has been before the cry of more than one widowed wife whom the sudden stroke of death has thus robbed of one who was nearest to her.

Such a termination to this history painfully illustrates the uncertainties which beset and the perils which underlie our art. It has nothing in common with lithotomy as such, but is a fatal incident, such as is recorded from time to time in conditions of apparent health, and also after any kind of operation. The mortality of lithotomy is, as we have seen, very small; and this is not amongst the fatal accidents which belong to it. Further light will be thrown upon the precise facts by a *post mortem* examination, which will, we believe, according to present arrangements, be made to-morrow by Dr. Burdon Sanderson.

CONTEMPORARY MEDICAL BIOGRAPHY.

MESSRS. BARRAUD and JERRARD have commenced the issue of a series of photographic portraits from the life, of members of "The Medical Profession of all Countries". The series opens with photographic portraits of Sir Thomas Watson and Sir William Fergusson. They are accompanied by short biographies, highly, but by no means unduly, eulogistic of these distinguished men. We may confess ourselves very much averse to illustrated biographies of the kind of contemporary medical men; nor does even the high authority of these eminent leaders of the profession reconcile us to this example of it. The biographical notice of Sir Thomas Watson states with truth that "Sir Thomas Watson's career has been one of undeviating success, of honour, and of distinction." That of Sir William Fergusson includes the following paragraph. "He never amputates an inch more than is necessary; and if, by excising a bone or removing a diseased joint, he can spare a limb, it is his pride to do so. In this department of operative surgery he shines perhaps more than in any other; and one standing rule with him is invariably to acquaint himself accurately with the characteristics of his patient's constitution, and to make all treatment

subservient to circumstances. Operating instruments in connexion with the jaws and joints have also been his careful study. A more striking instance of steady, uniform success, though not without those attendant early struggles and difficulties with which limited pecuniary means almost invariably beset the path of future eminence, in the prosecution of a profession of his own selection, is seldom met with in the annals of industry and perseverance, even when accompanied, as in the present case, by great natural gifts and original genius."

All this is very true, although it reads oddly from the pen of a barrister, the editor being Mr. Hugh Weightman, M.A. But, however true, we very much doubt whether it is the sort of matter of which it is right and convenient to countenance the circulation in this form. We are especially led by its perusal to feel an entire incredulity of the accuracy of a statement prefixed to the notices, that "the biographies of both Sir Thomas Watson and Sir William Fergusson, as they appear in the present work, have been carefully revised by themselves personally." The announcement is one which may very easily lead to an unfortunate result, of which it might be claimed as affording a precedent. We cannot think such an announcement justified; otherwise, what is to prevent any local publisher from issuing a series of photographs of local medical celebrities, with eulogistic illustrated biographies carefully revised by the subjects of them, and accurately expressing therein opinions of their achievements and their merits, and offered for sale in all the local booksellers' shops? This would certainly trench upon other forms of advertising which are very generally condemned. The end of this series, if it be far prolonged, can hardly be so distinguished as the commencement; and Sir Thomas Watson and Sir William Fergusson may, unless the publishers exercise a remarkable discretion, of which this preliminary announcement does not afford a guarantee, find themselves in the company of colleagues whose biographies are in truth and in letter carefully revised by themselves, and include estimates of position and achievement, and claim an equality which they would not be disposed to endorse. In its present form, we think Messrs. Barraud and Jerrard's enterprise is one which ought to be condemned rather than encouraged. A very large number of the members of our profession would no doubt be glad to possess good portraits, such as these are, of men whom they regard with the highest affection and respect. But the portraits might very well be accompanied with a brief record of the leading facts of their career, without any of this sort of fine writing, which we are sure must be rather hurtful than agreeable in this connection to the subjects of it, and from which a very evil precedent may easily be deduced.

RAIN AND HEALTH.

WILLIAM PITT was Chancellor of the Exchequer at the early age of twenty-three, under Lord Shelburne, and soon found himself placed in difficulties with regard to the subject of taxation. What to tax was the great question. On one occasion, whilst spending a short vacation at Burton Pinsent in Somersetshire, he wrote to a neighbour and family friend for a suggestion. The reply was, "My dear Pitt, tax umbrellas, and do not let the bishops order the prayer *against* rain to be read!" The minister found, however, that everything of which the umbrella was made had already been taxed, and, "having a conscience", could not take the friendly hint. This was in 1782, when, according to Symons' Record, the rainfall had been excessive, or nearly one-third above the annual average. During the early part of Pitt's ministerial life, we had a succession of wet years—in fact, from 1782 to 1799 there were eight years out of the seventeen which had an excessive rainfall. Let *laudatores temporis acti* ponder on this fact well, and not bore us with their repinings, as our ignorance of the meteorological laws which regulate our climate and our weather is really the great cause of our incessant grumbling whenever we are visited by excessive rain, excessive drought, or a series of disastrous thunderstorms. It would be far wiser at once to confess our ignorance, and refrain, until we are better informed, from

expressing any opinion as to whether such a rainfall as we have just experienced is either a blessing or a calamity.

We will now give some facts *pro* and *con*—the blessings and the calamities. During the seven years 1859-64, we have selected the weeks which contained, according to Dr. Ballard, the maximum and minimum amounts of sickness, and have estimated the rainfall according to his diagrams for the two previous months. During the maximum weeks there were registered 3,785 fresh cases of sickness, these weeks having been preceded by 26.6 inches of rain. The amount of sickness during the minimum weeks was 2,392 fresh cases, succeeding a rainfall of 22.5 inches. We have, therefore, the minimum amount of sickness coincident with the minimum amount of rainfall, when we take the extremes. This fact, although not conclusive, is sufficient to make any one hesitate before accepting the doctrine that an excessive rainfall is favourable to the public health. We know that in the case of zymotic diseases much good is derived from the free flushing of sewers and the general channels of filth; and we believe that an excessive downpour of rain has a wonderful effect both in preventing and checking epidemics generally. Zymotic diseases terrify and command attention at once; but other diseases, which are well known to be affected by weather, such as phthisis, rheumatic fever, etc., ought also to be considered, since they are prominent causes of death in our country.

We have been favoured by Mr. G. J. Symons, F.B.M.S., with a manuscript copy of some of the rainfall returns for 1872, and we append the following facts. At present, only a limited number of returns have been made from his staff of nearly two thousand contributors spread throughout the British isles; but as these reports are from places which may be considered typical of the divisions in which the rain-gauge observations were made, we venture to place them before our readers, hoping next week to deal more largely with the subject, and then show the relation that subsists between rainy seasons and the public health. Mr. Symons informs us that the rainfall of 1872 was about one-third in excess of the average, which may be fairly taken at thirty inches *per annum*. In London, the excess was about equal to that over the country generally; and the Registrar-General has reported the state of the public health, especially in London, to be good.

It appears from Mr. Symons's returns, that Cheshire and Lancashire have suffered the most from the excessive rain, the number of inches having been 18.24 in excess. These figures, however, will have to be amended. Portree is remarkable for having a rainfall 19.13 below the average, whilst its neighbour, Bracmar, has 25.85 above it. The highest rainfall yet reported is that at Stranracr, when 27.69 inches fell in excess of the average, 49.60.

Many interesting facts connected with this subject we are necessarily obliged to postpone until next week, when we hope to show from the facts before us what relation subsists between excessive rainfall and the public health.

DR. JOSEPH ROGERS publishes a very sensible letter on the working of the Public Health Act in the *Worcester Chronicle*.

DR. BALLARD has been sent as Government Inspector, to examine the causes of the epidemic of typhoid fever which has been recently prevalent at Moseley.

NOTICE is given of a competitive examination of candidates for admission into the Medical Service of the Royal Navy, which will take place at the University of London on Monday, the 17th of February.

DR. BILLROTH of Vienna, in the first part of an article on Ovariotomy in the *Wiener Medizin. Wochenschrift* of January 4th, says that he has performed the operation thirteen times, and that three of the patients have died.

DURING the week ending January 3rd, there were 73 deaths from small-pox in Vienna. The average daily number of patients in the small-pox hospitals and in the small-pox wards of the general hospitals was 357.

DR. ALFRED CARPENTER opened the year's meetings of the Social Science Association by reading a paper on "The Simplicity and Safety of Sewage Ventilation;" urging that, so long as the sewage was kept in movement, no mischief could arise, and that consequently the real source of the evil was rather the discharge of foul air from stagnant house-drains than from running public sewers.

WE especially direct the attention of our readers interested in public medicine to two very able articles in the *British and Foreign Medico-Chirurgical Review*—one on "The Public Health Act 1872," full of sound criticism and wise generalisation, and a communication on "The Public Health Aspects of the Adulteration of Food Act and the Mines Regulation Act," signed by Dr. Rumsey.

UNIVERSITY OF LONDON.

BY the resignation of Dr. Hirst, the office of Assistant-Registrar has become vacant. His successor will be charged with the duties of the librarian.

A PLEA FOR ENGINEERS.

THE first and most important of the officers under the Public Health Act will be undoubtedly the medical officer of health; and the British Medical Association has spared no pains to impress upon the Government the advisability of making a judicious selection of officers and an intelligent arrangement of districts. But it must be remembered, also, and we have always kept in mind the fact, that it is for the engineer to construct the means of satisfying the sanitary requirements which the doctor points out; and from this point of view we should be glad to see a more definite guarantee than exists at present that proper engineering skill will be brought to bear upon the local plans devised and to be devised. A great number of reports are about to be made, and before they are carried into effect it is very desirable that these should be submitted to some higher revision. It seems to us very clear that some of the inspectors of the Local Government Board under the Public Health Act should be engineers.

THE UNIVERSITY OF VIENNA AND DR. VON PETTENKOFER.

IT has recently been decided to institute a new Chair of Hygiene in the University of Vienna; and Dr. Max von Pettenkofer, well known for his researches on the diffusion of cholera, and generally as one of the highest authorities in Germany on sanitary matters, has been invited to occupy the professorship. Until lately, there was a hope that he would accept the proposal. He has, however, declined to leave the present seat of his labours, Munich. This decision is said to be the result of certain concessions which have been made to him in Munich, and also of the direct intervention of His Majesty the King of Bavaria.

CHOLERA IN THE AUSTRIAN PROVINCES.

THE following are the statistical returns of cholera in the Austrian provinces up to December 23rd. In Moravia, during the week from 15th to 22nd December, there were 311 patients under treatment, 243 being new cases; of these, 153 recovered and 79 died. During the same period, 11 cases occurred in Buda, and 100 in Pesth. In Silesia, the total number of cases had been 274, of which 78 recovered and 124 died. In the hospital at Prague, 21 cases had been received, of which 14 were fatal. In the province of Galicia, during the first half of December, 4,458 cases occurred; making, with 1,203 remaining under treatment at the beginning of the month, 5,661 cases; of these, 2,780 recovered and 1,653 died. From the commencement of the epidemic in Galicia, on May 19th, to December 15th, there had been 38,448 cases of the disease, with 23,148 recoveries and 14,066 deaths.

CHOLERA AND WATER-SUPPLY IN INDIA.

SEEING that the most eminent authorities are agreed that drinking-water, if not the only channel through which cholera is conveyed, is certainly one, and perhaps the principal medium of the dissemination of the poison, it is a matter of the most serious regret that, according to the announcement of the highest authority, the water-supply of the European troops in India is still so defective as to expose them to all the perils of epidemic invasion. The Commander in Chief, in a recent minute which applies to the still existing arrangements, observed that, "so long as the existing procedure is maintained of conveyance in mus-sucks from different sources, and the storage in numerous receptacles, at all times more or less open to pollution of dust or dirty vessels, so long is it fruitless to expect anything but comparatively foiled results." We join, therefore, with the *Indian Medical Gazette*, in the hope, although at present there seems but feeble ground for it, that the epidemic of cholera through which our Indian possessions are now passing, will be the last which will find our troops supplied in the manner above described.

THE PATHOLOGICAL SOCIETY.

THE annual meeting of this vigorous Society was held on Tuesday. There was a full attendance of members. The report showed a healthy condition of the Society. There was a marked increase of members as compared with the preceding year, and the Treasurer's report gave evidence of a large balance at the bankers'. By an alteration in the rules, which was passed unanimously, the trustees are henceforth members *ex officio* of the Council. The list of Council and office-bearers published in the *JOURNAL* last week was adopted. Sir Wm. Jenner is thus appointed President, on the retirement of Mr. Hilton; and Mr. Arnott Surgical Secretary, by the resignation of Mr. Hulke. A hearty vote of thanks was accorded to these retiring officers for their labours in the service of the Society. The other usual votes of thanks were accorded.

THE CLINICAL SOCIETY OF LONDON.

THE following list of officers and Council is proposed for election for 1873, and will be balloted for at the meeting to-night (Friday):—*President*: Prescott G. Hewett. *Vice-Presidents*: G. Owen Rees, M.D., F.R.S., J. Burdon Sanderson, M.D., F.R.S., A. P. Stewart, M.D., Hermann Weber, M.D., G. W. Callender, F.R.S., Campbell De Morgan, F.R.S., J. Cooper Forster, T. Holmes. *Treasurer*: E. H. Greenhow, M.D., F.R.S. *Council*: J. Andrew, M.D., W. H. Broadbent, M.D., T. Buzzard, M.D., W. Cholmeley, M.D., E. Clapton, M.D., A. B. Duffin, M.D., Wilson Fox, M.D., F.R.S., S. O. Habershon, M.D., J. Hughlings Jackson, M.D., A. Meadows, M.D., H. Arnott, W. M. Baker, Richard Barwell, R. B. Carter, J. T. Clover, J. C. Langmore, M.B., T. W. Nunn, S. W. Sibley, T. Spencer Wells, A. Willett. *Honorary Secretaries*: R. Southey, M.D., G. Lawson. *Trustees*: E. H. Greenhow, M.D., F.R.S., J. Burdon Sanderson, M.D., F.R.S., G. W. Callender, F.R.S.

MR. CARDEN OF WORCESTER.

DR. RADCLYFFE HALL of Torquay writes to us in reminiscence of his late friend Mr. Carden of Worcester:—In reading over your obituary notice of my late friend Mr. Carden of Worcester, it fails to convey to me an accurate representation of the man. Mr. Carden was an admirable specimen of the best kind of eminent surgeon, inasmuch as he was a thorough gentleman in manners, bearing, and conversation; at ease and able to hold his own in any society; devoid of mannerism; and conversant with all the current topics of conversation amongst the higher classes. He was familiar with the fine arts, and a critical judge of them. He possessed, like most men of ability, a genial sense of quiet humour, which rendered his conversation sparkling and agreeable. He possessed refined delicacy of manners. These characteristics as a gentleman shone through his professional relations with his patients, whilst his well-grounded confidence in himself on all professional matters induced entire confidence in him on the part of his patients. In practice, he was firm, clear, and simple—adopted no hobbies—stooped to no hum-

bugs. Altogether, he was a representative of whom the profession should be, and were, proud. Consulted more largely than any other consulting man for a circle of thirty miles around Worcester, in medical as much as in surgical cases, he was an illustration of the truth that a most successful man may afford to be a perfect gentleman in the practice of his profession, and enjoy the self-respect thence proceeding, as well as the permanent appreciation of his brother professional men and of the public at large. With a fairly extensive personal acquaintance amongst my brother professional men, I cannot call to mind a better specimen than the late Mr. Carden.

ROYAL COLLEGE OF SURGEONS.

AT a special meeting of the Council of this institution on January 2nd, Mr. Luther Holden, Senior Surgeon to St. Bartholomew's Hospital, was elected a member of the Court of Examiners, to fill the vacancy occasioned by the resignation of Mr. John Adams, Consulting Surgeon to the London Hospital.

CHRISTMAS AT THE CHILDREN'S HOSPITALS.

NEW-YEAR'S DAY was no ordinary day at the Hospital for Sick Children, Great Ormond Street; for the annual Christmas-tree and other amusements had once more come round to gladden the young inmates. In addition to the children in the hospital, a larger number of former patients took part in the evening's entertainment. A quantity of toys, useful books, and other articles, were distributed; and a magic-lantern entertainment added largely to the excitement of the occasion. A similar and equally successful Christmas treat came off at Cromwell House, Highgate, the convalescent branch of this institution—a picturesque and handsome building, built by Oliver Cromwell for his sister. The inmates of the East London Hospital for Children, Ratcliffe Cross, were also in luck on Wednesday. Here a most substantial and enjoyable evening fell to the lot of the poor East-enders, who appeared to have a desire "all over" to repeat the performances in tea and cake of the evening. The authorities and friends of the North-Eastern Hospital for Sick Children were not behind their neighbours. Here an excellent evening's amusement in eatables, a Christmas-tree, and conjuring tricks, was provided, producing effects which we hope will rival the therapeutical powers of the *materia medica*.

MEDICAL MICROSCOPICAL SOCIETY.

THE first ordinary meeting of the above society will take place at the Westminster Ophthalmic Hospital, King William Street, Strand, on Friday, January 17th, at 8 P.M., when the President, Mr. Jabez Hogg, will give an introductory address, and the meeting will then resolve itself into a *conversazione* for the exhibition of specimens.

ACTION AND COUNTERACTION.

AN action and counteraction brought by two medical men—Liston *v.* Leland, and Leland *v.* Liston—has recently been tried at Guildhall, before Mr. Justice Grove. The first of these actions was to recover £105, being the amount of a bill of exchange, and interest thereon; and the second, or cross-action, was to recover damages for an alleged false representation of a medical practice at Kirkby-Stephen, in Westmorland. It seems that Mr. Liston, physician and surgeon of a small town in Westmorland, sold his practice to Mr. Leland for £400, half of which was paid in cash, and two bills of exchange for £100 each were given for the rest. It was in respect of the first of these bills that the present action was brought. In the agreement, the practice was represented as being worth £400 a year. The fees charged for a visit were from one shilling to two shillings and sixpence. The counteraction was brought by Mr. Leland, on the ground of a false representation as to the profits of the practice made by Mr. Liston, Mr. Leland having in one year, it was alleged, made but £150. From Mr. Liston's books, it was, however, proved that his estimate of the value of the practice at £400 *per annum* was just; and, upon this evidence, the jury, without quitting the box, gave a verdict for the plaintiff in the action of Liston *v.* Leland, and for the defendant in Leland *v.* Liston;

damages £105. In summing up, Mr. Justice Grove expressed his astonishment that medical men should attend patients for such very low fees.

THE LIVERPOOL MEDICAL INSTITUTION.

WE understand that an effort will be made by some member or members of the Liverpool Medical Institute to abrogate the following law: "The Liverpool Medical Institution shall consist of persons registered or entitled to be registered under the Medical Act; but no person practising homœopathy shall be eligible either as a member of the Institution or as a subscriber to the library, and any member or subscriber who may become a practitioner in homœopathy, shall cease to belong to the institution or to the library." Dr. Sinclair has given notice of motion—"That, freedom of opinion being essential to the character of a scientific institution, the clause of the law (chapter i, section 1) by which legally qualified medical practitioners are excluded from the benefits of the institution on account of their medical opinions, be rescinded." On the same grounds it might be argued that Mr. Hampden, the believer in the flatness of the world's surface, should be elected a member of the Royal Society, and mesmerists and clairvoyants should be invited to the meetings of the Royal Medical and Chirurgical. We imagine that Dr. Sinclair will find little countenance for his motion among the members of the Society.

WARM THANKS.

WE read that, at a recent meeting of the Bacup Local Board, Mr. Aitken moved that the thanks of the Board be presented to Mr. Worrall for his able and gratuitous services as medical officer during the past year. Mr. Tagg seconded the motion, and said he thought that Mr. Worrall was highly deserving of the compliment. He also stated that Mr. Worrall had requested him to inform the Board that the average deaths during the year had been twenty in the 1000, which was rather higher than it had been on some occasions. The Chairman spoke warmly in support of the resolution, and, on its being put, it was carried with acclamation. As a rule, services given for nothing are supposed to have about the value which their author puts upon them. We judge, however, from this report that this Board considers that the services of a medical officer of health are worth a "thank you." And we are very sorry to observe that Mr. Worrall encourages them to believe that they are not worth more. Such a course involves injury to others as well as loss to himself, and it is to be deprecated on public grounds.

THE ROYAL HOSPITAL FOR INCURABLES.

THE Board of Management of the Royal Hospital for Incurables have published, in a neatly printed pamphlet, entitled *Life in Shadow*, five narratives of visits to the hospital—one being by Miss Thackeray, another by Dr. Guthrie, etc. The second consists of an article reprinted from the *Daily News*, to which the editor of the pamphlet attaches the following note: "Within a few days of the publication of this paper, a stranger called at the hospital carrying in his hand a copy of the *Daily News*. He asked to be shown over the wards, in order that he might see with his own eyes if the descriptions were 'sensational'. After satisfying himself that they were not, he went direct to the City Office of the Hospital for Incurables, and presented it anonymously with a cheque for £500."

THE FREE MEDICAL SCHOLARS OF EPSOM COLLEGE.

OUR contemporaries, the *Graphic* and *Illustrated London News*, of last week, tell us that several of the city companies, in whose hands are placed vast mines of wealth bequeathed to them by our illustrious ancestors for charitable purposes, have been responding to appeals made to them by Dr. Carr, of Blackheath, on behalf of the free medical scholar of Epsom College. The free scholarships are four in number, tenable for four years, each being of the annual value of £50. To say that such a bestowal does honour to them—that their benevolence will prove as bread cast on the waters—is no more than we sincerely feel,

and as heartily record. Truly, in thus giving to our necessitous orphans, they are bearing our burdens, and illumining the dark path of those who need light, in order that they may see how in due time to walk by themselves. Educating the orphan is a duty which devolves on the living; fitting them in early life to fulfil the obligations which belong to manhood, is simply doing for them what a father's hand would have done had he been spared. We, therefore, rejoice to learn that this orphan fund, which already reaches £3,500, and is educating three free scholars in London, has been enriched by £100 from the Grocers' Company, £52 10s. from the Mercers' and £50 from the Goldsmiths'. To all the other companies we would earnestly say, "Go, and do likewise."

THE STUDENTS' JOURNAL AND HOSPITAL GAZETTE.

THE year 1872 was fruitful in medical students' journals, and 1873 has begun with another. The students at Guy's Hospital commenced last year a creditable periodical; and their brethren at Aberdeen a fortnightly journal, admirably conducted and of some pretension. With the view of supplying the students at the various metropolitan schools with a periodical "that will be of assistance to those students who are preparing for medical and surgical examinations," and which will give the hospital doings and news, including also original stories of a professional character, which we presume will be culled from the smart sayings of hospital surgeons, the periodical now before us, *The Students' Journal and Hospital Gazette*, has been brought into the world. It contains "Our Introductory," extracts from the ordinary works on anatomy and physiology, an abstract of a lecture by Mr. Hancock, and paragraphs of news from hospital correspondents. "Literature and the Drama" are not forgotten, and "Science and Art" have their share of space. The journal is to appear fortnightly.

MEDICAL ETIQUETTE.

UNDER this heading, the *Times* reports that Dr. Lankester held an inquest on the body of a young man who died in Bow Street Police Station on Saturday last. On Thursday night he went to a music-hall with his sister, and in coming home in a cab, about eleven o'clock, he was taken ill in Bow Street. He was kindly permitted to be taken into the inspector's room, and two medical men were fetched—Dr. Mills and Dr. Purcell. The latter was there a few minutes before the former, and stayed for an hour, while Dr. Mills stayed the three hours the young fellow lived, and then gave a certificate stating that death arose from heart-disease. The family, it appeared, were adverse to an inquest being held, and there was some ill-feeling, as it was thought that Dr. Purcell had communicated with Mr. Blake, the coroner's officer. Dr. Purcell made the *post mortem* examination. His evidence showed that deceased was suffering from diseased lungs and heart-disease, and a verdict to that effect was returned. The *Times* reporter adds: "The two professional gentlemen had a few words in the court, Dr. Mills pointing out that his certificate had been fully borne out by the result of the *post mortem* examination, and he considered this duty should not have been given to Dr. Purcell, who, on his part, maintained that he was entitled to make it, as he was 'first.'"

SCOTLAND.

THE Edinburgh Public Health Committee have decided to recommend to the Council the appointment of two additional inspectors in the Medical Officer of Health Department.

GLASGOW MEDICAL CHARITIES.

IT is stated that the Lord Provost of Glasgow has distributed the following sums, forming part of the damages awarded to him in his recent action for libel against the *North British Daily Mail*:—Glasgow Royal Infirmary, £125; Western Infirmary, £100; Proposed Hospital for Incurables, £100; Glasgow Ophthalmic Institution, £100; Saltcoats Seaside Home, £50

ABERDEENSHIRE LONGEVITY.

FOUR deaths, and no others, were intimated in a recent number of the *Aberdeen Daily Free Press*. The average age of the persons was 87½ years. One was 97, another 92, a third 85, and the fourth 75; and this in spite of the pronounced and hard fare and weather of Aberdeenshire.

THE NEW INFIRMARY BUILDINGS, EDINBURGH.

IN consequence of the want of sufficient funds, and the recent Act of Parliament throwing the responsibility of providing epidemic accommodation on the local authority, the Managers have decided in the meantime to proceed only with that portion of the building intended for the reception of medical patients. They propose to alter the former Watson's Hospital for accommodating the domestic and other general establishments. This work will, it is hoped, be completed at the end of three years.

THE LADY MEDICAL STUDENTS AND THE ROYAL INFIRMARY. QUEEN STREET HALL was on Monday the arena in which the contributors to the Royal Infirmary again fought over the subject of female medical education, and the result, unless reversed by the scrutiny of votes, appears to be unfavourable once more to the ladies. A list of gentlemen known to be favourable to their cause was proposed to represent the contributors on the Board of Management, but their opponents carried a list which, although containing the names of three gentlemen on the list favourable to the female medical students, leaves the supporters of the ladies in a minority at the Board.

SMALL-POX HOSPITAL FOR PARTICK.

THE Directors of Glasgow Royal Infirmary must feel some relief from the announcement that the large suburban burgh of Partick is about to be supplied with a small-pox hospital. The premises to be used for this purpose were erected some years ago in view of a visitation of cholera. They are situated on a large vacant piece of ground to the north of the police-office, and the hospital has for some time been used as a place of worship by an Episcopalian congregation.

FEVER-BREEDING IN ABERDEEN.

THE *Aberdeen Medical Student*, in an article on the Fever Accommodation at the Aberdeen Royal Infirmary, points out that, notwithstanding the erection of a new fever-house, the old practice of mixing infectious fever cases of different kinds together is still continued. It was believed that a practice so unjustifiable as that permitted to exist in the Aberdeen Royal Infirmary would cease to prevail when the new fever-wards were opened: but it would appear that fever-patients sent to that institution are still to be exposed to the risk of contracting one form of fever after another—that is to say, if the unfortunate person survive long enough. It was pointed out in considerable detail some years ago in these columns that the Aberdeen Royal Infirmary had seriously lagged behind well-administered institutions of the kind, in the means placed at the disposal of the medical officers for the proper treatment of disease, and that one of the great wants of the Infirmary was proper fever accommodation. A movement was shortly afterwards set on foot which led to the erection of the present fever hospital. The excellence of the accommodation and the situation of the new fever-house are both, to say the least, open to question. These are minor considerations as compared with the system still alleged to be in force, of willingly and with forethought exposing patients labouring under one infectious and dangerous fever to the danger of contracting another—and, in the weak condition of the patient, probably a fatal illness. The authorities of the Infirmary cannot conceal the fact that year by year patients are so exposed. Why, then, should this be tolerated? Would any one of the managers themselves consent to be placed under such conditions as their poorer neighbours? Certainly not; and were the real unfairness—yea, the almost criminal character of the offence—brought properly home to them, they would, we believe, at once admit the necessity for proper arrangements. But this

cannot have been done. Who is to blame in the matter? We cannot help feeling that the managers, obstructive though they have shown themselves to be in many reforms, are not altogether at fault. We fear it rests in large measure with the medical officers. Did they in a body assert their proper authority, the matter might be easily arranged. If the managers decline to offer protection from further infection to fever-patients, the public of Aberdeen should at least be made fully aware of the risks they run under the present management. Until it is officially denied, the public, who have a right to information on the subject, should understand that the chances to a fever-patient of again coming out of the Aberdeen Royal Infirmary are seriously diminished by the present arrangements.

GLASGOW ROYAL INFIRMARY: ANNUAL MEETING.

THE usual annual meeting of the contributors to the Infirmary was held on the 6th instant. From the reports read there, it appears that the finances have been during the past year in a prosperous condition. The number of patients treated during the year was 5,446, which is 568 less than the previous year. This decrease, however, is more than covered by the falling off in the fever-wards, there having been 709 fewer patients in these wards last year than the year before. In respect to small-pox accommodation, the directors have come to the conclusion to admit no cases of this disease, though they do not indicate very clearly how their patients who reside beyond the municipal boundaries are to be treated. Those within the city are to be sent to the City Fever Hospital as formerly; but, as was mentioned last week, the Board of Police have now resolved to admit no small-pox patients from beyond the municipal boundaries.

IRELAND.

IRISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A MEETING of the North-Western Branch of this Association was held in Omagh on January 2nd, to hear a statement from Dr. Maunsell (Secretary of the Association) in anticipation of the introduction of a Public Health Bill for Ireland during the coming session. Dr. Motherell, of Castlederg, county representative for Tyrone, took the chair. There were present a number of medical men from Londonderry, Donegal, Armagh, and the neighbouring counties. Having heard a lengthened explanatory statement from Dr. Maunsell, resolutions to the following effect were passed. "That, as the prevention of disease would be the great object of the Public Health Bill, the action of the Diseases Prevention Act should be made continuous, and not allowed to remain intermittent, as at present, and only put into force 'whenever any part of Ireland is threatened with, or is affected by, any formidable epidemic, endemic, or contagious disease.'" "That every dispensary medical officer should be *ex officio* the medical officer of health of his district, in order to consolidate the preventive and curative medical system in Ireland." "That for the performance of such duties they should receive such salary or remuneration as the Local Government Board should direct or approve." "That provision should be made that medical officers of health, when called upon to attend as witnesses in courts of law or at sanitary investigations, should receive fees and expenses, there being no provision for payment of medical witnesses in Ireland." "That provision should be made, as under the Medical Charities Act, for the appointment of medical inspectors under the Public Health Act."

ASSOCIATION INTELLIGENCE.

SHROPSHIRE SCIENTIFIC BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch took place in the Natural History Museum, Shrewsbury, on November 20th; H. NELSON EDWARDS, Esq., President of the Branch, in the Chair.

The CHAIRMAN gave a short introductory address.

Jan. 11, 1873.]

Vice-President.—On the proposition of Dr. JOHNSON, seconded by Mr. ROPE, Thomas Greville Thursfield, M.D., was elected Vice-President.

New Members.—Six new members were elected.

Communications.—1. Dr. NEALOR THURSFIELD read a paper on the Duties and Difficulties of a Health-Officer.

2. Mr. W. EDDOWES read a paper on Removal of a Cartilaginous Tumour of the Parotid Region, a Fibroid Tumour of the Breast, and a Scirrhus of the Breast, and union by the first intention (without the aid of artificial means), or by simple apposition.

3. Mr. EDDOWES also described a case of Traumatic Tetanus cured by the internal administration of the Extract of Calabar Bean and Hydrate of Chloral.

4. Mr. T. BLUNT read a paper on the Probable Cause of the Eruption on the Skin which occasionally follows the Administration of Hydrate of Chloral.

Very animated discussions followed the reading of the several papers. A large collection of calculi was exhibited.

A number of new instruments, splints, and other mechanical contrivances, were shown.

Dinner.—Forty members and visitors dined together at the George Hotel.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH : PATHOLOGICAL AND CLINICAL SECTION.

THE second meeting of the session was held on Friday, November 29th. Present, FURNEAUX JORDAN, Esq., in the Chair, and thirty-five members and visitors.

New Members.—Eight members of the Branch were admitted members of the section.

Communications.—1. *Pulmonary Hernia.*—Mr. OLIVER PEMBERTON exhibited a man aged 33, in whom the right lung formed a herniary tumour, through a space left by fracture of the fifth rib, six years previously, by a wagon-shaft. No trace of the rib could be found. It had evidently disappeared.

2. *Diseased Testis.*—Mr. PEMBERTON also showed a testis removed by operation from a patient aged 28. The specimen was one of true cystic disease, with enchondromatous formations. The history was of eight months' duration only, and the disease was without known cause.

3. *Rodent Ulcer and Malignant Disease of Orbit.*—Mr. PRIESTLEY SMITH exhibited a case from the Eye Hospital, under Mr. Solomon. A rodent ulcer of ten years' standing had destroyed the soft parts between the left eyeball and the inner wall of the orbit, forming a chasm more than an inch in depth, which communicated behind with the ethmoidal cells. Within the last year and a half the disease had taken on a more malignant action, and a firm nodulated tumour occupied the orbit and below the globe. A grooved needle had been introduced, and a portion exhibited under the microscope showed cells resembling those of the spindle-shaped sarcoma.

4. *Pigmentous Skin-Disease.*—Mr. MANLEY brought a rare case of pigmentous skin-disease on the back of each hand of a young healthy looking man. The patches were white, surrounded by a yellowish brown pigmentation.

5. *Paracentesis Thoracis for Empyema.*—Mr. MABERLEY exhibited a boy aged 10, on whom paracentesis thoracis had been successfully performed for right empyema. When first seen, the patient was greatly emaciated, the disease having lasted about ten weeks, coming on after scarlet fever. For ten days he had had no sleep; his breathing was hurried and very laborious; pulse almost imperceptible. The right side of the chest was dull throughout, and the apex of the heart beat one inch and a half to the outer side of the left nipple. Paracentesis thoracis was at once determined upon. On April 25th, accompanied by Mr. Whitehead, Mr. Maberley performed it. The chest was punctured in the usual place, and about a pint of thick pus withdrawn, with immediate relief. The operation was repeated three times subsequently. The last time the chest was punctured was on July 23rd. After all the pus had been withdrawn from the chest by means of an exhausting apparatus, the pleural cavity was thoroughly washed out with a weak solution of tincture of iodine and warm water. Since then he had progressed favourably, and now went to school, and was able to play with the other children. The breathing could be heard in all parts of the chest, and the boy was plump and hearty.

6. *Poisoning by Chloral.*—Dr. JAMES THOMPSON (Leamington) read details of a case of narcotic poisoning. The patient, a female aged 27, took at a draught a mixture (six ounces) containing three drachms of chloral hydrate. She was not seen until two hours afterwards, when she was found wildly delirious. This state gradually passed off, and she fell into a quiet sleep, which lasted sixteen hours, and ended in

recovery. This woman had been in the habit of frequently taking dose^s of chloral.

7. *Ovarian Tumour.*—Dr. THOMPSON also presented a specimen of ovarian tumour which had been removed from the body of a female aged 54. Death took place from the effects of an overdose of tincture of opium, which the subject had taken to relieve uneasiness in the abdomen. The tumour was attached by a long pedicle to the right ovary, which was not itself diseased. It was of the size of a large orange, and contained a semifluid mass of cheesy appearance. It appeared from the previous history to have caused much inconvenience during life.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH : GENERAL MEETING.

THE third general meeting of the present session was held at the Midland Institute on Thursday, December 12th, at 3 P.M. Present : THOMAS EBBAGE, Esq., President of the Branch, in the Chair, and forty-eight members and visitors.

1. *Production of Diastolic Murmur.*—Dr. BALTHAZAR FOSTER showed a specimen of incompetency of the aortic valves, to illustrate the direction of the conduction of the diastolic murmur. In this case, during life, the diastolic murmur had been heard very distinctly at the left apex, and this had led Dr. Foster to point out to his class at the General Hospital that it was most probably the left segment of the aortic valves which was incompetent. On *post mortem* examination, the aortic valves were found free from vegetations, but were incompetent to close the mouth of the aorta; the incompetency was chiefly due to shrinking and thickening of the left segment. Dr. Foster had previously observed a similar conduction of the murmur associated with lesion of the left valve-segment.

2. *Partial Vicarious Menstruation.*—Mr. LAWSON TAIT showed a young girl, in the beginning of her menstrual life, who had bleeding periodically from a faint mother's mark on the right side of her face. It was, of course, a case of partial vicarious menstruation, but resembled, in some respects, the well known cases of "stigmata."

3. *Malformed Fetus.*—Mr. TAIT also showed a malformed foetus delivered by him in consultation. Considerable difficulty was at first met with in diagnosing the presentation from the existence of what was afterwards found to be an irregular *spina bifida*. There seemed to be an absence of some of the dorsal and cervical vertebrae.

4. *Skin-Grafting.*—Mr. BENNETT MAY exhibited a patient of Mr. Goodall's—a boy, aged 14—showing the condition of the parts in a case of skin-grafting after the lapse of six months. Each graft still remained isolated in the surrounding cicatricial tissue. The cicatrix (an extensive one encircling the knee, following a lacerated wound) was perfectly flexible and sound, and had stood the test of hard work very well.

5. *Congenital Nævoid Tumour.*—Mr. MAY also showed a boy, aged 11, from whom Mr. Goodall removed a large congenital nævoid tumour of the abdominal wall. The removal was mainly effected by ligature, as very free hæmorrhage prevented the completion of the operation by excision. A coloured drawing illustrated the description of the tumour.

6. *Intestinal Obstruction.*—Mr. MANBY deprecated the course usually taken by authors on this subject in dissociating from intestinal obstruction the external herniæ. He proposed a simple classification of causes according as they arose : (1) outside, (2) in the structure of, or (3) within the tube of, the gut. The paper was illustrated by several cases of interest; among others, one of successful result of operation for strangulated umbilical hernia in which the sac was opened (the hernia had been irreducible only six hours, however). A case of intussusception had been treated successfully by inflation of air. A gall-stone as large as a walnut was shown, which had been passed after the most urgent symptoms. The patient subsequently recovered. Colotomy should be more often resorted to before the patient becomes too weakened by cancerous or simple stricture of the rectum. Opium in full and repeated doses was especially extolled in treating obstruction from impacted fæces.

7. *Hæmorrhage into the Peritoneal Cavity.*—Dr. WELLESLEY TOMKINS described a case. It is published at page 33.

8. *Subcutaneous Wound of the Tibial Artery.*—Mr. ALFRED BAKER detailed a case that had recently occurred in his practice in the General Hospital. A labouring man had noticed a slight swelling on his ankle; this gave him no pain until when at work he struck it a severe blow with a spade; after this it gradually and continuously enlarged. Exploratory incision only gave exit to a little blood. On operating for the removal of the swelling, Mr. Baker found that it originated in a wound of the anterior tibial artery, which had bled into an old bursal cyst. Mr. Baker pointed out the peculiarity that a blow should incise the artery without wounding the skin.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC INSTRUMENTS, AND RECENT IMPROVEMENTS IN THEIR APPLICATION:

WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE MEDICAL PRACTITIONER.

I.

THERE are few departments of practice in which so much change has taken place during the last ten or fifteen years as in the medical and surgical use of the different forms of electricity and galvanism, as far as both diagnosis and treatment of diseases are concerned. If we compare, for instance, instruments which were in use for the diagnosis of chest-disease ten or twenty years ago, we find that those nowadays employed do not differ in any very material respect from the older ones. The same holds good for the appliances used in the treatment of diseases of the bladder and urethra. The bougies now generally manufactured are the same as they were when we were students; a *boule*, it is true, has been added by an ingenious Frenchman, but that does not constitute a fundamental alteration in the instrument. Lithotrites have undergone only slight modifications of late years; and Hodge's pessaries are still in almost universal use. But with regard to the medical electric and galvanic apparatus, it may be affirmed that a clean sweep has been made of late; for, of the appliances of that kind which were in use fifteen or even ten years ago, hardly a single one is now employed by the advanced electro-therapeutists of any country.

The professional opinion on the therapeutical value of electricity and galvanism has likewise undergone a radical change during the same period. No doubt, there are still some eminent and highly respectable members of our profession who sneer at the medical use of electricity, and fail to comprehend of what earthly use such a thing can be, except to bring fees into the pockets of needy adventurers. But these gentlemen yearly find themselves in a smaller minority. The body of the profession takes now a decided and serious interest in the application of electricity to the treatment of disease; and hardly a week passes by in which letters do not reach the office of the JOURNAL, as well as those physicians who are known to have occupied themselves more particularly with this subject, making inquiry about the best apparatus for galvanisation and faradisation, the best mode of employing the current in special cases, and so on. Indeed, the substantial value of electricity as a remedy has now become an acknowledged fact; and the doubts which were formerly expressed as to its real usefulness, chiefly by those who had not studied the subject, have been dispelled by the advance of science.

While, therefore, electricity has now taken an honourable and prominent rank amongst the resources of the physician, there is great danger lest it may again be brought into discredit by the absurd encomiums bestowed upon it by fanatics, who look upon it as the only salvation for suffering humanity. We are constantly told by men who know nothing of physiology or medicine, or of electricity in its relation to either, that electricity is life, and that all diseased conditions of the human system, having only one cause—viz., deficiency of vital power, are most successfully treated by electricity, and by that alone. Now, this is not only nonsense, but mischievous nonsense. Electricity is by no means life, just as little as heat, light, or motion is life. Electricity is not even identical with nervous force, but something essentially different from the latter. Electricity, in its medical aspect, is simply an agent which, according to the form of it which is used, and to the mode in which it is applied, may be made to produce tonic, stimulating, or sedative effects; and which has this peculiarity, that it can be made to exert a powerful influence upon the nervous and muscular systems without the intervention of the stomach, or even of the circulation. In the treatment of a number of nervous and muscular affections, it cannot be replaced by any other remedial agent at our disposal. But electricity is by no means a panacea for all the ills to which flesh is heir; and those who pronounce it to be so, only deceive others, and it is hoped, themselves.

In using electricity medically, it should be considered that electricity or galvanism is not one single thing, but that there are four different forms of it—viz., 1. Static or frictional electricity, which is also sometimes called franklinic electricity; 2. Galvanism, by the continuous

current, or voltaic electricity; 3. Electro-magnetism; and 4. Magneto-electricity, the latter two being also called faradism or faradic electricity, and the interrupted, intermittent (or better) induced current. Each of these four agents possesses peculiarities of its own which distinguish it from its fellows; while, from one of them—viz., the continuous current—again, three radically different effects may be obtained, according as we use its catalytic, its electrolytic, or its thermic action.

Frictional or franklinic electricity, and magneto-electricity as furnished by the rotatory apparatus, have almost entirely disappeared from medical practice. The former is still occasionally used, as a hobby, by the *laudator temporis acti*, and the latter by those who must act with cheap instruments. Good magneto-electric machines can be had for from 15s. to 20s., where most good electro-magnetic machines cost £4 to £6. Tolerably good electro-magnetic machines are now, however, likewise manufactured very cheaply. Thus, a small Gaiffe's sulphate of mercury induction apparatus can be had for 23s., and the imitations of Gaiffe, which are sold by Messrs. Zimmermann, Fen Court, Fenchurch Street, go into small fractions of a pound, with which not even the cheapest magneto-electric machines can compete. On the whole, it may be said that in this, as in other branches of manufacture, the best and most expensive thing is the cheapest in the end; yet it is an undoubted advantage that manufacturers have been able to lower their prices so much as to bring some kind of electric instrument within the reach of the humblest of our professional brethren.

It is well known, even to those who have not given any special attention to the subject, that the greatest mechanical and scientific activity has of late years reigned in the sphere of the continuous or constant current. In passing, we may mention that any current furnished by a galvanic battery, without the intervention of a coil of wires and a magnet, is a *continuous* current; but that a *constant* current is only that kind of continuous current which is furnished by the *constant* batteries of Daniell, Bunsen, Grove, Leclanché, and others. Thus, Pulvermacher's chains furnish a continuous, but not a constant, current; whilst Stöhrer and Muirhead yield a constant current, which of course is at the same time continuous.

Amongst the more recently invented batteries, Leclanché's has attracted a great deal of curiosity and attention. We will therefore begin our descriptions with this one, as, up to the present time, no reliable information about it is available. We may say at once that Leclanché's arrangement is the most constant which is known, as far as the length of time is concerned during which action is still perceptible. During our recent stay in Paris, M. Tripier showed us a Leclanché, which had been charged four years ago, and had never been touched since, but which still gave signs of considerable galvanic activity. The Leclanché pair consists of a cylinder of zinc immersed in a concentrated solution of chloride of ammonium, and a rod of gas-carbon packed with coarsely powdered gas-carbon and small pieces of pyrolusite (native peroxide of manganese) in a porous cell. The vase is closed with a cover, through which the rod of carbon may pass, and which has two small openings for allowing the access of air and the escape of the hydrogen and ammonia formed by the electrolytic action of the battery. The chemical process which takes place in Leclanché's pair is therefore the following: the solution of chloride of ammonium is decomposed, chlorine combines with the zinc, hydrogen is absorbed by the oxygen of the pyrolusite, and ammonia is set free. This is at first absorbed by the water; but, as soon as the water is saturated with it, the ammonia escapes into the atmosphere through the apertures of the cover. Leclanché's pair gives an abundant supply of electricity. According to Beetz, its electro-motor power is 1.167, Daniell's power being put at 1.

This new galvanic pair, which was invented in 1868, was first utilised for medical practice by M. Gaiffe of Paris.* He either employs the original Leclanché, or a modification of it, which has been introduced by M. Tripier, and which consists of the substitution of a piece of lead surrounded with minium, for the carbon and manganese. These pairs are arranged in batteries varying from twenty-four to sixty cells. Fig. 1 shows one containing twenty-four cells. They are all furnished with a "collector," which allows the selection of any number of pairs in the battery, so that a gradual increase or decrease of power may be had without causing any interruption of the current. Moreover, a galvanometer is added to the instrument, showing approximately the condition of the pair and the intensity of the current. Conducting wires and directors are enclosed in the case. A B C D is a tablet which carries the manipulating "collector" M, the galvanometer (g), and the clamps (P N), in which the conducting wires are fixed. E E E E E are the pairs or elements of the battery, and F

* Gaiffe's batteries may be procured in London from his agents, Messrs. Lejeune and Perken, 24, Hatton Garden, E.C.

the conducting wires which connect the pairs with the collector. H is the box containing the battery. M. Tripiert has added to this battery a "double collector" (Fig. 2), by the aid of which it is possible to put all the different cells successively into the circuit. This consists of a

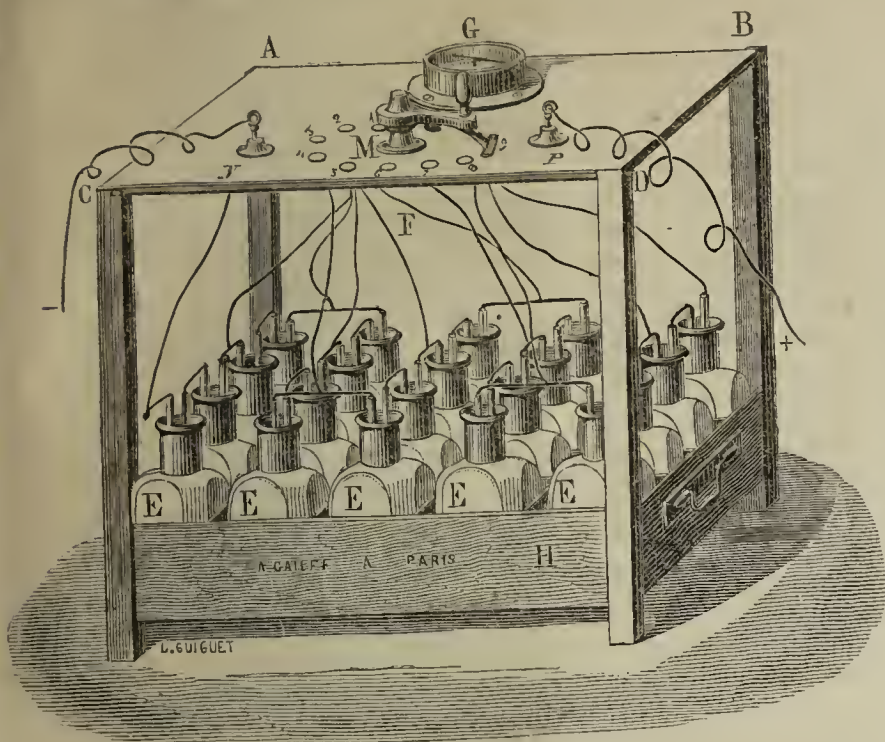


Fig. 1.

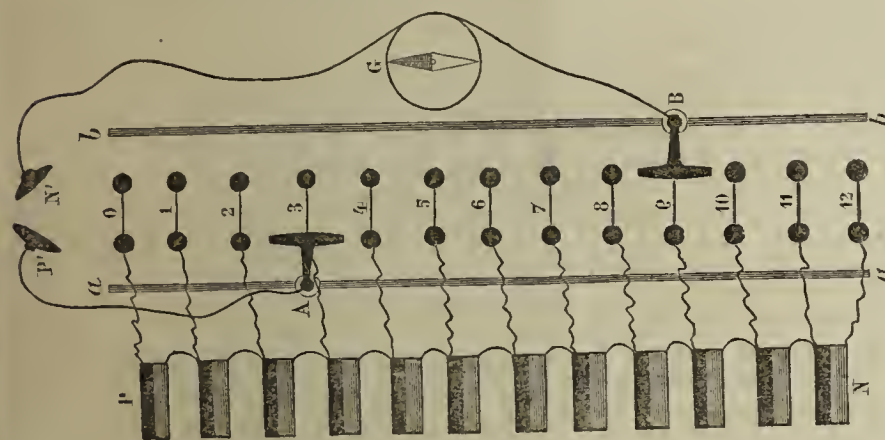


Fig. 2.

double row of metallic knobs connected amongst each other by two and two, by means of conducting wires. The first twelve pairs are in communication with the positive poles of the battery P N; the thirteenth with the negative pole of the last pair of this battery. It is therefore possible, by attaching the conducting wires A P' B N' to the knobs, to collect the current furnished either by the entire battery, or by any portion of it. The contact of the conducting wires with the knobs is made by the springs T, A, and B. The spring A being in contact with any one of the knobs of the right row, and the spring B with any one of the left row, either the commencement, or the middle, or the end of the battery can be utilised. The positive pole is under these circumstances that nearest to O, and the negative that one which is furthest removed from it. In this way, where only a limited number of pairs is used, sometimes one, and sometimes another set may be used, so as not to throw the whole weight of the chemical action on the initial pairs of the battery. The integrity of any part of the circuit may be shown by closing the circuit at N P' by means of the galvanometer G.

The price of Gaiffe's Leclanché, of twenty-four pairs, is £4 10s., every additional twelve pairs making an increase of £1; a sixty-pair battery costs therefore £7 10s. The addition of the "double collector" raises the price by from 12s. 6d. to £1 5s. A commutator may also be had, for reversing the direction of the current and producing voltaic shocks, at 12s. 6d.

Messrs. Keyser and Schmidt of Berlin have also constructed a Leclanché; but it is only fit for the consulting-room, and cannot be

carried about. It has the appearance of a cupboard, and contains twenty-four large cells. On the upper surface of the cupboard there is a dial for the selection of the galvanic power required, a galvanometer, a contrivance for reversing the current, and two clamps for receiving the conducting wires. The price of this is about £11.

Professor Beetz of Munich has constructed a portable Leclanché, which will probably be more useful than Keyser and Schmidt's arrangement. He has rejected the porous vase altogether, and fills the third part of an ordinary test-tube with a mixture of coarsely powdered carbon and pyrolusite; two-thirds of the tube are filled with a concentrated solution of chloride of ammonium. The inner surface of the upper part of the tube is coated with tallow, so as to avoid capillary attraction of the liquid and crystallisation. A cover of vulcanite closes the opening of the tube, admitting through its centre a rod of zinc, into which a brass wire is let in. The latter forms the zinc pole, while a platinum wire projecting from the bottom forms the carbon-pole. The tube is closed waterproof, but not air-tight. There can be no spilling of the liquid, but the gas which is formed during the galvanic action may escape through the cover. Beetz has measured the electro-motive power of this battery, and finds it superior to the original Leclanché—viz., 1.4, Daniell's being 1. Twenty-four cells of Beetz-Leclanché are therefore equal to thirty-four Daniells, or thirty-six chloride of silver pairs. The price of the twenty-four cells' apparatus is £6; and any number may be added to them at an expense of 4s. for each pair.† Leclanché's battery has also been utilised for induction machines; but of these arrangements we shall speak when we treat of faradisation.

Our own idea about Leclanché's battery is, that it is a most useful arrangement where only short work is required of it. It would therefore be an excellent battery for the physician or general practitioner who uses electricity occasionally in one patient; while, for the electro-therapist, who has to get hard work out of a battery, Daniell-Muirhead is infinitely preferable. The reason for this is very simple—it is, that Leclanché is more readily subject to polarisation than Daniell. As soon as it is put into action, the water is decomposed and hydrogen developed. Now, it is quite true that the pyrolusite gives off a certain quantity of oxygen, which combines with the hydrogen to form water; yet hydrogen is always in excess, and thus polarisation is produced. Polarisation is, in fact, inevitable in all batteries, because, if a liquid were used that is incapable of decomposition, no galvanic action would take place; it is therefore the degree of polarisation which we have to consider in batteries. The polarisation current flows in a direction contrary to the battery-current, and has therefore the tendency to neutralise the original current. Where polarisation is energetic, this secondary current becomes so strong, after a time, that it completely paralyses the original current, so that the action of the battery is reduced to zero. Now this takes place in Leclanché's battery much more rapidly than in Daniell's, with the result that it will "strike" after having been at work for some time. Of course, after the battery has been at rest, the current reappears, but only to disappear again after a certain amount of work. This is the principal reason why Leclanché has not superseded Daniell-Muirhead at our postal telegraphs, where it has been extensively tried; but, on the other hand, it has been found extremely useful for railway-signalling, where only a short action is required.

Another drawback to Leclanché's battery is the development of free ammonia, as soon as the water has taken up such an amount of that gas as to become saturated with it. This is chiefly remarked in the coarse batteries which have been constructed for telegraphic and railway purposes, and scarcely at all in Gaiffe's and Beetz's arrangements. Nevertheless, it is a drawback.

A great advantage, on the other hand, is the wonderful enduring power of a good Leclanché. In this it surpasses any other battery that has yet been constructed; and its constancy as far as this is concerned appears to be practically unlimited.

It will thus be seen that Leclanché is the exact counterpart of Daniell-Muirhead. In the latter arrangement, polarisation is to all intents and purposes reduced to zero, so that an unlimited supply of electricity can be got from it, even if one were to continue working with it day and night consecutively without any intermission. But, unless cleaned and nursed with a fresh solution of sulphate of copper every two or three months, it would soon cease to act altogether. In the telegraph offices, where a battery that works hard without ever "striking" even for a minute is indispensable, these batteries are cleaned almost every week or fortnight. In our own practice it is found necessary to have this done about once every six weeks or two months. With Leclanché, on the other hand, no cleaning would be required for from five to ten years. For this reason, practitioners residing in re-

† We are much indebted to M. Tripiert's courtesy in allowing us the use of his electrotype, before any similar publication in France. His "collector" will be described in the forthcoming February number of the *Gazette Médicale*.

† This apparatus may be procured from Messrs. Th. Edemann, of Munich.

note parts of the country, or in the colonies, where it is difficult to put a fresh charge into a battery, or to get it repaired, would find Leclanché invaluable, while it also recommends itself to others living more in the centres of civilisation as an instrument that will never refuse some amount of service, even after having been stowed away in the lumber-room for years.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 13TH, 1872.

CAMPBELL DE MORGAN, F.R.S., Vice-President, in the Chair.

Auscultation of the Heart.—Dr. POORE exhibited a patient with heart-disease, upon whom he demonstrated a new method of intensifying cardiac murmurs or other sounds produced within the chest. The patient, who had a remarkably loud aortic regurgitant murmur, accompanied by intense thrill, was made to lie on his back upon a common mahogany table. Dr. Poore then took an ordinary walking-stick, placing it vertically upon the sternum at the level of the third costal cartilages, and upon the upper end he poised the sounding-board of a guitar, with the orifice downwards. When this arrangement was completed, and after complete silence had been obtained, the murmur became distinctly audible to the bystanders. Dr. Poore remarked that he regarded the case merely as a clinical curiosity. His apparatus was very rough, but it served to exhibit a novel application of acoustic principles, and possibly with a specially constructed and more delicate instrument it would be possible to render the sounds and murmurs of the heart audible for the purposes of clinical demonstration. Sounds and probes having sounding-boards at one end were used in some of the clinical lecture theatres in Germany; and Dr. Poore exhibited an iron probe with a circular sounding-board at its extremity, by means of which all vibrations communicated to the probe were greatly intensified.—Mr. DE MORGAN remarked that Dr. Corfe had suggested the converse of this. He demonstrated that, when a person placed his head on the chest, the sound of his voice when speaking was affected by the condition of the patient's chest.—Dr. ANSTIE remarked that Mr. Brooke used to demonstrate stone in the bladder to his class at the Westminster Hospital by means of a sounding-board attached to the staff.

Pyrexia in Phthisis treated by Cold Baths.—Dr. C. THEODORE WILLIAMS brought forward three cases of pyrexia in phthisis treated by cold baths. He stated that it had been his custom for the last year and a half to have the temperature of a certain number of hospital cases taken twice or three times a day, for periods varying between a week and a fortnight before any decided treatment was attempted. In many instances the pyrexia had subsided under the influence of rest, abundant food, and an equable atmosphere (60 to 63 deg. Fahr.) In others it had persisted, and assumed a type sufficiently well marked to afford a characteristic tracing. In a third class it seemed to follow an extremely irregular course, and to be governed by no fixed laws. The second class was chosen for experimental treatment; and Dr. Williams, having tried various drugs without marked effect, and having noted the good results of cold immersions in the hyperpyrexia of fevers and acute rheumatism, and the cold douche practice at Göbersdorf and Davos in cases of phthisis, determined to give cool immersions a cautious trial, as, except Dr. H. Weber, no one in this country had, he believed, done so. The patients were two males and one female, aged 27, 56, and 25 respectively, and were instances of chronic phthisis marked by a high degree of pyrexia. In two, both lungs were extensively affected, and in one of them a cavity existed. In the third, the disease was one-sided and limited. The patients were submitted to baths of about 90 deg. Fahr., which were rapidly lowered to 70 and 65 deg. Fahr., the time of immersion varying from thirty to forty-three minutes. The effect in every case was an immediate reduction of temperature, which continued to fall for some time after the patient's removal to bed. The reduction in one instance amounted to 6 deg. Fahr. In all it was temporary, the temperature soon rising again; but in one case it never rose to the same height as before the bath, and in two it gradually subsided, marked improved, general and local, taking place in the patients. In the third case, one of advanced disease with a cavity, three baths were given; and, though only a temporary fall of heat took place, great improvement in appetite, sleep, and action of the skin followed. Throughout their pyrexia, all these patients steadily gained weight; and Dr. Williams drew attention to this fact, which had been noted by himself and others, as being directly opposed to Niemeyer's doctrine on the subject. Dr. Williams asserted that the cold bath did no harm, that it improved the appetite, induced sleep, and tem-

porary lowering of heat; but he did not urge it, except in cases of very obstinate pyrexia.—Mr. DE MORGAN said that there were several questions suggested for discussion in Dr. Williams's paper—the effect on the temperature, the effect on the disease, and the altered conditions under which the patients were placed in the hospital.—Dr. WILSON FOX pointed out that in phthisis it was difficult to get a very uniform standard of temperature as in some other affections; hence it was not easy to ascertain the exact results of any treatment on the temperature of this disease. Sometimes there were a low morning and a high evening temperature, sometimes the reverse; so that, while watching the temperature, it is seldom that we can with certainty put down any change to the remedy. He had adopted cold sponging in pyrexia.—Dr. ANSTIE said that there were a considerable number of cases of phthisis in which the temperature rose to much the same height daily, although in many there was no regular variation; and related a case in point—that of a lady whose temperature for three weeks was in the afternoon 105 deg., and in the morning 100.5. This was a suitable case for cold-water treatment.—Dr. HERMANN WEBER said that he had used the bath in pneumonic phthisis, where there was regular increase of temperature at a certain time of the day, but only for ten minutes; and no harm resulted. On the contrary, it kept down the temperature so far next day. There was, he thought, more advantage from the wet sheet than the bath. At Göbersdorf, the cold was applied in the form of a shower-bath, and never for more than forty-five seconds; and there the condition of the patients was different. They had to walk up a hill to the bath-room.—Dr. POORE remarked that, in acute rheumatism and febrile diseases, the maximum temperature was in the afternoon, and not in the evening. This we should bear in mind in applying the cold bath.—Dr. JAMES E. POLLOCK said that there were a considerable number of cases in which the disease did not advance while the temperature kept up, but this was not the rule; the temperature generally was a ratio of the disease. He was not sanguine of the results of the bath, because, if the temperature were reduced, the disease was not necessarily affected; and this was certainly what happened in some cases. The question was, whether we should put the patient to a somewhat doubtful, if not perilous experiment, if the results were not shown to be more distinctly good.—Dr. DOUGLAS POWELL wished to know more particularly in what cases to apply the bath.—Dr. THEODORE WILLIAMS, in reply, agreed with Dr. Wilson Fox as to the difficulty of determining the natural course of the pyrexia of phthisis. Kuchenmeister had stated that the greatest exacerbation occurred between 11 A.M. and 2 P.M., and that a second and somewhat lower one occurred between 2 P.M. and 5 P.M. Dr. Williams did not agree with this, and exhibited some charts of cases where the temperature had been taken five times a day, and from these it appeared that the lowest temperature was about 8 A.M., that there was an exacerbation between 11 A.M. and 2 P.M., but that the highest was between 2 P.M. and 5 P.M., and that after this the temperature gradually fell. He should certainly have felt inclined to try the bath in Dr. Anstie's case. In the length of the time of immersion, he had been guided by the fall of temperature and the state of the pulse; but he thought the cases showed that this treatment, pursued with due precaution, was not a dangerous one, and certainly in the two least advanced cases did considerable good. He should recommend it in patients where the disease was limited and the obstinate pyrexia interfered with appetite and sleep.

Wound of the Portio Dura causing Facial Palsy.—Mr. W. B. DALBY related the case of a patient who applied at St. George's Hospital on January 5th. Eleven days before, his little child had accidentally thrust a pair of sharp-pointed scissors into his left ear. The pain was acute, and at the same moment he felt his left cheek drawn to the right side, and could not close his left eye. Since that time the facial palsy had been complete. The wound in the tympanic membrane healed in the course of a fortnight, leaving some deafness; but no change had taken place in the facial paralysis when the patient was last heard of (over three months after the accident). Mr. Dalby remarked that the point of interest connected with the case was the paralysis following immediately upon the injury, thus showing that the nerve was wounded, the situation of the lesion being the aqueduct of Fallopius. Facial palsy, as the result of inflammation of the mucous membrane lining the tympanum, was of not unfrequent occurrence even when the inflammation had not been severe enough to induce a perforation of the tympanic membrane; so that, had the paralysis in the present instance been only observed two or three days after the accident, there would have been nothing unusual to excite notice.—Dr. BUZZARD remarked that three months was not sufficient time for the nerve to heal; it required six or eight months. The effects of section of the portio dura external to the temporal bone were pretty well known; but it would be interesting to know the effect of the injury on the taste, and the condi-

tion of the soft palate, in this rare internal section of the nerve.—Dr. HUGHLINGS JACKSON repeated Dr. Buzzard's question as to the state of the palate. He (Dr. Hughlings Jackson) had not seen paralysis of the palate in any case of paralysis of the portio dura nerve. He had seen the palate paralysed most often in association with paralysis of the tongue or vocal cord or both. Deviation of the uvula was not very uncommon in healthy persons. He also asked Mr. Dalby if he had often observed recovery from paralysis of the portio dura when the cause of that paralysis had been suppurative tympanic disease. In his (Dr. Hughlings Jackson's) experience, recovery was not uncommon in such cases.—Mr. DALBY, in reply, said that he had lost sight of the patient. He had seen several cases of recovery from paralysis of the portio dura from disease of the tympanum. He had never seen a case accompanied by loss of taste or paralysis of the muscles of the palate.

FRIDAY, DECEMBER 27TH, 1872.

A. P. STEWART, M.D., Vice-President, in the Chair.

THE usual preliminary current business of the society was disposed of. Mr. CALLENDER rose to propose that the society should adjourn its meeting until the date of the next general meeting. He pointed out that, considering the very small attendance of members, it was hardly fair to call upon gentlemen to read important papers, such as those down for the evening. He wished to know if he would be in order in proposing an adjournment.

Dr. SYMES THOMPSON coincided with Mr. Callender in the opinions he had expressed, and suggested that a formal motion should be proposed.

The PRESIDENT said that such a motion would be in order.

Mr. CALLENDER accordingly proposed, and Dr. SYMES THOMPSON seconded the following motion, which was unanimously carried:—"That the present meeting be adjourned until the date of the next meeting."

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 3RD, 1872.

J. COOPER FORSTER, Esq., Vice-President, in the Chair.

A REPORT by Mr. J. CROFT and Mr. ARNOTT was read on Mr. A. T. NORTON'S Case of Loose Cartilage in the Knee-Joint.

Varix of the Arm.—Dr. J. POLLOCK exhibited a girl aged 18, with a varicose condition of the left arm and hand of five years' duration, with small radial pulse and wasting of the affected extremity. The condition was probably due to pressure deep in the thorax.

Sarcomatous Tumour.—Mr. HULKE showed a sarcomatous tumour, the fourth which had been removed in five years from a middle-aged man. The first had appeared in the mamma, the others nearer the axilla, and the last in the axilla.

Mediastinal Cancer.—Dr. C. THEODORE WILLIAMS exhibited a specimen of mediastinal tumour, a medullary cancer constricting the right bronchus, and causing enormous dilatation of the smaller tubes from accumulated secretion. It also compressed the œsophagus, causing dysphagia, and narrowed the aorta considerably, involving the left recurrent and sympathetic nerves. Paralysis of the left vocal cord was detected by the laryngoscope; and, after several attacks of stridulous dyspnoea, the patient sank from catarrhal pneumonia.

Curvature of Femur.—Mr. NUNN exhibited a cast of the lower extremity, and photographs showing curvature of the femur, due apparently to disease of the cartilage between the shaft and the lower articular extremity at the posterior aspect. The bone grew at the anterior part and produced the curve.

Epithelioma of Labium.—Mr. ARNOTT showed an epithelioma which had been removed from the labium pudendi of a girl aged 20. He believed that epithelial cancer was not so common as supposed in the female vulva, and gave the statistics of the Middlesex Hospital and other records to prove this.—Dr. EDIS had seen three cases lately.

Aortic Stenosis.—Dr. KING exhibited an interesting specimen of extreme aortic stenosis, originating apparently in acute rheumatism, from which the patient had suffered twice.

Recurrent Fibroid Tumours.—Mr. SPENCER WATSON showed numerous recurrent fibroid tumours which had been removed at various times by Dr. Walker of Hanley from the lower extremity. One had become fungous, bled profusely, and necessitated ligature of the femoral, which appeared to arrest the growth.—Mr. ARNOTT pointed out the case as a warning to those who failed to remove the affected connective tissue surrounding the tumour.

Fatty Pancreas.—Dr. SILVER exhibited a fatty pancreas from a pa-

tient who had suffered from diabetes and had died of phthisis. The central portion of the pancreas was calcified and the rest fatty. The patient had passed much fatty matter in his motions and had diarrhoea although taking opium.—Mr. COUPLAND related a case of cirrhotic change in a patient who had died of diabetes.—Dr. SILVER remarked that cirrhosis of the pancreas was a common change in diabetes, and was found in other diseases.

Cancer of Neck.—Dr. GOODHART brought forward an interesting specimen of cancer taken from the body of a patient aged 18, which had apparently originated in the neighbourhood of the deep vessels of the neck, and secondarily involved the tonsil.

TUESDAY, DECEMBER 17TH, 1872.

JOHN HILTON, Esq., F.R.S., President, in the Chair.

Dr. CAYLEY read a report from the Morbid Growth Committee on Mr. NUNN'S Case of Tumour in the Liver. It was a myxoma.

Extroversion of the Bladder.—Mr. JOHN WOOD exhibited two patients. In the first, a young man, extreme protrusion of the bladder was observed when he talked, and there was oblique inguinal hernia present—a frequent occurrence in these cases. In the second, a boy aged 13, Mr. Wood had covered in the bladder by flaps, made a prepuce, and covered the urethra. The case was really a triumph of careful surgery. An instrument can now be passed and the boy is kept dry.

Pigmentation of the Tongue.—Dr. GREENHOW showed a specimen of pigmentation of the tongue and cheeks of four years' standing, similar to that found in Addison's disease, but in which no disease of the suprarenal capsules was found after death. Cases of pigmentation like this were very rare. He had believed that the appearances described, together with constitutional signs, were diagnostic of Addison's disease. The constitutional symptoms were not here observed. The man died of phthisis with ulceration of the larynx.

Aortic Aneurism.—Dr. GEORGE JOHNSON showed a specimen of aneurism of the aorta from a man aged 45, who had become suddenly hoarse eighteen months before his death; then followed dyspnoea with stridor. The laryngoscope showed a nearly closed glottis, with immobility of both vocal cords. An impulse was heard and felt over the top of the sternum, and the laryngeal stridor was loudly heard there, as well as over the upper dorsal spinous processes at the back. Tracheotomy relieved the urgent dyspnoea, but he died with pulmonary engorgement and double pleurisy four days after the operation. An aneurism of the transverse aorta about the size of an orange compressed the left vagus and recurrent nerves, which were imbedded in the walls of the tumour. The laryngeal muscles on both sides were pale and atrophied, those on the left side rather more than those on the right.—Dr. POWELL asked Dr. Johnson if he had seen dyspnoea from spasm as well as from paralysis of the cords. Was the other nerve not drawn down by the aneurismal tumour?—Dr. CAYLEY mentioned a case in which a patient had died in the Middlesex Hospital that morning in a spasmodic attack.—Dr. JOHNSON, in reply, pointed out that in children spasm of the laryngeal muscles frequently caused dyspnoea, and referred to several cases in illustration.

Carbolic Acid Poisoning.—Dr. WAY showed the stomach and small intestine from the body of a young woman who had died of carbolic acid poisoning.

Fungus Disease.—Dr. H. V. CARTER showed a specimen of the fungus-disease which he had brought to England from India, and also numerous original drawings of this singular affection illustrating its ordinary and its peculiar features. The foot, or more seldom the hand, is attacked as it were by the spores of a *muco* or mould, which, effecting an entrance through a slight wound, or even the unbroken skin, slowly germinate within, and the resulting growth then spreads through all the tissues of the part, not excepting the bones themselves. Thus a portion or the whole of the foot becomes converted into a tumour (now called *mycetoma*), which is often very large. The several yet known varieties of this disease are due to the growth of a single mould or parent species, which can, by artificial cultivation, be educed from the erratic or abnormal forms existing in the fungus-particles characteristic of *mycetoma*, and for which the Rev. M. J. Berkeley has proposed a name now generally accepted. This parent species has not yet been detected outside the body; it is not apparently allied in character to the infecting mildews, etc., of plants, but rather belongs to the "moulds"; it is of a deep red colour, and grows during the hot season of India.—In reply to Dr. CRISP, Dr. Carter said that he was not aware that it affected any lower animal, or that it had been inoculated into them; and, in answer to Mr. JOHN WOOD, he observed that the fungus generally gained entrance through an external wound, such as that caused by acacia-thorns, but this was probably not necessary. To Dr. MONON, he replied that there was scarcely any limit to the

form which these low fungi will assume; and, to Dr. GOODHART, that the hyaline appearance around the mass was due to stearine.

Skin-Eruptions in Leprosy.—Dr. CARTER also showed several drawings which he had made in India from leprosy subjects of the peculiar skin-eruptions ordinarily attending the "true" leprosy of the East. Reference was made to a fuller description of these skin-affections published in the *Bombay Medical Transactions* for 1862. It was considered that these characteristic forms of eruption were essentially interallied; and, since they were observed only among lepers, it was concluded that they were an essential feature of "true" leprosy. Attention was then invited to these leper-spots as possessing many of the characters of "lepra" so-called. It was briefly pointed out in what sense this latter term had been variously employed; and the view that ordinary lepra and true leprosy may be distantly connected was indicated as one that was at least not indefensible.

Heart-Clot.—Dr. CRISP showed a cast of a heart-clot from a woman who died suddenly seven days after delivery. The clot extended into the pulmonary artery.

Scabies of the Legs in Fowls.—Dr. MOXON showed two living Neapolitan fowls affected with scabies of the legs.

Encysted Hydrocele.—Dr. MOXON showed an encysted hydrocele. There were numerous cysts in the epididymis lined with scaly epithelium. One of them had semen enclosed, which negatived the idea of Paget that these cysts contained semen from their relation to the secreting tubes.

Malignant Disease of Ovaries.—Dr. MOXON exhibited two ovaries affected with malignant disease, and with large cysts which showed peculiar and he believed undescribed kinds of cyst-formation.

MANCHESTER MEDICAL SOCIETY.

NOVEMBER 6TH, 1872.

JOHN GALT, Esq., President, in the Chair.

Papilloma Conjunctivæ.—Dr. SAMELSON showed a case of papillary hypertrophy of the caruncula and the adjoining portions of the palpebral and ocular conjunctiva in a girl seven years of age. The inner thirds of both lids had their margins fringed, and their mucous linings to about three lines distant from the margins decked with the luxuriance, loops of which were also seen investing the conjunctiva bulbi near the caruncula. The whole of the excrescence has since been snipped off, without any injury to the mucosa.

Tattooed Leucoma.—Dr. SAMELSON showed, upon the leucomatous left cornea of a patient who had first been relieved of an upper symblepharon, a mock pupil produced by the newly recommended process of tattooing with Indian ink.

Ossification of Retina, and Cholesterine in the Vitreous Body.—Dr. SAMELSON showed a specimen of almost totally ossified retina, with profusion of cholesterine particles, in an atrophic eyeball, obtained by enucleation from the left orbit of a man fifty-four years old. The sight had, at the age of six years, been lost by an injury from a hay-fork, and the eye had only begun about a year ago to give trouble, which was much aggravated by an inferior entropium.

Removal of both Ovaries.—Dr. THORBURN exhibited two solid ovarian tumours which he had removed from the pelvis of a patient in the Southern Hospital. The operation was attended with considerable difficulties; and, although the patient gave hopes of recovery for some days, she ultimately sank.

Foreign Body in the Eye.—Dr. GLASCOTT showed, for Dr. LITTLE, a piece of flint-stone, of the size of a hazel-nut, which had been removed from under the right eyebrow of a young man aged 26. Five years ago, he was thrown out of a cart, and fell on the right side of his face on a roughly laid country road; and ever since he had had a large swelling below the eyebrow. He did not complain of inconvenience from it, but desired its removal for cosmetic reasons.

Retinitis Albuminurica.—Dr. GLASCOTT also brought forward this case for Dr. LITTLE. The case was that of a woman aged 31, under the care of Dr. Little at the Eye Hospital. She had complained of dimness of vision for four months. Ophthalmoscopically, the degenerative changes in the retina were well marked; the region of the macula lutea and neighbouring retina presented a number of white glistening yellow spots or patches of various sizes. The urine contained a large quantity of albumen.

Aneurism of the Aorta.—Mr. ROE related the history of a case of aneurism of the ascending portion of the arch of the aorta. The condition of the patient had not been ascertained during life, although she had suffered from pains in her chest and dyspnoea for the previous twelve months. She continued work in a factory up to the moment of her death, which took place at the age of 22.

Varicocèle.—Dr. HARDIE showed a new instrument for its treatment. The ligatures are applied as when using Ricord's instrument; but, instead of being tightened daily by means of a screw, which causes much pain, a constant pressure is kept up, and strangulation effected by a strong spring. The instrument may also be used for ordinary varicose veins or small nævi.

Dilated Gall-Bladder.—Mr. STOCKS showed the gall-bladder of a patient who had died with all the symptoms of jaundice from obstruction. The gall-bladder was found extending into the pelvis, and containing over a pint of biliary fluid and between thirty and forty gall-stones. The cause of obstruction, owing to the hurry of the *post mortem* examination, was unfortunately overlooked.

Hernia.—Dr. LLOYD ROBERTS exhibited a drawing of a large hernial protrusion, of the size of a foetal head, on the right side. The patient, who had had ovariectomy performed in St. Mary's Hospital, was forty-eight years old. The tumour, which was solid, weighed 12½ pounds. She made a good recovery, and the hernia had much decreased in size since the operation.

Abdominal Cyst.—Dr. LLOYD ROBERTS showed a cyst which he had successfully removed by abdominal section from an unmarried woman aged 30. The cyst, when exposed, was slightly in advance of the left ovary, and appeared to be a dilated tubule of the parovarium, or an expansion of one of the terminal bulbs of the Wolffian body. It was very thin. The ovary, which appeared healthy, was not removed.

The Origin of Cancer.—Dr. ROSS read an interesting paper on this subject.

CORRESPONDENCE.

ETHER.

SIR,—I had purposed saying nothing more in reference to ether than what I did last summer in London at the Ophthalmic Congress, and what was here printed in the *Boston Medical Journal*; but I now feel constrained to make the following personal explanation, because it may serve the cause of ether. Your numbers for November 9th and 16th came into my hands to-day. In the former, Mr. Haward in a communication, and in the latter, you in an editorial, take exception to the title of my article printed in our medical journal here. Perhaps it was not a very modest one, and as to its truthfulness I was not in a position to absolutely judge; therefore I, in explanation of it, wrote the following sentence, to which allow me to call your and Mr. Haward's attention. "I may, at least, say that the title heading these brief and desultory remarks, 'Reintroduction of Ether into England', was the expression used in reference to my efforts by one of the most distinguished medical men in London." Without the endorsement of such an expression I should not have felt warranted in using the title. Pray, therefore, acquit me of ignorance or egotism.

Mr. Haward, in his communication, expresses himself as if I had not quite recognised his use and advocacy of ether. I could not but judge of these from the following remarks, made immediately after I read my paper at the Congress, by Mr. Brudenell Carter. "I much regret, sir, the absence from among us of a gentleman who, more than any other in London, is in the habit of administering ether—Mr. Warrington Haward, the surgical registrar and chloroformist to St. George's Hospital. He has advocated very strongly the use of ether in general surgery; but his experience is, and I must say that mine entirely coincides with it, that ether as an anæsthetic agent does not produce sufficient muscular relaxation to fulfil all the requirements of the ophthalmic operator. As we have had it administered at St. George's Hospital, we have certainly found that the recti muscles have not been rendered passive in the degree that I should desire; and, after some experience, both Mr. Haward and myself have determined to lay it aside, and return to our old and trusted friend chloroform, of which I must say we have no fear, and which we have never had any reason to regret using. I shall be grateful, sir, if Dr. Jeffries will come to St. George's Hospital and administer ether for us, that we may see whether our past dissatisfaction with it may be in any way due to our faults of administration."

These remarks certainly seemed to justify me in thinking that those who, like Mr. Haward, had strongly advocated the use of ether, were inclined to give it up, in ophthalmic surgery at least. Mr. Carter's statements seemed to me very damaging to the cause of ether before the Congress. To meet this feeling, I had carried American ether to London, and administered it as is known. The result of my compliance with Mr. Carter's request, among others, was the following sentence in an editorial in the same number of the *Lancet*. "In all these cases, Dr. Jeffries administered the ether in the manner set forth in his

Jan. 11, 1873.]

paper, and saturated his towel with it with a freedom that at first sight seemed almost startling. In all cases the results were very good, and all the operators expressed themselves as being fully satisfied with the insensibility and muscular relaxation produced." Was I not justified in considering that I had conquered an existing scepticism?

Mr. Haward's criticisms on my method of giving ether, as I did it in London, are very proper. I, however, repeatedly told my audiences, and I thought they understood, that the lavish and seemingly careless way in which I used the anæsthetic was principally to prove to them that I did not, and they need not, fear ether, even thus given, convinced as I was, and still am, that dread of ether had prevented its proper administration, and hence adoption; and, as Mr. Haward says in agreeing with me, "that the majority of failures in etherisation are simply due to its too sparing administration". I also endeavoured to impress upon my audiences that we Americans generally used a much less amount of ether—in hospitals for economy, and in private practice to avoid filling the room or house with the smell. Certainly, I very distinctly stated that, when time was of no importance, ether could be given slowly, just as Mr. Haward advocates, and that we usually did so. I also desired to show that a towel cone, always ready, would supply the place of all apparatus. It is proper for me to here state that my request to administer ether was objected to on the score of the time required to do so, convincing me of a prejudice I must and did overcome.

I would call attention to such testimony as that of Mr. Underhill in the communication following Mr. Haward's. He was a year among us in the United States, and saw our modes of administering ether. I hope Dr. Robert M'Donnell of Dublin will also report on the use of ether among us, as he saw it in his recent visit to the States.

I would not express any irritation in this hastily written letter. I am especially indebted to Mr. Carter for his kindness shown me whilst in London, as also to Mr. Haward, with whom I most cordially join hands across the water in support of ether as a safe anæsthetic. I only desire that my weak advocacy should not hurt the cause of ether.

I am, etc., B. JOY JEFFRIES, M.D.

15, Chestnut Street, Boston, Mass., Dec. 17th, 1872.

THE M.B. EXAMINATION OF THE UNIVERSITY OF LONDON.

SIR,—The objection often raised with respect to the severity of the Preliminary Scientific Examination of the London University can hardly be said to be applicable to the second M.B. Examination. The papers set at the last examination for the Bachelorship of Medicine show, however, that a general and intimate knowledge of the principles of their profession is required of the candidates. The practical examination in the various branches is also very searching. The questions are, nevertheless, straightforward, and such as might be given at any final test for a degree in medicine.

The Monday afternoon's paper, which comprises six questions in Hygiene and General Therapeutics, is the one most dreaded by the candidates, for no amount of bookwork can insure an ability to answer it satisfactorily. Drs. Bristowe and Russell Reynolds, however, have exercised with clemency and discretion the great scope which is given them as to choice of subjects. It is generally expected that this part of the examination may contain questions which bear upon any important topics which have been brought prominently before the public and the profession during the previous twelve months. Thus, last year, the subject of sewage-farms and their influence on the spread of diseases was treated. This year, the ventilation of water-closets and sewers, and the abstraction of heat in fevers, amongst other subjects, were touched on. To deal satisfactorily with this paper, the candidate should be well informed in the principal theories and newest doctrines of the day; and this end can best be obtained by a general perusal of the medical journals and reviews.

The examination in practical Medicine was conducted in the wards of University College Hospital. A male and a female patient were allotted to each candidate, and he was allowed half an hour for taking rough notes of each case, and for making his diagnosis. After this, he was allowed two hours for writing a full account of the cases, and for giving the etiology, course, and treatment of the disease. During these two hours, the candidates were called off in rotation to diagnose four cases of skin-disease; and, to save time, they were obliged to form their opinion of the diseases without asking the patients any questions. The cases were tinea decalvans, scaly eczema, urticaria, and commencing psoriasis. In the *viva voce* part of the examination in medicine, prescriptions were required in Latin, without abbreviations; and several pathological specimens were shown, one of which was a

piece of a heart containing small hollowed blood-clots, and another a tubercular kidney. Under the microscopes, trichina spiralis, and spores of the trichophyton tonsurans in a hair were exhibited, as well as other objects of a similar characteristic nature.

The urbanity of the two new examiners in Forensic Medicine, Drs. Gamgee and Maudsley, was evidently well appreciated. In the practical part of their examination, the poisons to be detected could hardly be missed; nor were the solutions so much diluted as to present any difficulty, as has happened on a previous occasion.

The clear and honest manner of questioning in the practical part of the examination in obstetrics by Dr. Barnes is sure to suit the practical student, and is such as should be aimed at by every examiner in midwifery.

The surgical part of the examination would doubtless be made more severe, were it not that a special degree is granted in Surgery.

The Second M.B. Examination is held on six separate days, and, as may be supposed, few candidates who have survived the rigour of the preceding examinations succumb to it. The success attending the students from Guy's Hospital in the Pass Examination is very marked. Among the examiners, University College is represented by one gentleman in each subject.

I am, etc.,

M.B.

November 1872.

SIR,—I should be glad if you would spare me space to make a few remarks, from a student's point of view, concerning the M.B. degree at the University of London. I am, perhaps, rather late in writing, but want of time has prevented me from doing so before.

My object in writing is to express my conviction that the University requires more preliminary scientific training than is necessary for the majority of students applying for its medical degrees. If the University wish that its degrees should be possessed only by the leading consulting members of the profession, to whom a few years' extra stay at college and hospital is perhaps an advantage rather than otherwise, I have nothing further to say; but as I believe that the University of London does not intend to be quite so exclusive, and as there are many students who, though intending to engage ultimately in general practice, wish to possess some higher qualification than the membership of the College of Surgeons and the licence of the College of Physicians, I think that a considerable part of the "preliminary scientific" examination is not only useless, but, to some extent, mischievous.

The University recommends that the "preliminary scientific" examination should be passed before the commencement of medical study. If this be done, it no doubt greatly lightens the work to be performed during attendance at a medical school; but in many cases this is impossible, for some of the subjects of examination can scarcely be learnt without a teacher; and the student, before he formally enters at a medical college, is often so situated that he can neither attend classes nor get efficient teachers in chemistry, botany, etc.

Then, again, the student can rarely afford time and money to spend more than four years at a recognised hospital and college; and since, by the regulations of the University, he must attend hospital practice, etc., for at least eighteen months after having passed the "first M.B." examination, there are the three examinations—namely, the preliminary scientific and the first and second M.B. examinations, to be passed within the space of four years.

Now, I think this labour might be to some extent lessened without impairing the real value of the degree, by omitting altogether from the "preliminary scientific" examination the subject of mechanical philosophy, and by lessening the severity of the examination in chemistry and natural philosophy, or by diminishing the extent of knowledge required in these subjects. For the student is examined in mechanical philosophy at the matriculation examination; it is a subject which is comparatively unimportant to a medical man, and if he desire to study it further, he may take the B.Sc. degree. For like reasons, one paper in chemistry and one in chemical physics might surely replace the two papers in chemistry and the paper in natural philosophy.

I have said that this study of science is in some cases disadvantageous. I think it is so, because it takes up some of the time that should be employed in the study of subjects which have more immediate connection with the practice of medicine and surgery; for, even if the student be able to stay for a year or two longer than usual at a medical school, still the aphorism of Hippocrates is as true now as it was two thousand years ago—"Life is short and the art long"—while, as the examinations take place but once a year, to fail to pass any one of them implies a year of study lost; and, if the student's stay at college be limited, a single rejection may compel him to give up all hopes of obtaining the degree. For this reason there is so much anxiety connected with the reading for the examinations, that I think the mind oftentimes

fails to be strengthened by the study, while certainly the bodily health is not unfrequently impaired, and in some cases is permanently injured.
November 1872. I am, etc., M.B.Lond.

VOLUNTEER MEDICAL REGULATIONS.

SIR,—The letter of your correspondent of November 10th concludes with a wish to know if any Volunteer surgeon has been officially offered remuneration for attendance on any member of the staff. I will throw what little light I can upon the matter from my own experience, and will also add that I have a very strong impression that large numbers of the medical officers *have* swallowed their indignation and pocketed the twopence a week. It is the old story over again; and Mr. Cardwell probably knows too well that, if he have patience, the pitiful lack of spirit and union which characterises our profession will ere long set things right for him.

A few weeks ago, the sergeant-instructor attached to one of the companies in my battalion applied to me to attend him under Clause 43 of the new Regulations. I declined, believing that these Regulations were not in force. At the same time, I wrote to the adjutant to ask what the state of things was; intimating that, if the clause were to be enforced, I must send in my resignation. His reply was to the effect that the Regulations had not been cancelled, and therefore must be acted on; but that the assistant-surgeon to a battalion was not alluded to at all, and that the sergeant must apply to the honorary assistant-surgeon of his own corps or company. He added that, as for himself, he had applied to the surgeon of the battalion, "who had undertaken to do all that was needful"—i.e., to attend himself and family at the twopence-a-week allowance. The sergeant-instructor applied to the medical officer of his own corps, and obtained immediately his attendance at the same rate of remuneration.

After this, what are we "to impress on Mr. Cardwell?"

I am, etc., W. L. WINTERBOTHAM, M.B.Lond.,

Assistant-Surgeon 2nd Administrative Battalion Somerset R. V.
November 1872.

MEDICAL FEES.

SIR,—There is another point of view from which I should rejoice at a settlement of the question raised by a Provincial Physician. I am a medical man retired from the army, with sufficient means to keep soul and body together, though not to spend freely. I have a large family, and, owing in a great measure to prolonged illness, I have been unable hitherto to settle down into private practice—in fact, I have been more or less of a wanderer in search of health. I have had occasion, in various places where I have resided as a stranger, to seek medical assistance either for myself or my family. I can afford to pay for this assistance, and I desire to do so; but professional etiquette says No. I may thank the doctor to the best of my ability, and my wife may present him or his wife with some useless drawing-room ornament or other; but the result is, nevertheless, unsatisfactory to me, and, I doubt not, to him also. What comes of this? That on several occasions, I had almost said on many, I have endured pain myself, and have seen those dear to me suffering, when, had I been one of the general public, I would have instantly sent for a doctor, but which I, a medical man, was debarred from doing by the consideration that the case was not sufficiently serious to warrant my accepting the gratuitous services of a stranger, no matter how philanthropic he might be.

I am, etc., R. L. H.

SIR,—In the year 1869, I was requested to attend gratuitously a woman who claimed exemption from surgical fees, "because she had a cousin whose friend was a medical man." This *reductio ad absurdum* will, doubtless, open the eyes of many a medical man, and warrant him in asking, "Why is an honest man's labour refused an honest man's pay?"

I am, etc., RICHARD DAVY,
Assistant-Surgeon to the Westminster Hospital.

OBITUARY.

WILLIAM ELMSLIE, M.D., CASHMERE.

WE regret to announce the death of Dr. W. Elmslie, medical missionary at Cashmere. After passing his student's career with some distinction at the Universities of Aberdeen and Edinburgh, he graduated at the latter in 1864. He then went to Cashmere as medical missionary, where he became a successful missionary and medical practitioner. His devoted labours in that country during the prevalence of cholera called forth expressions of the greatest admiration in Indian papers.

He had bestowed considerable attention to the Cashmere language, and had in view the preparation of a dictionary of the language. He died on November 18th at Goojerat of liver-disease, deeply regretted.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, January 2nd, 1873.

Draper, Matthew Ryder, Cheltenham
Edwards, Frank, Wixoe, Halstead, Essex
Mahony, John Robert, Farnham

The following gentleman also on the same day passed his primary professional examination.

Bernays, Sidney A., St. Thomas's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

BRIGHTON AND HOVE LYING-IN INSTITUTION—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.

CHELtenham GENERAL HOSPITAL AND DISPENSARY—Resident Surgeon to the Branch Dispensary: £120 per annum, furnished residence, and allowances for servants, coal, gas, etc.

DENTAL HOSPITAL OF LONDON—Dental House-Surgeon: £40 per annum.

DRIFFIELD UNION, Yorkshire—Medical Officer for the Weaverthorpe District.

GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.

INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.

LONDONDERRY DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, LUNATIC HOSPITAL, or ASYLUM—Two Assistant-Physicians.—Two Assistant-Surgeons.—

Obstetric Physician or Surgeon.—Ophthalmic Surgeon.—Dental Surgeon.

MEATH COUNTY INFIRMARY, Navan—Apothecary and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.

MERTHYR TYDVIL UNION, Glamorganshire—Medical Officer for Workhouse.

MULLINGAR UNION, co. Westmeath—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Tyrrellspass Dispensary District: £110 per annum, and fees and residence.

NATIONAL HOSPITAL, Newman Street—Consulting Physician.—Physician.

NATIONAL ORTHOPÆDIC HOSPITAL, Great Portland Street—Consulting Physician.—Consulting-Surgeon.—Surgeon.

NAVAL MEDICAL SERVICE—Assistant-Surgeons.

NEWPORT, Monmouthshire—Medical Officer to the House of Refuge.

NEWPORT UNION, Monmouthshire—Medical Officer for the St. Woollos District: £140 per annum.—Medical Officer for the Workhouse and Infirmary: £40 per annum.

NOTTINGHAM, Borough of—Medical Officer of Health.

PROVIDENT SURGICAL APPLIANCE SOCIETY, Broad Street Buildings—Surgeon: £100 per annum.

RATHDOWN UNION, co. Dublin—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Powerscourt Dispensary District: £110 per annum, and fees.

ROYAL INFIRMARY, Dundee—Resident Medical Superintendent.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN, Waterloo Bridge Road—Physician.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL—Surgeon.

ST. GEORGE and ST. JAMES DISPENSARY, King Street, Regent Street—Physician-Accoucheur.

ST. MARY'S HOSPITAL, Manchester—Medical Officer: £60 per annum, board, and residence.

SLIGO UNION—Apothecary to the Sligo Dispensary: £80 per annum.

SOUTH SHIELDS and WESTOE HOSPITAL—House-Surgeon: £100 per annum, partly furnished residence, coals, and gas.

SURREY DISPENSARY, Great Dover Street—House-Surgeon.

UNIVERSITY OF LONDON—Assistant Registrar: £500 per annum.

WIGAN, Borough of—Public Analyst.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

WARNER, Francis, M.B., appointed House-Surgeon to the Royal Surrey County Hospital, Guildford, *vice* H. Humphreys, M.B., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

ELLIS, Henry V., M.B., of Reynoldstone, to Marion, eldest daughter of John Barron, Esq., of Penrice, at Nicholaston, near Swansea, on January 2nd.

DEATHS.

BENNETT.—On January 8th, at Liverpool, aged 32, Sarah Jane, wife of James M. Bennett, M.D.

HUTCHINSON.—At Bishop Auckland, on January 2nd, Jane, the wife of V. Hutchinson, M.D.

SMEDLEY, Nathan, L.R.C.P.E., at Bolton, aged 23, on December 28th.

DR. HEBER D. ELLIS has been unanimously appointed Medical Officer of Health for the borough of Poole; population 10,000; salary £60, subject to revision in six months. The authorities have decided not to accept the Government grant at present.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAYSt. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

EXPECTED OPERATIONS AT THE HOSPITALS.

GREAT NORTHERN HOSPITAL, Wednesday, January 15th, 2½ P.M. Lithotomy, by Mr. T. Carr Jackson.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Alexander Rattray, "Analysis of Ship Air and its effects."
THURSDAY.—Hunterian Society, 8 P.M. Mr. Hutchinson, "On the Laws of Hereditary Transmission of Gout."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WE apprehend that a subscriber is bound to attend under the order of the relieving officer. If he thinks that the man is not a proper subject for such an order, he should make a complaint setting forth the facts carefully to the Board of Guardians.

DR. ROOKE (Cheltenham) has rendered good service by his local refutation of the fallacies of the anti-vaccinators; but they are, perhaps, hardly worth a more extended notice in these columns.

J. F. E. LIMEHOUSE.—Medical witnesses, like others, are entitled to their fees at or immediately after the inquest at which they give evidence. By a very bad arrangement, however, coroners are called on by the magistrates to advance such fees out of their own pockets; and hence, we believe, delays are not uncommon.

INQUIRER asks:—Can any of your readers kindly advise me what to use as a safe and yet efficient depilatory? The case is one where the hairs are numerous, have persisted for some years, and cause considerable distress to the patient.

AN ADVERTISEMENT.

THE following advertisement appears in a local paper. Our condemnation is sufficiently expressed in putting it here in the pillory.
 "December 1872.—George M. Davidge, L.A.H.I., L.M.R.L.H.D., late Certifying Surgeon over Factories, Medical Officer and Public Vaccinator for twenty-five years over two dispensaries and the constabulary in the unions of Old Castle and Delvin, in the counties of East and West Meath and Cavan, in Ireland, Resident Assistant to one of the largest lying-in hospitals in Ireland, where the average number annually of women delivered in their confinement were 3000 to 4000, now takes leave to inform the gentry and inhabitants of Bacup and neighbourhood that, having thrown up the appointment he held from Dr. Clegg, he has entered into an arrangement with his son-in-law, and has undertaken the management of his surgery and practice in Bacup, for which purpose one of Mr. Pilling's houses in Newchurch Road has been taken. He begs to inform families who may wish to enter into a yearly contract for medical and midwifery attendance, with medicine supplied, on reasonable terms. Where no contract shall be effected, the following low charges will be fixed and continue till the 1st July, 1873:—For a case of midwifery within the town of Bacup, 5s.; for a single visit with medicine supplied consequent on the visit at the time, and within the town of Bacup, 2s. 6d. For all bottles of mixture prescribed at the surgery, no matter how costly the medicine may be, and which are now charged for 8 oz. mixtures 2s., 6 oz. 1s. 6d., and 4 oz. 1s., the charges will be one half these prices, viz.: 1s. for 8 oz., 9d. for 6 oz., and 6d. for 4 oz. mixtures, to be paid for at the time."

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

THE USE OF SIRI OF BETEL.

SIR,—I observe in to-day's *Times* an extract from the *New York Mail* regarding the use of siri among the natives of India; and as the statement is full of inaccuracy, the result doubtless of hasty and imperfect observation on the part of the author, I trust you will permit me to make a few remarks on it. Firstly, then, the habit is not a partial one, as the use of spirits or tobacco is among us, or that of opium among the Chinese; but siri is chewed by both sexes of all ranks and at nearly all ages. The wearing out of gums and digestion, if it mean anything, must therefore lead to early death among *whole nations*; a conclusion which I do not think statistics carry out. Secondly, the "crumbling down of the teeth to a level with the gums" shows that the writer has only been among certain Malay tribes, among whom it is the fashion to wear the teeth short and black. This crumbling is accomplished by a much speedier process than chewing siri, a good steel file being the instrument used; while the staining of the teeth and gums is carefully attended to by rubbing them with a quid of moistened tobacco. So much for the short black teeth. Thirdly, had the writer widened his sphere of observation among the people of continental and insular India, he must certainly have seen many tribes, nay nations, who use siri to quite as great an extent as the others, but among whom, the fashion being different, the teeth are *not filed and are cleaned*, and among whom the rule, not the exception, is sets of teeth of perfect regularity and pearly whiteness, so beautiful in fact, that not even the services of a dentist, an institution of course unknown among natives, can produce their equal in one out of hundreds of Europeans.

I am, etc.,
 London, December 30th, 1872.

SIRI.

EDIBLE AND POISONOUS MUSHROOMS.

SIR,—In the BRITISH MEDICAL JOURNAL, December 14th, 1872, you refer to the remarks of W. G. S., in the *American World of Science*, as to the difference between the true edible mushroom and a poisonous variety resembling it.

W. G. S. says that the common mushroom (*Agaricus campestris*) invariably grows in pastures; this is perfectly true; but he suggests that the varieties which grow in woods should be left alone. As many thousand tons of this valuable food grow in certain woods, and is wasted, it does appear to me remarkable that such delicious diet should be so disregarded by the public generally, particularly as food is so dear in these times; but few know its nutritive value, let alone the delicacy of numerous varieties of the edible fungi. As a general rule, I have found, in my small experience, that if the fungus tastes hot, and has a disagreeable aroma, it is unsafe to eat it, and it most likely belongs to the poisonous family; but if, on the other hand, it has a delicious flavour, and imparts an agreeable aroma, it is safe, and is of the edible variety. There may be exceptions; but I have never experienced any danger by following this rule, when I have found a specimen unknown to me by name. Some woods are famous for one particular variety; for instance, I have gathered bushels at a time of the *Boletus edulis* in a fir plantation, where, apparently, no other vegetable life would grow but the tree itself; the land was deeply drained by open trenches; the surface of the soil covered with several inches of dry semi-decayed woody fibre, the *débris* of the larch. This variety is most delicious, equal to my mind if not superior to the *Agaricus campestris*. In another wood adjoining, consisting chiefly of birch, where the ground is not so well drained, is found in the autumn vast quantities of the *Agaricus rubescens*, a very beautiful specimen of the *Agaric*, which is perfectly good and nutritious, but not so delicious as the former.

I have thought it well to remind your readers that other varieties of edible mushrooms, which grow in great abundance in woods, should not be disregarded or overlooked in favour of the well known *A. campestris*, before referred to.

I am, etc.,

ROBERT CUFFE, M.R.C.S. Eng.

Woodhall Spa Villa, January 1873.

MEDICAL ETIQUETTE.—We would request Dr. Tennant to bring the circumstances in which he considers himself professionally aggrieved under the notice of the Council of his Branch. We shall be happy, if subsequently desired, to publish a brief statement, coupled with their decision.

SUSPENDED ANIMATION.

AT the meeting of the Middlesex Hospital Medical Society, held on Thursday, December 12th, 1872, Mr. G. Edgar Lawrence exhibited a baby a fortnight old, in whom animation was suspended for two and a half hours after birth. He stated that the labour, the woman's sixth, was very tedious. The presentation was head and left arm and cord, the umbilical pulsation being distinctly felt. Turning was tried without success, and eventually the patient was delivered by the long forceps. At birth, the pulsation in the cord was so weak as to be scarcely perceptible, and the child gave two gasps, there being a long interval between each. Friction to the surface of the body, hot and cold applications alternately were tried, as well as artificial respiration by Silvester's method, and, after half an hour, pulsation could not be felt in the cord, neither had the child shown any further signs of life. The cord was separated from the placenta; and, as a last resource, mouth-to-mouth insufflation was tried, Silvester's method being resumed. This was continued for three quarters of an hour, at the rate of twelve to fifteen a minute, when the child gasped once or twice, and made an attempt to cough, still no pulsation could be detected at the heart; a warm bath was given, and the treatment resumed for fifteen minutes, when the child showed more signs of life. In another hour, breathing was fairly established; artificial respiration, warm baths, and weak brandy and water, being used at intervals. It had several convulsions, which continued at intervals for nine days after birth, but now the infant appears healthy.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

QUACK PROSECUTION FUND.

SIR,—As you were good enough to notice the so far successful effort to suppress a villainous form of quackery, I take the liberty of bringing the claims of the Quack Prosecution Fund before you. I regret to say that the response made to the private application by circular, has not been so generous as one could wish; indeed, it barely amounts to £100 up to the present time. We have proceeded with three cases only, though we have the evidence prepared for several others, and only wait for funds. The cases in which proceedings have been instituted, are—1. "Dr." C. Watson *alias* W. Hill, Esq., M.A., Berkeley House, South Crescent, Bedford Square, who pleaded "guilty", and was bound over in his own recognisances of £1000 to come up for judgment when called upon, meanwhile he undertaking to cease directing attention to himself or his book, whether by advertisement or otherwise. 2. Pulvermacher of Regent Street, whose case differs in kind from the others. This summons was adjourned for six months, the defendant promising to withdraw this "pamphlet for private instruction" from circulation. 3. Kahn's Museum, Haymarket.—8900 copies of the *Philosophy of Marriage* were seized here, and three persons, who all simulated "Dr. Kahn", were committed for trial at the Central Criminal Court on the 13th instant.

All subscriptions will eventually be acknowledged in one or more of the medical journals.

I am, etc.,

THE HONORARY SECRETARY OF THE FUND.

CLOT IN THE HEART AND CEREBRAL EMBOLISM.

SIR,—Referring to a communication in your JOURNAL of the 14th instant, from Elizabeth Garrett-Anderson, M.D., the impression left on my mind, after perusing the account under the title of "Clot in the Heart," was that the cause of disturbance of the system might not have reference to clot in the heart, but be due to the sudden and intense flow of blood into the lungs and liver induced by the removal of pressure after all the fluid had been evacuated allowing the organs to expand much beyond their late condition while impeded and pressed by the collection of fluid causing an almost complete stoppage in the lungs, at least, from engorgement, and nearly stopping respiration or reducing it to a minimum, until, by degrees, the equilibrium between heart and lungs was again established. Although such violent disturbance might be expected almost to leave some permanent injury to the parts directly concerned, yet the very gradual return to an even balance might account for the absence of it. And, granted such a cause, the non-existence of after-complications, scarcely to be accounted for by the supposition of a clot, might the more readily be explained. Symptoms being treated, scarcely any alteration would be necessary in the treatment, save that such a state of things as pointed out being known, local depletion or venesection might have afforded relief, etc. As no anterior history of the case or subsequent demonstration pointed to clot in the heart, I really do not see why such a cause need be assigned unless other explanations fail.

I am, etc.,

Beeston, Notts, December 1872.

JOHN ORTON, M.D.

N.B.—I read that "while the bandage was being fastened", distressing symptoms showed themselves. Might not that point to an interval of remission of pressure after the fluid had been evacuated and before the binder was fastened? That, I believe, might be obviated in a great measure by supplying artificial pressure in place of that produced by the fluid—viz., by having the binder passed over the abdomen and out at each side under the back, each end being held by an assistant, and, as the fluid is gradually displaced, the pressure kept up by a constant steady pull on each end of the binder until the fluid being all, or as much as thought desirable, removed, the binder be made fast, say pinned, without any relaxation of tension, and afterwards to be gradually relaxed as suitable.

MEDICAL PROMOTION FOR MILITARY SERVICES.

SIR,—I cordially agree with your editorial note respecting Dr. Edge's promotion. The only way of meeting such a difficulty would have been to appoint him brevet surgeon, so that, whilst enjoying the full pay and position of his rank, he could not interfere with the advancement of senior men. This plan is found to work effectually in the general service, where officers obtain a brevet for distinguished service, without any increase of regimental rank, and I see no reason why Dr. Edge should not be gazetted surgeon, but extra and supernumerary in that class. We must remember that his promotion will not take effect until he has completed the qualifying period of five years full-pay service, and by that time we may hope for some change in that terrible dead-lock which is now paralysing the energies of the army medical department. It might, I think, have been somewhat difficult to reward this gallant officer in any other way. Being below the rank of field-officer, he was not eligible for the C.B.; and the Victoria Cross seems better adapted for feats of daring dash than for the admirable tactics and soldierlike qualities displayed in this case. We must remember that several medical officers now serving were advanced to higher rank for special services during epidemics, and it would be no less invidious than difficult to make the steady performance of daily professional duty any ground for exceptional reward.

I am, etc.,

December 1872.

LATE ARMY ASSISTANT-SURGEON.

MEDICAL CLUBS.

SIR,—In a letter published in the JOURNAL of December 21st, 1872, Mr. Clark of Dunster calls upon all medical men holding club-surgeonscies to assist in the exclusion of those members of clubs who are able to afford medical charges, and admits "it may be difficult to draw the line, but that can easily be done, when the question shall, as I hope it will, be taken up by the profession, and by your able assistance." Can a surgeon to a Lodge of Oddfellows draw the line while Rule 64 exists? It enacts: "Members . . . may . . . place their name on the surgeon's list." It appears that members, no matter how well off, can claim medical attendance from the surgeons of their lodges; and that the latter cannot help themselves when men have become members. Originally, a member may have been too poor to incur medical accounts, and so been a fit person for a club; but it is an undoubted hardship on our profession that, when he has prospered and can afford to pay, he should remain entitled to the services of the surgeon to any lodge to which he may pay a penny per week towards the surgeon's fund. Can a surgeon to a lodge refuse to examine a candidate for admission on the ground of his being able to afford fees?

With your correspondent, I hope the matter will be taken up by the profession, and supported by your powerful advocacy.

I am, etc.,

January 1873.

S. H.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

CHLOROFORM DEATHS.

SIR,—It is of such extreme importance that the least dangerous anæsthetic should be used, that it is hardly justifiable to wait for the result of observations on human subjects only, when the question might probably be quickly solved by experiments on animals. Many horses have constantly to be slaughtered, and it is only right that those that must be killed should be put to the least possible pain. It would be easy, without putting these poor beasts to any additional pain, to put each under the influence of an anæsthetic, and to notice what proportion of them are killed by the different anæsthetics used. Similar observations might be used upon horses or other animals rendered insensible to save them from the torture of operations; and, though it is not certain, it is highly probable, that the anæsthetics proved least dangerous to horses, are also least dangerous to men. It is very possible such observations may have been already made, but none have I think been published.

I am, etc.,

London, December 1872.

P. H. HOLLAND.

THE ACTION OF ALCOHOL.

SIR,—In a leading article of one of the late numbers of your JOURNAL, referring to the use of alcohol, you took occasion to urge the desirability of investigations being made on the subject in the large hospitals. I certainly agree with you in thinking that there is plenty of room for improvement of our knowledge concerning alcoholic stimulants. There are constantly a large number of patients taking wine, who would be much better without it.

I was much struck, last spring, with the effect of wine on myself, as a patient. I had just emerged from enteric fever, and, there being all the indications for its use, I was ordered, and took wine. Now, instead of benefiting me, it seemed to do just the reverse. I took two glasses during the twenty-four hours. It stimulated in a remarkable manner the heart's action, and always produced, more or less, a feeling of cold; which latter effect is interesting, as showing that wine influences the contractility of the minute as well as of the large vessels, although probably it is indirectly through the nervous system. But that such stimulation was unnecessary, and indeed injurious, appeared from the fact that, when I went out and walked a few miles after taking a glass of wine, a cold perspiration would break out generally, and a feeling of exhaustion come on, compelling me often to sit down at the roadside during my walk; whereas, going to see the same patient another day before taking the stimulant, I felt quite another being. All the time that I was taking wine, for two months after I got out of bed, my pulse could not be coaxed below 120. But, at the end of this period, I stopped the wine; and from that time I date my satisfactory convalescence. I soon noticed a lowering of the pulse; and, certainly, before a fortnight passed, it was down at 72, and faintness and other disagreeable symptoms belonged to the past. My pulse soon came down to 60, which is my normal number.

Now, I cannot but think that the wine materially retarded my recovery. I had been brought down considerably during the acuteness of the disease, and, perhaps, the tissues required repose and filling up, rather than to be stimulated to change by wine. I should not wonder if, before long, the use of wine as a remedial agent should be confined almost entirely to urgent cases of flagging of the heart's power and certain cases of passive congestion, such as often occur in fever.

I will only add, that some of the symptoms in my case quite coincided with those observed by Dr. Parkes in his recent experiments. But, with regard to the latter, is there not a source of fallacy attached to them? How can the quantity of urea excreted, for instance, be taken as a true criterion of the degree of metamorphosis of the tissues, seeing that urea is derived as well from the raw unassimilated albumen in the blood as from the fixed nitrogenous tissues?

Applecross, December 1872.

I am, etc.,

CHARLES MACLEAN.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Jan. 4th; The Manchester Guardian, Jan. 8th; The Ulster General Advertiser, Jan. 4th; The Scotsman, Jan. 7th; The Bath Express, Jan. 4th; The Birmingham Daily Post, Jan. 6th; The North Wales Chronicle; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Dr. S. Wilks, London; Mr. T. H. Bartleet, Birmingham; Mr. Ikin, Leeds; Dr. Alexander Ogston, Aberdeen; Dr. C. Radclyffe Hall, Torquay; Dr. Fothergill, London; Dr. Lionel Beale, London; Dr. Joseph Bell, Edinburgh; Dr. Peacock, London; Dr. Hutchinson, Bishop Auckland; Mr. Priestley Smith, Birmingham; Dr. Tennant, Leyland; Dr. J. Matthews Duncan, Edinburgh; Dr. Broadbent, London; Dr. Fraser, Edinburgh; The Secretary of the Royal Medical and Chirurgical Society; Mr. Savory, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Paul, London; Mr. F. Wachter, Canterbury; Mr. G. Everitt Norton, London; Mr. George Cleghorn, London; Mr. Spencer Watson, London; Dr. Lucey, London; Dr. Althaus, London; Mr. Gillard Lambeth; Mr. A. Young, London; Mr. W. Nuttall, Bury; Dr. Mackey, Birmingham; Rev. Dr. Haughton, Dublin; Mr. Fielden, Shildon; The Secretary of the Hunterian Society; Mr. H. Ellis, London; Dr. Joseph Rogers, London; Our Glasgow Correspondent; Mr. Shirley Deakin, London; Mr. Cleaver, Liverpool; Dr. D. T. Maunsell, Dublin; Mr. Walter Rigden, London; M.D.; Mr. Ridger, Ashby-de-la-Zouch; Mr. Jakins, London; Dr. Arlidge, Stoke-upon-Trent; Mr. John Marshall, London; A Former Demonstrator of Anatomy, Edinburgh; Dr. Rooke, Cheltenham; Dr. R. W. Smith, Dublin; Mr. Elwin, Limehouse; Dr. R. Barnes, London; Dr. Bru mwell, Barnsley; Dr. Willes, London; Dr. Philipson, Newcastle-on-Tyne; Dr. Bennett, Liverpool; Dr. Warner, London; Mr. Tibbits, Bristol; The Secretary of the Medical Society of London; Dr. Spratt, London; Mr. J. Russell, Neath; Mr. Pope, Cleobury Mortimer; Mr. Leland, Kirkby-Stephen; Mr. E. Pears, London; Mr. T. Leach, Abbeyleix; Mr. Groves, London; Dr. Carr, Blackheath; etc.

CLINICAL LECTURES

ON THE

EXAMINATION OF PATIENTS BEFORE
OPERATING ON THEM.*Delivered at St. Bartholomew's Hospital.*

BY W. S. SAVORY, F.R.S.,

Surgeon to and Lecturer on Surgery at the Hospital; etc.

I.

THE truth still needs enforcing, that the duties of an operator are by no means limited to his work on the table. What would be thought of a general who, however brilliant his supervision and direction might be in actual conflict, was heedless or ignorant of the management of an army before it was brought face to face with the enemy? What chances of success would remain to mere personal prowess or skilful manœuvring, if, from lack of previous discipline, defect of the commissariat, or stupid indifference to the health of his troops, he led them into action a sickly and disorganised band? The wise and enlightened general reaps the reward of his previous care and attention, of his forethought and providence, not so much before as on and after the day of battle. And so it is with the operating surgeon. No ingenuity of conception or brilliancy of execution of the operator can cover the shame of the surgeon who neglects to secure for his patient, by previous preparation, every possible advantage which can in any way, however trivial, minister to success. No prospect of success—nay, no issue, however successful—can justify you in subjecting your patient to any avoidable risk. Very often has it been remarked, that the success of an operation frequently bears no proportion to the dexterity with which it is performed. The explanation of this apparent anomaly lies beyond the operating-table, but it is not far off. It is because, too often, the importance of previous examination and preparation is unheeded or ignored. Such is my apology, if the seeming triteness of the subject call for one, for troubling you with some remarks on this head to-day.

Just, then, as the purpose of a soldier is to bring the greatest number of men, in a state of the highest efficiency, to bear at once upon the enemy, so should it be the purpose of the surgeon, when called upon to perform an operation, to see that his patient is in the best possible state for it, and that he has the advantage of every practicable circumstance that may tend to secure him against risk.

Now, in considering how this great object can be best carried out, let us remember that operations may be divided into those of necessity and those of expediency. That it is to say, in the one class it is a question between presumptive death and the performance of an operation, and in the other it is a question whether a patient's health and strength and efficiency for the duties of life will or will not be advanced by an operation. Anyhow, in the last case he will continue to live on; but will an operation place him in a better condition than he was in before? And, again, let it be remarked that in the last case the surgeon is not under any great pressure in regard to time; he can afford to wait and watch, and to select the most favourable period for stepping in with an operation. And the first class—the operations of necessity—may be subdivided into those which must be at once performed, if performed at all, which admit of no delay, which afford no time; and into those in which, although an operation must be performed in order to save life, yet there is, within limits, a choice of time. Here we have to decide the question whether it shall be done at once, or postponed to a more favourable opportunity.

Now, with regard to operations of necessity which must be done at once, the question is reduced to a very simple issue. Has the patient a reasonable prospect of surviving the shock of the operation? Whether or not he will ultimately recover from it, is a further question into which we can hardly look. Such an operation is justified—nay, called for—if it give him a better chance of life. If he must die without it, then the poorest chance with it is better than none at all; and, in these extreme instances, all other questions are put out of court. If the patient do not die on the table, or sink directly afterwards, the surgeon has but done his duty, albeit the statistics of surgery are burthened with an

unsuccessful operation. Take, as an illustration of such cases as these, the example of a shattered limb, where the shock of the injury has reduced the person to a state of collapse. We may not dare to wait. The occurrence or probability of hæmorrhage, a very trifling amount of which would turn the scale, forbids this. If the patient can only live through the amputation, it had better be done. Or, even a yet stronger example, a case of strangulated hernia which has been left too long: Can we stand over a patient dying with a stricture unrelieved? No; though she be on the verge of dissolution, we must make the attempt to give relief. Aye, even though she should die, as it might be said, under the surgeon's hands, his act was a good and wise one; he was doing the right thing, in the face of all possible discouragement.

In operations of necessity in which we are allowed some choice of time, the disease or injury varies most widely in its nature. In some, the mischief is so rapidly progressive that the period allowed us for preparation is very limited indeed; in others, the disease or effect of injury is so stationary or indolent that such operations pass by insensible gradations into those of expediency, in which an operation may be declined unless we are well assured of success. Of the former class, it may be said that, as a rule, the sooner they are done the better. With disease of such a nature as to call imperatively for removal, and which is rapidly or even steadily progressive, a patient's state for the trial that awaits him is not at all likely to improve. Therefore, except under extraordinary circumstances, there should be no delay. If the patient's general health be satisfactory, so much the better; but what chance is there of the amendment of any chronic disease while subjected to the distress of a malady for which he seeks the surgeon's aid? With evidence, then, of damaged kidneys, heart, or lungs, a great risk must be run; and it is for the surgeon to measure, so far as he is able, the degree of risk, and to decide accordingly. In such cases, the momentous question is, Is there a fair chance of recovery from the operation? If not this, then, indeed, nothing short, it would seem, of extreme intolerable agony, calling at all risks for the relief, should induce the surgeon to interfere.

But the few cases in which, while an operation is urgently called for, it may be wise for a time to delay it, are those in which, at this critical period, there appears some active, though it may be transient, disturbance of the system. If some acute disease should actually set in, an operation is, for the hour, out of the question; but suppose, short of this, on the day previous to, or on the morning of, the operation, the temperature should be found to have suddenly risen two or three degrees; or suppose a smart attack of diarrhoea, or some anomalous eruption of the surface, or a bad sore-throat, or something else,—the surgeon would postpone an operation under such circumstances if he could. Sometimes, too, in women, the period of occurrence of the catamenia has been miscalculated, or they appear irregularly at the critical moment, from anxiety or excitement. Surgeons generally, and no doubt with good reason, are averse to operating then; although, for my part, I do not think we act wisely in postponing, even as a rule, an operation for this cause. It is a choice of some difficulty. It must depress and otherwise sorely try a woman who has, by a supreme effort, brought up all her courage and resolution to the hour, to put off an operation only for a day or two. To her it is as if, while she lay counting the minutes, some mocking finger moved back the hands on the dial. Certainly it is good physiology and sound surgery to avoid all interference with the regular flow of the catamenia. No careful surgeon would omit inquiry into this; but, when they appear at an intermediate period, the case, I fancy, is somewhat different, and much, of course, must depend on the patient and the disease; but, for myself, I believe that, by sometimes running whatever risk there may be in proceeding with the operation, I choose the lesser evil of the two.

But now, having cleared the way of those cases which give us little or no choice or time for preparation, let us consider those in which, although, so far as concerns the local mischief, it has been determined that an operation is necessary or advisable, there is yet some considerable choice of time and opportunity of improving, if need be, the general health. There must be a full and exact inquiry into his present state—an inquiry not less full and exact than has been made of the local mischief. First, hear his own description of his present health, and the evidence he can offer in support of his statements. Then inquire as to the existence of any present or past deficiency. Listen patiently to the whole of his personal history, and to whatever account he may give of his habits; what he has been able and accustomed to do; in what respects he has been sensible of being unequal to ordinary exertion. Get him to contrast his present health and strength and weight with what it was three, six, or twelve months ago. Have too, if you can, any report which his friends who know him best can give of him. Then go diligently through his family history. Do not be in too great a hurry

to cut short a long and tedious story signifying nothing; but be rather on the alert to secure, if you can find them, any grains of wheat in a heap of chaff. And when you have ascertained all that he can tell, you have to make an inquiry of a far more exact and reliable kind for yourself. You have to make a searching appeal to his various organs and to hear what each has to tell. The heart, lungs, and kidneys can speak directly to you, and, for the most part, clearly. The brain, stomach, and liver will respond by indirect signs.

I have sometimes thought that it would be useful practice for the dresser of the patient, in every case, previously to an operation, to fill up a scheme similar to those employed by our insurance offices. You know, perhaps, that the list of questions set down in these papers to be answered by the person whose life is proposed for insurance, and by his own or some other doctor, have been drawn up and arranged most carefully, with the view of guarding the office, as far as possible, from all unnecessary risk. And the risk which the office seeks to avoid is just that of which an operator should beware. But, then, how vastly greater is the need of foresight on his part, for presently he has to subject his patient's powers to the severest test, and he has far more than a mere sum of money depending on the result.

With regard to the first point—the personal history of your patient—you will, of course, often obtain very valuable information, but at the same time you may be led into false security. Do not confound strength—muscular power—with health. A man may be physically very strong, and yet the subject of rapidly destructive disease. This is notorious. Many a man, you know, ignorant of the flaw within him, has brought about his death suddenly by some great effort. And men who are strong are usually proud of it. So, while evidence of great endurance is satisfactory so far as it goes, be not, by any account of the amount of work a man can go through or the number of miles he can walk or row, thrown off your guard. Better, I think, if such a history be forthcoming, is that of the way in which he has gone through any previous illness or effect of injury. On the other hand, a person physically very weak, of delicate mould and aspect, and, as the saying goes, easily knocked up, may yet be, and often is, a very excellent subject for an operation. Such people will tell you that they have never been very strong, but still have never had any damaging illness; that from such affections as may have assailed them they have always recovered well; that their flesh is very good for healing. Such persons are usually less gross and full-bodied than others; but about this I shall have something to say further on.

The most common of evils in the way of past history is the habit of intemperance, and without doubt one of the most mischievous. Of course, almost everything depends upon the extent to which the vice has been carried, and the length of time during which it has prevailed; but this, at least, may be safely said, that very few persons who have long indulged to excess in intoxicating liquors retain good health. They may, and usually do, report themselves sound and strong, but an operation, perhaps too late, exposes the delusion. Much difference of opinion prevails amongst those best qualified to judge upon the kind and degree of mischief wrought by adulterated alcohol. The opinions of authorities are at variance, for example, upon the relation which intemperate habits hold to disease of the kidneys. But, waiving questions of detail here, this general conclusion may be accepted: that constant saturation of the blood with alcohol interferes with healthy nutrition; that degeneration is thereby promoted, and a tendency to the production of fibroid formations of a low kind; and, more especially in relation to surgery, that the power of producing good vigorous euplastic lymph is largely interfered with or destroyed; that such effusions in habitual drunkards are either cacoplastic or aplastic; that in such corpuscles abound to the exclusion of fibres, or, in plainer terms, wounds fail to heal by adhesion, and are very prone to suppurate. And then, of course, there is the risk of evils which are prone to wait on wounds indisposed to heal, such as erysipelas and the like. Another danger which besets these cases is this. Suppose there be signs of depression or failure of power after operation, as indeed there are likely to be, stimulants in additional quantity are called for, but they do little. Their effect is so reduced in such cases that very little can be got out of them. They are very often necessary, even in large quantity, as every one knows, but with the extreme purpose of saving life, and with scant hope of speedily bringing about healthy action.

Under these circumstances, then, in the case of a sot who requires an operation—what had better be done? Why, if we can afford to wait, we may take time to bring about, as speedily as practicable, a more promising state of health by rigid regulation of the habits. Every one is alive to the fear of suddenly depriving a man, who has been accustomed to them, of his stimulants. Is not the danger of this, in some measure, over-rated? No doubt, it would be better to bring about the change gradually if we had time; but our choice lies between the chance

of improvement, which is often signal, from two or three weeks' very moderate allowance of stimulants, but with the effect also of making him low and miserable, and the risk of an operation upon a person soddened with alcohol. And if two or three weeks' comparative abstinence should try him so much, what prospect is there of carrying him through a considerable operation? I have often been struck by what can be done for such cases by a week or two of comparative temperance. It is astonishing how often the signs of healthier action will rapidly appear; how quickly the breath will lose its foulness, and the tongue its thick coating; how the appetite will improve, and the eyes and whole expression brighten. The man seems to have shaken off a load, and in great measure to have become himself again. I say, therefore, make a decided change beforehand when practicable; for, whatever the risks of that may be, they are assuredly far less than those which otherwise you must inevitably encounter.

Family history bears upon the case in two ways. First, it affords evidence, though it must be confessed vague and indirect, of the constitution and general powers of our patient. Every one knows, and every insurance company acts upon the knowledge, that the prospect of life and health is rendered more favourable by a good family history. On the other hand, when several members of a family have died prematurely, although it may be from apparently different diseases, the risk of such a life is very materially augmented.

But evidence within this of a more definite kind is often afforded by family history. It is familiar knowledge that certain diseases are hereditary—that they are transmitted from, or through, parents to offspring. This needs no illustration. Who is there that cannot refer to many examples of it? The subject has, in our day, been much attended to. Our knowledge of the number of diseases, inherited or acquired, that may be transmitted has been extended, and we begin to understand something of the laws or conditions under which such transmission occurs. The subject is far too vast to be entered upon here. You must study it by itself as fully as you are able, and be assured that, in your practice, it will repay all the attention you can give to it; its bearing, however, upon the question now before us is much more limited. We are not now even concerned with diagnosis, upon which it sometimes bears strongly—as, for example, in the suspicion of the cancerous nature of a tumour—but with calculations of the risk of operation. And here family history will affect our views in this way: suppose the existence of some deformity or disease which is so far quiet as not to be productive of any material evil to the general health, and suppose the subject of such an affection to be a young person, say about twenty, in whom no present disease can, by any scrutiny, be discovered, but who had, nevertheless, lost several, perhaps all, his brothers and sisters of phthisis between twenty and thirty years of age; surely no prudent surgeon would subject such an one, except under very exceptional circumstances, to the ordeal of a severe operation. He may, perchance, even with his deformity, live on and escape, for many years or altogether, the fatal outcome of his inheritance; but his constitutional powers would probably be inadequate to the stress of an operation. And although he might recover from the immediate effects of the operation, so far as to save ostensibly the credit of the surgeon, yet he would rise perhaps too heavily weighted for the chance of ever becoming again the man he was. The great question, however, of the influence of operation on the tubercular diathesis will be brought before us more directly by and by.

THE AGUE-PLANT.—Dr. Bartlett of Chicago has forwarded to the Editor of *Grevillea* (No. 6, 1872) specimens of the palmeloid plant, in which Dr. Salisbury believed himself to have discovered the germs of the ague. He says: "Desiring to investigate the subject, I sought for the plants described by Dr. Salisbury in the ague bottom of the Mississippi river, opposite Keokuk, Iowa, lat. 10° 25'. Not being provided with a suitable microscope, I was unable to discover the microscopic algæ described by the doctor. I was pleased, however, to find the fungi, samples of which I send you. Generally, it answers Salisbury's description." He adds: "By placing the cake of earth sent you in a plate, and adding water enough to make it of about the consistence of potter's clay, and keeping it at a temperature of above 60 deg., you will find a fresh crop of the plant to develop, and you will thus have an opportunity of studying them. Should you allow them to flourish and remain uncovered in your room, you might have the satisfaction of demonstrating the 'cause of ague'. This fungus was first found, so far as I know, by Dr. J. P. Safford of Keokuk, who was kind enough to search for me while I visited an ague patient. In the locality of their growth they are to be seen in myriads, and near them, even on elevations of over one hundred feet, everybody had the ague. The course of this disease seemed *pari passu* with that of the plant."

REMARKS

ON THE

BLISTER-TREATMENT OF RHEUMATISM.

BY THOMAS B. PEACOCK, M.D., F.R.C.P.,

Senior Physician to St. Thomas's Hospital, etc.

FORMERLY, most diseases were supposed to be due to the operation of specific poisons, and their relief was sought to be obtained by the administration of antidotes or specific remedies which should either destroy the virus or prevent its action. With the progress of medical knowledge, these views have gradually been restricted, till at the present time we suppose such causes only to give rise to the specific fevers; and, as these follow a definite course of accession, progress, and decline, we have come to regard them as incapable of being arrested by any medical interference, though their intensity may be lessened and a favourable issue obtained by judicious management. Of the numerous diseases which owe their origin to other causes, and especially such as are due to the operation of cold, or cold and damp combined, the course and progress are very uncertain; and it has generally been considered that medicine may claim a wider sphere of usefulness in reference to them, though probably few scientific medical men at the present day claim for their art the power of curing disease, if by that term be understood the power of at once arresting the diseased action, or of "stamping it out", as the process of cure has recently been defined to be. Of late years, also, the tendency of medical opinion has been in these cases to regard the process of diseased action as one which must go through a certain course, and as, therefore, less amenable to remedial agency than was formerly supposed. Notably, in reference to pneumonia and rheumatism, these views have gained ground, though formerly such diseases were regarded as the types of affections which afforded the greatest scope for the employment of treatment which should have for its aim the entire and immediate arrest of the morbid action. That these views should have gained ground in reference to rheumatism, can readily be understood. The analogy between rheumatic fever and the specific fevers is certainly a close one. Like them, the disease has generally been supposed to be due to the existence of a poison in the blood, though to a poison generated in the system, not received from without. The close analogy which exists between gout, which clearly depends on the presence of such a cause, and rheumatism, is in favour of this view. The actual existence of any such *materies morbi* in rheumatism has not, however, been proved; and the sudden development of the disease after the operation of the exciting causes, in persons apparently hitherto in sound health, seems opposed to the idea that any such poison should have previously existed. Be this as it may, however, there seems no *a priori* reason why rheumatism should not have its duration shortened by treatment; and the possibility of this being accomplished, and the decision as to the greater or less efficacy of the different kinds of treatment which are employed with the hope of arresting or relieving the disease, would appear to be questions readily to be solved by experiment. An experimental investigation of this kind would, however, be attended with considerable difficulties, and would require for its satisfactory accomplishment the exercise of great care and special precautions.

1. Rheumatic fever is of very variable duration and intensity, and there is no certain means of ascertaining at the commencement of an attack what will be its character. The patient may at first present active symptoms, which may soon subside; or the disease may at the commencement assume a mild form, and subsequently become severe; or an attack, though never of any great intensity, may be very much prolonged.

2. The proportion of cardiac and other internal complications which obtains in any given set of cases, and which at first sight would appear to be a very fair test of the success of the different kinds of treatment adopted, is very variable, without reference to the circumstances in which the patient is placed while under care. Indeed, in a large proportion of cases, the evidences of complication are present to a greater or less degree before any treatment whatever is employed.

In support of these assertions, I may refer to the results of an analysis of the cases of rheumatic fever under my care at St. Thomas's Hospital. Thus I find that, of fifty cases in my wards between the spring of 1868 and the same period of 1872, the duration of treatment

before the establishment of convalescence was, on the average, 20.2 days, and ranged from 3 to 46 days in different cases; while the total duration of illness had an average of 28.3 days, and a range of from 11 to 56 days. The number of cases in which recent heart-complication occurred, either alone or in persons previously the subjects of cardiac disease, was 26.4 per cent., or 1 case in 3.7 persons treated. This average varied, however, very greatly when the cases admitted at different periods were compared. Thus, in 1868, of 20 cases, 5 had recent cardiac complication; in 1869, of 16 cases, 5 also were so complicated; in 1870, of 20 cases, 2 only had heart-affection; and, again, of 12 cases which were treated in the early part of 1871, 3 were complicated; or in the proportions of 25 per cent., 32.2 per cent., 10 per cent., and again 25 per cent., in the respective years. Yet these cases were treated precisely in the same way and under entirely similar circumstances; and, as equal variations obtained in the frequency of cardiac affections in the practice of the other physicians to the hospital, the differences could not be accidental, but must have been due to differences in the character of the disease, most probably depending on atmospheric conditions or epidemic influence. The intensity of the disease at different times does not afford any explanation of the relative proportions of cardiac complication which obtain, for the heart may be involved almost equally in the slighter as in the more severe cases. Indeed, the general rule is, that pericarditis occurs in cases that are of very slight intensity, while endocarditis is more common in the severe cases. The difference in the frequency of both forms of cardiac complication in the slighter and the severe cases of rheumatism is, however, not great. Thus, in the first series of cases to which I have referred, the proportion of recent cardiac complication in the more severe forms of rheumatic fever was 38.8 per cent., or 1 case in 2.57; while in the less severe the proportion was 34.7 per cent., or 1 case in 2.8. In the more recent report, the proportion of cardiac affection in the severe cases was 30 per cent., or 1 case in 3.3; and in the slighter cases, 27.02 per cent., or 1 case in 3.7. Of 14 cases of pericarditis contained in the last series of cases, in only one was the attack of rheumatism very severe. Of the 23 cases of cardiac complication, in 18 there were some signs or symptoms of the disease when the patients were admitted into the hospital; and in only 4 or perhaps 5 cases did the evidences of heart-affection first appear while the patients were under treatment.

It is evident, therefore, that, for any investigation into the usefulness of different forms of treatment of rheumatic fever to lead to satisfactory results, the fallacies which would depend on three causes must be guarded against.

1. It would be necessary that the patient should be kept in bed for a day or two after his admission, before the remedy to be tested should be tried, in order that any aggravation of his symptoms which might be due to his removal to the hospital should have subsided, and that the alleviative influence of rest, warmth, and suitable food, should have partly exhausted itself.

2. The cases must then be distributed into two or more classes, according to their probable severity as far as can be ascertained, and those which present any evidences of cardiac complication must also be separated from the general mass.

3. The different classes must be treated separately in a given way, the treatment adopted being precisely similar in all the cases of the same class.

In this way definite results would be obtained as to the effects of any given course of treatment; but if it were desired to test the relative efficacy of two or more remedies or plans of treatment, such remedies should be exhibited alternately or in some other regular order, to cases of a precisely similar character occurring at the same time; for otherwise, if the observations were made at different times, the duration of disease and the proportion of cardiac complication might be very different, altogether independently of the treatment adopted.

It is evident that an investigation of the kind referred to would be very difficult to carry out. It would be almost essential that it should be either instituted in the practice of one physician, or, if followed by several acting in unison, it would require to be reported upon by one observer. No one physician's practice, and scarcely any one hospital, would, however, afford a sufficiently large experience for the collection of an adequate number of cases in each class, so that, when subjected to analysis, the sources of accidental fallacy may be avoided. In the reports to which I have referred, I have tabulated and analysed as to duration the proportion of cardiac complication in all the cases of rheumatic fever which had been under my care for several years of which I had reports, the two series constituting a total of 233 carefully observed cases; and I had hoped that, having obtained in this way certain general results, I might be able to compare the facts thus elicited with others to be deduced from different sets of cases treated

in different ways. I have, however, become convinced that the results differ so largely, without reference to the treatment pursued, that no such comparison could yield trustworthy inferences. I make these remarks in order to explain why, in the few observations which I have to offer, in the employment of the blister-treatment in cases of rheumatism, I have refrained from giving the statistics of cases so treated and comparing them with those deduced from cases treated in other ways. This has been done by other physicians in reference to the use of different remedies. I think, however, that at present at least, we must abandon the hope of being able to reduce the treatment of rheumatism to anything of the nature of a demonstration, and be content to rest our opinions as to the efficacy of any system of treatment upon the impression which it produces on the mind of the careful and experienced practitioner.

I have now been in the regular use of the blister-treatment of rheumatism since 1865, when my attention was drawn to it by the paper of Dr. H. Davies. When I first employed it, it was only tentatively, one, two, or three blisters being applied at the same time or in succession, and in conjunction with other remedial means, and the general impression which I formed was not very favourable. Subsequently, I was induced to apply the blisters much more freely, three or four, or even six, at a time, and in rapid succession a still larger number, and I have been led to form a high opinion of their usefulness when thus used, and to confirm what has been said in favour of the treatment by Dr. Davies. The blisters are generally two or three inches wide, and sufficiently long to encircle the limb. They are placed above the chief joints that are affected, and are usually put on in the after part of the day; in the morning, or when they have risen sufficiently, the serum is let out and the surfaces are covered with warm linseed-meal poultices, and these are continued for several days. The treatment has been objected to as unnecessarily severe and attended with much suffering to the patient, but this is not correct. I scarcely remember an instance in which the patient, though specially questioned on the subject, has found fault with the treatment; and I have often heard them say that the pain caused by the blister is not to be compared with that of the rheumatism. Nor have I ever seen any serious inconvenience of any other kind caused by the blisters. Sometimes, however, there is a temporary increase of suffering when the blisters begin to draw, and the temperature rises and the patients are restless at night; but generally there is very marked amendment in the morning, both the swelling, tenderness, and pain being reduced, and the constitutional disturbance relieved. In some cases, however, the local symptoms may not be immediately benefited to any marked degree, and the blisters must be repeated, being applied above to the seat of the first vesication; or, after a few days' cessation, the same joint may be again affected, and in this case too the blistering must be repeated. The occurrence of second attacks in the joints first affected is not, however, by any means confined to cases treated by blisters, but equally occurs when constitutional means have been had recourse to.

Generally with the local means, constitutional remedies, especially the bicarbonate and nitrate or tartrate of potash are given more or less freely, according to the severity of the symptoms. The cases in which I have employed the blister-treatment are the following.

First, when several joints are coincidently and severely affected, the sufferings of the patient are great, the constitutional disturbance severe, and the temperature high; in cases of this kind, three, four, or even six or more blisters are applied immediately the patient is seen, and as many more may be put on in the course of a few days in rapid succession as other joints are involved, or when those first blistered are not materially relieved or again become affected. From this treatment I have seen the most satisfactory results, both the local and general symptoms being greatly relieved by the free blistering, and the duration of the disease being curtailed. It is evident also that, if the active stage of the disease be shortened, as this is the period during which the internal complications are most apt to occur, the frequency of such complications will be lessened. It is in cases of this kind that the blister-treatment is most efficacious, the benefit obtained being apparently directly proportionate to the number of joints coincidently affected, to the severity of the local symptoms, and to the freedom with which the blisters are applied to the whole of the parts involved, so that an immediate and decided impression is produced upon the disease. In cases where only two or three joints are affected, though these may be all blistered, the relief obtained to the constitutional disturbance is less decided, and where the pains are rather diffused over all parts of the body than limited to certain joints, the remedy cannot be satisfactorily employed. I have mentioned that the occurrence of internal complications may be prevented by the early and free employment of blistering; but in some cases we have proof of much more decided benefit being produced, for

I have seen cases in which there were very threatening symptoms of cardiac disturbance, such as are ordinarily followed by serious disease of the pericardium or valves, entirely relieved by the free blistering of the inflamed joints, and the cardiac symptoms apparently arrested.

In cases of this kind, the free discharge from the vesicated surfaces operates apparently as an outlet to the *materies morbi*, and so causes the disease to exhaust itself on the external and less important parts of the body. So satisfied have I been with the effects of the blister-treatment in cases of intense rheumatic fever, that I have gradually reduced the use of the internal remedies, giving much smaller doses of the bicarbonate or nitrate of potash, or only employing coincidently some slight diaphoretic, as the tartrate of potash. Generally, I have seen no reason to doubt that in doing so I have acted wisely. In some very few cases, however, I have come to the conclusion that the relief to the rheumatic symptoms would probably have been more quickly obtained and have been more decided, had I relied to a less extent on the local treatment and availed myself more freely of constitutional means. As an example of this, I may particularly instance the case of a female aged 22, who was under treatment for a third attack of severe rheumatic fever during the last winter, and in whom the pericardium was affected. She was first blistered and took the tartrate of potash internally; but as the symptoms did not subside, I had recourse to the free administration of alkalies. The temperature did not subside to the natural standard till the thirtieth day of treatment, and nine days afterwards a relapse occurred, which, however, was relieved by blistering. She ultimately quite recovered, though the pericarditic friction was of very unusual duration. On the other hand, I have seen cases rapidly relieved by the application of blisters which had previously been under constitutional treatment for some time with very slight benefit.

Secondly, I have known very satisfactory results from the blister-treatment in cases in which the symptoms, both constitutional and local, were less severe, but where the patient's strength was greatly reduced either from previous attacks of rheumatism or other cause, or when the heart was already seriously diseased. In cases of this kind, the use of remedies which exercise any depressing influence is to be avoided if possible. I have, therefore, sometimes relied on the blister-treatment alone, or in combination with tonics—quinine and iron—and with very good results. The blisters, even though freely applied, do not depress the strength so much as the use of alkalies or other constitutional remedies. When the heart is diseased from a previous rheumatic attack, and when, as is generally the case, the patient is very anæmic, the use of depressing remedies is especially objectionable. In such cases, also, the attack should be arrested as quickly as possible, lest the heart should again become involved; and I know no means so likely to accomplish this as the free blistering of all the affected joints. One of the most gratifying cases of the kind occurred to me some time ago in a married woman aged 22, who had very threatening rheumatic symptoms, and old heart-disease the result of a previous attack, and who was very weak and anæmic. The joints were freely blistered, and quinine and iron were given internally, and the patient quickly recovered her usual health much more quickly than I think she would have done had she been treated by constitutional remedies. I may mention incidentally that this patient had a very characteristic presystolic murmur while in St. Thomas's Hospital; and some time afterwards I heard by accident that she had died in the Brighton Infirmary, and that the mitral aperture was found greatly contracted.

Thirdly, another class of cases, in which the rheumatic affection rather involves the smaller joints—what is often called rheumatic gout—and in which the constitutional disturbance is of a more subacute character, is also very often benefited by the use of blisters, though less decidedly than the two other forms of disease. In cases of this kind the blisters need not, however, be employed so freely as in the former cases: I also generally combine them with the internal administration of small doses of iodide of potassium, bicarbonate of potash and colchicum, and often with bark or quinine. As we all know, cases of this kind are very apt to be tedious, whatever be the plans of treatment which we adopt; but I believe that the combination of local and general remedies which I have named is generally the most efficacious means of relief.

Lastly, there are cases in which the disease rather assumes the neuralgic than the ordinary rheumatic form, where the pains follow the course of certain nerves, and are often very persistent, in which the application of blisters is very beneficial. The treatment is a very old one, but it is one which has perhaps of late years received less attention than it deserves. Very recently I had a gentleman under my care who suffered—at times very severely—from sciatica. He had been more or less an invalid for about two years, and had spent much time at the German baths and at Vichy, but had obtained very little relief. Under the application of blisters in the course of the nerve, and the interna-

use of the remedies last mentioned, he soon got quite well, and, I believe, remains so.

It will be seen from the remarks which have been made that I have employed the blister-treatment both as a means of cure, as ordinarily understood, and of relief. In many of the two former classes of cases it may be regarded as essentially curative, though the cure may be assisted by the employment of constitutional remedies. In the latter cases it can only be considered alleviative, and as an adjuvant, though a very important one, to the cure by constitutional means.

ACUTE YELLOW ATROPHY OF THE LIVER, ABORTION, AND *POST MORTEM* EXAMINATION OF MOTHER AND FŒTUS.

By ALEXANDER OGSTON, M.D., Surgeon to the Royal Infirmary, Aberdeen.

IN September 1872, J. R., unmarried, a female domestic servant at a farmhouse in the parish of Turriff, Aberdeenshire, aged 21, took medicine to procure abortion, she being then four months advanced in her third pregnancy. Shortly afterwards, she was one day, after performing her ordinary morning work, and being apparently in perfect health, delivered of a fœtus. Although hæmorrhage was not excessive, her collapsed state immediately after the delivery led to Dr. Mortimer, of Turriff, being sent for. He removed the placenta, and, perceiving slight indications of jaundice, gave an unfavourable prognosis. A few hours afterwards, without having lost more blood, she died.

The *post mortem* examination of her body, performed by Dr. Mortimer and myself, gave the following results. There was jaundice of the whole skin and of both conjunctivæ. The pupils were dilated, and subcutaneous ecchymoses were present on the right shoulder, right arm, left haunch, and left shin. There were black areolæ around the nipples, and milk in the breasts. The lineæ albicantes of previous pregnancies were present. The fingers and thumbs were clenched. There were several rounded ecchymoses, in breadth from an inch downwards, under the scalp. The dura mater was yellow. There was a moderate amount of serum in the ventricles of the brain. There was *post mortem* central softening of the brain. The blood in the sinuses were fluid and cherry-coloured. The mouth and throat were pale. Brown matter was present on the teeth and back of the tongue, and black grumous matter in the trachea and œsophagus. At the lower part of the pharynx, opposite the larynx, was an oval ulcer half an inch long, longitudinal in direction, and in the process of healing. The lungs were anæmic and œdematous behind. A few ounces of pink serum were contained in each pleural cavity. The thymus gland was persistent, but small. The heart was empty; its walls were pale, soft, flabby, and friable; microscopically, its structure was fatty, the fatty granules, all of minute size, being so numerous in every muscular fibre, that few of them showed any transverse striation, and not one was healthy; no large granules or drops of fat were present, and the whole heart was equally degenerated. The stomach was pale, containing a large quantity of black grumous fluid, mixed with friable brownish knots of altered blood. The duodenum, which contained similar matter, presented a small patch of injected mucous membrane. The gall-bladder was contracted, and contained only whitish mucus. The liver was pale, yellow, and intensely anæmic; its structure was soft and friable; microscopically, the acini were crowded with fat globules, a narrow zone of the cells around the intralobular vein alone remaining free from them, and in this zone the liver-cells were cloudy and swollen. The portal veins were full of blood. The hepatic ducts contained no bile. The spleen was healthy. The kidneys were yellow, anæmic, and fatty; microscopically, the epithelium of the tubules was loaded with fatty granules, and some of the tubules contained pure fat, which spirted from their cut ends in some of the sections. The bladder was full of natural urine. The uterus was large, and contained grumous blood. The ovaries were healthy; a corpus luteum was present in the left ovary. A small quantity of blood was found in Douglas's space behind the uterus. The blood was everywhere fluid, and of a peculiar cherry colour. Small extravasations of blood, in addition to those already mentioned, were found under the mucous membrane lining the pelves of the kidneys, and under the peritoneum on the right side of the uterus.

On examining the ovum, we found the placenta and membranes still attached to the child, and a portion of the decidua lying beside them. These latter, and the decidua, were studded through their whole thickness with small ecchymoses and extravasations of blood, which were so numerous on the inner surface as to be confluent. The fœtus was nine and a half inches long, its sex undeterminable. The scarf-

skin was loose and readily detaching. There were several capillary ecchymoses on the back part of the scalp. A patch of extravasated blood, half an inch broad, lay beneath the skin on the right side of the neck. There was brown discoloration of the right leg; green discoloration of the belly. Extravasated blood was found in the lower parts of both lungs, which had not breathed. The liver was soft, containing several clots and extravasations of blood of the size of peas.

An analysis of her liver, spleen, and stomach, and of a mixture said to be the drug she was using, disclosed no trace of phosphorus. The mixture consisted of a small quantity of perchloride of iron, a bitter vegetable infusion, and a minute proportion of antimony.

CONTRIBUTION TO THE HISTORY OF PUBLIC MEDICINE.

By J. INGHAM IKIN, Esq., Leeds.

As far back as 1851, I published in the *Provincial Medical and Surgical Journal* a series of papers on the Progress of Public Hygiene and Sanitary Legislation in England, and the Advantages to be derived from their further Extension. Now that the Public Health Act of 1872 is about to be carried out, an important epoch in the history of sanitary reform has arisen; and it seems an appropriate time to supplement my former papers with a brief commentary or appendix on the progress of sanitary measures from 1851 to 1872. With this view, therefore, I have penned a short statement for the JOURNAL in the first place, and afterwards for the perusal of the public generally, as general information on the question of public health is much needed, and the medical profession are in a position at least to claim the credit of having been the most urgent and effective sanitary reformers—so much so that, without their agitation, combined with their writings, discussions, and practical observations, the slight progress made would have been slower even than it has proved.

The progress of sanitary reform in this country has been slow in the extreme—a fact not creditable to a practical people like ourselves. This has arisen more from apathy and lukewarmness, and from the want of a due appreciation of its national importance, than from any decided opposition or objection to the cause itself. Our heavy bills of mortality, the frequent prevalence of epidemics of a dangerous and fatal character amongst both men and beasts, the alarming illness from fever of a Prince, the spread of cholera from the East to Europe, the breaking out of the small-pox in all parts of the kingdom, the reports and warnings of our medical officials of the Privy Council, and the urgent demands of the medical profession generally, have at last induced Parliament and the Government to discuss and legislate, and a portion of a Public Health Bill has just been the result, along with the consolidation of the Local Government Board. Still, a beginning has only been made; the main work has to be accomplished, and the value of the agencies employed tested. Fortunately for the interests of the country and the health of the community, the leaders of both the great political parties in the State are now pledged to encourage and carry out a well devised system of sanitary legislation; so that no change in the Government and no party strife can check the progress of sanitary reform, in itself as important as any Church or State question.

If the public had been *earlier* better informed, and a knowledge of the ordinary laws of life even partially understood, we should not have been so long kept from sanitary legislation; but the fact is, people are only just beginning to understand that it is for their pecuniary interest that sanitary measures should be adopted; and at last the ratepayer is getting to understand that every preventable disease, every dangerous nuisance, and every premature death, is so much pecuniary loss, local and national. Our leading sanitary reformers have for years led the van in sanitary agitation without any pecuniary object to gain, aided by our state-paid officials, the most enlightened of our class, and philanthropic statesmen like the late Lord Brougham, the Earl of Carlisle, the Earl of Shaftesbury, etc. At last, sanitary reform has become, if not a popular question, at any rate a prominent one. Considering the array of facts that have been published during the last thirty years from time to time, showing the necessity of improved sanitary legislation, it is not creditable to our legislature that so little has been done to remedy the evils pointed out, or to protect the health of the public, check disease, and lessen mortality.

It would be tedious in the extreme to enumerate the steps that have had to be adopted, and the exertions made by different individuals, in favour of the various isolated and imperfect Sanitary Acts that have been adopted since 1851. Equally would it be a waste of time to

dwell on the difficulties that have arisen in their administration: suffice it to enumerate some of these measures themselves. In my former papers, the passing of the Health of Towns Bill, the Epidemic Diseases Prevention Act, and the appointment of the General Board of Health (1845), were dwelt upon, along with the labours of the eminent sanitary reformers then working in this field. Those Acts have been followed by the amended Sanitary Act; the Public Health Act for Scotland; the Act for promoting better Dwellings for Artisans and Labourers, and overcrowding in Lodging-houses; the Nuisance Removal Act; the Sewage Utilisation Act; modifications of the Factory Act; the amended Vaccination Act; an Act referring to the Sale of Poisons; the Contagious Diseases Acts, Human and Animal; besides others; and, lastly, the new Public Health Act, and one on the Adulteration of Food and Drugs, etc.

Analysis of the various Sanitary Acts, by an eminent lawyer, has been, I believe, issued; and another is announced by the Local Government Board; so that on this head it is unnecessary further to dwell; but I wish, in this imperfect sketch, to show to whom the credit is due of having brought about the present state of sanitary legislation, and achieved an advancement in sanitary science. The labours of the *Lancet* and its Commissioners were referred to in 1851. These have ever since been steadily pursued, and with much success; indeed, all our leading medical journals have done much to diffuse information and promote sanitary progress, our own JOURNAL especially. The returns, reports, and recommendations of the Registrar-General and his medical statistician (Dr. W. Farr) have laid the foundation for the new legislation that has been adopted. The first Board of Health, and the labours of the veteran sanitary reformer Mr. E. Chadwick, C.B., along with the writings of Drs. Alison, Southwood Smith, Combe, Forbes, Hastings, Drs. Hodgkin, Black, Grainger, Sutherland, Kilgour, etc., were referred to in my former papers on Public Hygiene. The field has since that period (1851) furnished a host of cultivators. The eminent long continued services of Mr. Simon, first as a medical officer of health, and then as the Head of the Medical Department of the Privy Council, have done much to promote sanitary reform; and he has been supported by an able body of assistants. The sanitary reports and recommendations of Sir J. Ranald Martin on Indian and British sanitary questions have proved of the highest value and utility. It would, however, be an omission not to refer by name to a few others out of the many labourers in this wide field—Letheby, Littlejohn of Edinburgh, Dundas Thomson, Lankester, Hunter, Seaton, Ballard, Buchanan, Seaton, Gavin Milroy, Hillier, Radcliffe, Druitt, Duncan, Hassall, Ernest Hart, Trench, and the various metropolitan medical officers of health. To these we must add the writings and labours of eminent practical sanitarians like Parkes, B. W. Richardson, Black, Holland, Rumsey, Stewart, Acland, Godwin, etc.; not to enumerate those of the numerous sanitary authorities at our foreign stations, as well as those in Dublin, Edinburgh, and Glasgow, in each of which cities medical officers of health of high standing have been at work. The long continued exertions of these parties have materially aided in bringing about sanitary legislation. Various Sanitary Commissions and Parliamentary Committees have from time to time been appointed, such as those to inquire into the causes of the pollution of rivers, the removal and utilisation of sewage, the effects of various trades and occupations on the health of the young, and protection of infant life, etc.; and the protection of miners, the dispensing of drugs, the sale of poisons, etc. The information thus acquired has been utilised by the State, and has led to numerous new amended improvement Acts for the sanitary regulation of many of our large towns, giving greater sanitary powers to the local authorities.

In addition to the above, I must not omit the valuable Annual Reports of the Directors-General of the Army and Navy. These blue-books are full of valuable sanitary information, accompanied with most complete statistical tables referring to the health of every department of these two large branches of the public service. Unfortunately, these documents are comparatively little read by the public, and their merits and intrinsic value are not duly appreciated. The clearness of statement and admirable analyses displayed in these reports are models which other departments would do well to follow; but the public too often pass over statistical reading, and avoid seeking information when a little patient study or reflection is essential. It has often struck me, when perusing the returns of the Registrar-General, the reports and tables of the Medical Department of the Privy Council, and those of the Director-General of the Army, that a brief summary of the facts and results might be drawn up and published in cheap form for general circulation. Except for reference, no one ever thinks of reading a large blue-book. The valuable information contained in them, except in the short extracts given in the papers, is not adequately brought before the public eye.

This observation brings me to allude to the good influence of the press generally, exercised both by the leading newspapers and magazines, as well as by popular writers like Dickens, Kingsley, etc., in favour of sanitary progress and the protection of the public health. The articles of the *Times*, the *Builder*, as well as of other important journals, on sanitary improvement, and on the reports of the Registrar-General, the Director-General, and those from the Head of the Medical Department of the Privy Council (now connected with the Local Government Board), have contained concise epitomes, and reflections arising from them, of the utmost value; and, very extensively read, have had an influence on those in authority, and have served to stimulate members of Parliament to pay attention to the subjects discussed. Without the exertions and co-operation of the public press, both metropolitan and provincial, sanitary philosophers would have effected little. Public discussion and public opinion were elicited in favour of a good cause. The attainment of the object sought is certain, sooner or later, to be brought about. Of course, the more popular the cause, the earlier the success. Public hygiene not being a popular subject, and persons being indifferent about sanitary measures and precautions whilst in the enjoyment of health themselves, it is too often set aside as a question for future consideration, and one not of pressing necessity. What short-sighted policy this is! For the neglect of the laws of health is sure to bring about misery, degeneration, and premature decay, to ward off which is of more consequence to the State than any party or political conflict.

It would be a great injustice, in a summary of this kind, if I omitted to insist upon the influence of the Social Science Association in favour of sanitary reform. Ranking amongst its earliest promoters Lord Brougham, Lord John Russell, the Earl of Shaftesbury, the Earl of Carlisle, Lord Stanley, Sir John Pakington, the Hon. W. Cowper, along with its founder, Mr. Hastings, supported by sixty members of Council, Vice-Presidents, and Secretaries, containing the names of most of our leading sanitary writers, this Association has, from its foundation in 1856, by its valuable addresses, papers, discussions, and influence, aided most materially the promotion of sanitary legislation and the spread of sanitary science. The merits of different legislative measures bearing on the public health are more due to this Association and our own Medical Association and its early founders, than to the members of Parliament who happened to be selected to introduce the measures into Parliament. I have just referred to the volumes of the Social Science Association *Transactions* as far back as 1858, and find that the following subjects were discussed in the Public Health Department that year, besides twenty other papers on various sanitary subjects: "Certain Obstacles to Sanitary Reform," by Rev. Charles Kingsley; "The Effects of Poverty and Privation on the Public Health," by Dr. W. P. Alison; "The Necessity of Experimental Works before incurring large Expenditure for the Disposal of Sewage," by P. H. Holland; "The Duty of Municipal Authorities to improve the Sanitary Condition of Towns, etc.," by Thomas C. Orr; "Notes on the Sanitary Condition of Hospitals, and on the Defects in the Construction of Hospital Wards," by Florence Nightingale; "Suggestions relative to Civil and Military Hospitals, and to some other Sanitary Questions," by R. E. Rawlinson, C.E.; "On the Application of Sanitary Science to the Protection of the Indian Army," by E. Chadwick, C.B.; along with papers by Dr. W. Farr, Dr. Conolly, Dr. Rumsey, Dr. Gavin Milroy, etc.

Now this list is a fair sample of the various subjects brought before the Public Health Section yearly, and this course has been repeated for sixteen years, along with the issue of its *Transactions*, giving an impetus to the diffusion of useful sanitary knowledge, along with the tracts of the Ladies Sanitary Association, affiliated with the parent society. These tracts are admirably written, and are from the pens of some of our most eminent medical men and sanitary authorities. The Social Science Association is justly entitled to rank as the great pioneer and promoter of sanitary reform. Attendance at its meetings and the perusal of its publications and tracts induced me to form a Branch of the Ladies Sanitary Association in Leeds, for the purpose of issuing useful information and for the establishment of sanitary lectures (an extended course of which I gave upwards of thirty years ago), the issue of sanitary articles, house to-house-visitation by lady visitors, bible women, town missionaries, etc., acting in co-operation with the clergy and medical men of their respective districts. Our annual meetings, reports, and discussions served to rouse public attention to sanitary evils, and thus to promote sanitary reform, one of the results being the appointment of a medical officer of health and increased attention to the sanitary state and dwellings of the poor, the removal of nuisances, the prevention of overcrowding, and the isolation of infectious diseases. Kindred societies having similar objects in view have since been formed in this town, and much useful sanitary work accomplished; and the recent visit of the

Social Science Association to Leeds served to focus the authorities to exert their powers to improve the sanitary state of the town and diminish a still unenviable high rate of mortality. The improvement of the homes and habits of the working classes is one of the most effective means of diminishing the high rate of mortality existing in most of our large towns. Popular lectures on sanitary science and physiology can be made very attractive by the introduction of a few experiments, such as those on the chemical composition of the atmosphere, water, blood, etc. The series of sanitary lectures, at my suggestion kindly given by various medical men of standing under the auspices of the Leeds Branch of the Leeds Ladies' Sanitary Association were well attended and much appreciated; and I am glad to find that the ladies themselves have now decided to lecture to the poor women and give them sanitary information and useful domestic advice tending to promote the health and comfort of their families. Under the auspices of the Bishop of the diocese, the Vicar, and the leading clergy, and many of my medical brethren, the public meetings of the Leeds Association were highly successful, and its annual reports had a large circulation. A Social Improvement Society has now taken the place of the Leeds Branch of the Ladies Sanitary Association, and promises to be very useful. Branches of the Ladies' Sanitary Association have done much good in many other places. With sanitary agencies at work such as I have named, pointing out the remedies required, and with a long continued high rate of mortality in most of our large towns, and the continued prevalence of epidemics, Parliament was compelled to act, and at last we got the promised Public Health Bill, which last session, after grievous throes, was brought to see the light of day; but, during the tedious process of its birth, differences of opinion arose between the chief adviser in charge of the case and the numerous doctors and nurses who volunteered their assistance on the occasion, the delay caused by an unnatural presentation forming the cause of dispute. The consequence was, the offspring came into the world defective, if not malformed, though the parent of the child is sanguine that it will ultimately be developed to perfection, and be able to exercise all its organs with efficiency and confer credit on its originator. It is clear, however, there is some doubt as to this happy result; for, though the doctors have been displaced, who had given their services gratuitously, the lawyers and examiners have been selected to take charge of the infant whilst under the guardianship of the Local Government Board. This course has naturally displeased the medical faculty, the members of which, having made the prevention and detection of the disease and the preservation of health their special study, considered themselves best qualified to apply the needful remedies. The official instructions just issued for carrying out the new Health Act are elaborate enough, and it is to be hoped the operations of the Act will adequately meet the ends sought to be remedied. By the passing of the Adulteration of Food and Drugs Bill, a great impulse will be given to the cultivation of chemical analysis, and a field of useful and remunerative skill and labour opened to those medical men and chemists who have made analysis their special study. The acuteness and skill shown in the detection of poisons must now be bestowed to the detection of articles so frequently employed for the adulteration of food and drugs, etc.

The working of the Contagious Diseases Acts has proved on the whole successful, and it is to be hoped the clamour and outcry at one time brought to bear against one of these Acts has subsided, and that the law will be carried out where it is most required and found necessary for the protection of the public health. We separate and isolate small-pox cases, fever, cholera, etc., and it is equally for the safety of the public and for the benefit of future generations that persons with poisonous diseases of a loathsome nature, either in men or women, should be restrained from spreading these diseases, and be treated in a special manner in special institutions. In this respect we are not as careful as the Jews were as far back as the time of Moses. We have the privilege of living under a new and Christian dispensation; still, in many respects, we disregard both the Levitical as well as Christian code of laws laid down for the preservation of our health. By breaking the natural laws of health, we deface the sacred temple we possess, and run counter to the laws of our Maker. The necessity of temperance, cleanliness, and chastity must be enforced by the arm of the law, otherwise the human body is apt to become degraded into a mere brutal machine, and the highest interests of the creature, both here and hereafter, disregarded. Our most enlightened divines have long recognised the necessity of inculcating attention to the physical as well as spiritual wants of the people under their charge. Our leading sanitary reformers, humane statesmen, church dignitaries, and ministers of religion generally, have done much to remedy the gigantic sanitary evils so long uninterfered with by the law of the land. If God's laws are broken, those of men soon come to be unheeded as well. The co-operation of the clergy with the medical profession is

always attended with public benefit; and the Public Health Act will prove comparatively a dead letter, if the parties whom it is principally intended to benefit do not intelligently and heartily unite with the local authorities in carrying it into practice, and they will not do so unless their truest friends, the doctor and the pastor, convince them it is a real advantage to make their homes and habits subservient to the laws of health. As long as the body is neglected and dishonoured, the wants of the soul will receive no attention, the education of the young will be little cared for, civilisation and religion will be retarded, and national degeneration sooner or later ensue. To meet such direful consequences, and add to the happiness and longevity of the human race, are the grand objects of the social and sanitary reformer.

HYPERTROPHY OF THE ARTERIAL WALLS.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

To any one who feels confident that he has satisfactorily worked out a problem, the opportunity of answering objections is always acceptable; and I have to thank my colleague Dr. Beale for having done me the favour to put forth two objections which admit of a complete answer.

The suggestion that thickening with degeneration of the arterial walls had been mistaken for genuine hypertrophy, is completely refuted by pointing to the obvious contrast between my published illustrations of hypertrophy and Dr. Beale's representations of arterial degeneration. It is assumed that the drawings fairly represent the specimens from which they are taken; but the specimens still exist, and can be compared with the drawings. Dr. Beale's Plate XIII, to which he refers in illustration of his criticism, a part of which only has been quoted by Sir W. Gull, contains five figures, of which one represents a normal artery, while three are illustrations of thickened arteries which most pathologists, without even a "hint" being given, would recognise as examples of amyloid or waxy degeneration. But one figure (72) presents an entirely different appearance. This is an artery from the peritoneum of a starved frog; and its fibrous tunic is much distended, probably by glycerine or by acetic acid, while the muscular coat is pushed inwards, and the canal is narrowed. This is a good example of the "hyalin-fibroid" change in the external coat of an artery—artificially produced, as usual. Dr. Beale now repeats the suggestion which he made on a former occasion—that a contracted healthy artery "may be indistinguishable from one of less diameter but with thicker walls." The specimen which Dr. Beale exhibited at the *soirée* of the Royal Medical and Chirurgical Society in illustration of this suggested source of error, showed, as I believe, to the satisfaction of most men who examined it, that, so far from it being difficult to distinguish a normal contracted artery from one with hypertrophied walls, it would scarcely be possible to confound the two. My own specimens of hypertrophied arteries exhibited on that occasion had their canals uniformly distended by injection, and formed a striking contrast with Dr. Beale's specimen. While Dr. Beale believes that the muscular wall of an artery may be atrophied, his singular incredulity as to the possible occurrence of arterial hypertrophy "under any supposable circumstances" will probably prevent him from spending much time in the search for what he conceives to be a physiological impossibility; but to those who are less sceptical I beg to suggest a mode in which they can easily obtain arteries with an increased thickness of true muscular tissue in their walls, and at the same time satisfy themselves that the thickening is not the result of contraction of the canals of the vessels. Let a section of an injected healthy kidney be compared with one from an injected small granular kidney. The size of the canals of the afferent Malpighian arteries, and the normal thickness of their walls, are both well known and remarkably uniform. A comparison of these particular arteries from the two kidneys will show that, while the canals may be of equal size in the two specimens, the muscular walls are more than twice the normal thickness in the diseased kidney.

ETHER AS AN ANÆSTHETIC.

By SAMUEL FIELDEN, Esq., Shildon, Durham.

AT a time when the question of anæsthetics is again attracting the attention of the profession, the following notes may not be without interest.

C. B., aged 24, a feeble, cachectic young man, came under my care early in December last. His symptoms were indicative of vesical calculus, and from his history these had existed for eighteen or twenty

years. I passed a sound into his bladder, and verified my diagnosis. The urine contained no albumen.

On December 20th, I performed lateral lithotomy, and extracted an oblong mulberry calculus, which weighed 547 grains. Ether was the anæsthetic employed, and was administered by means of a sponge enclosed in a towel folded six or eight times, and held closely over the mouth and nose. Fully half an hour elapsed before complete anæsthesia supervened. The quantity of ether used was six ounces. There was no excitement, nor any noisiness on the part of the patient. The pulse and breathing were scarcely at all affected, but the return to consciousness was protracted considerably beyond the time usually required for recovery after chloroform inhalation. An hour and a half after the operation vomiting came on, and recurred frequently for twenty hours in spite of remedies. The patient complained of the vomited matter tasting strongly of ether. Only a little light food had been taken on the morning of the operation, and that three or four hours previously.

With the exception of the exhaustion produced by the persistent sickness, the patient had progressed favourably, and since December 30th has sat up for several hours daily. I am indebted to my friends, Mr. Jobson and Mr. Thwaites, of Bishop Auckland, for their kind assistance at the operation.

CLINICAL REMARKS ON STONE IN THE BLADDER.*

By W. F. TEEVAN, B.A., F.R.C.S.,
Surgeon to the West London Hospital; etc.

I HAVE now operated on thirty-five patients for stone in the bladder; of these twenty-three were adults, the remainder boys. I performed lithotomy in seventeen cases, and lithotripsy in eighteen. I lost two of my patients; one, a pauper aged 66, who had been bedridden for two years before the operation, died one month after I had removed from him, by lithotomy, a large oxalate of lime calculus; and the other patient, aged 70, died suddenly from heart-disease ten days after lithotripsy, whilst straining forcibly to pass a fragment of stone. It thus appears I have had two deaths in my practice, and I have published them both, for I think it more incumbent on a surgeon to make known his fatal cases than his successful ones: in the first place, it is only due to the profession; and, secondly, I think that more is to be gained from an investigation into the fatal cases. I would now briefly relate certain conclusions at which I have arrived from my own experiments, investigations, and experience. I will commence with the choice of an operation in a given case. Shall it be lithotomy or lithotripsy? I think the following rule is the safer one to act upon. We ought to cut every patient, unless we can clearly make out that lithotripsy is indicated. By adopting such a rule as this we shall, I am sure, obtain much better results than if we act on the converse and crush every case unless lithotomy be specially called for, as there will always be cases occurring, from time to time, in which there will be doubt whether they be better suited for lithotomy or for lithotripsy. I would say that every doubtful case ought to be cut. I have never regretted performing lithotomy, but I have some reason to think that in a particular case lithotomy would have been better than lithotripsy. I am of opinion that we ought never to crush a calculus unless the urethra be capacious, the stone small or of moderate size, and the kidneys fairly healthy; for if they be much diseased the patient will, in all probability, get a low form of chronic cystitis, and be carried off by irritative fever or blood-poisoning. However, every case must be judged by its own particular peculiarities and bearings, and not by any rules that may be or can be laid down. For instance, a contracted urethra does not preclude lithotripsy, because we can enlarge the canal, and if the meatus be abnormally small we can incise it. Neither does a large stone forbid crushing, for it may be safely done in a young man, provided it be phosphatic and not too large. Then, again, the fact of the kidneys being diseased does not put lithotripsy out of the question; for if the calculus were small, it could be crushed with comparative safety. If the urethra and bladder be extremely sensitive, I regard the case as unfit for lithotripsy, for the patient would be broken up by the want of rest and loss of appetite, attending the continued irritation set up by the passage of fragments. However, before relegating such a case as I have described to lithotomy, we ought to try if we cannot greatly abate the morbid sensitiveness of the urinary tract by the daily introduction of an olivary elastic bougie. I have known excessive irritability almost entirely removed in a few weeks by such method. Experience is everything in lithotripsy. A surgeon may cut his first case as brilliantly as his last, but it is otherwise with

lithotripsy—it requires practice, and a surgeon who has a gentle hand may impose on the tolerance of the bladder in a way that would be instantly resented if the surgeon were an inexperienced operator. The more I see of lithotripsy, the more I am convinced that the secret of success lies in making each crushing as short as possible. At the first and second sittings the male blade ought only to be screwed home once, but later on this procedure may be repeated twice or thrice. It would thus appear that I only allow my lithotrite to remain in the bladder from half a minute to two or three minutes, and it is to this that I attribute my success. I never give chloroform for lithotripsy, for I look upon the patient's consciousness as necessary for a successful result. If the patient take chloroform, the surgeon is usually tempted to do too much, and the result is that the patient gets incontinence of urine or cystitis. Indeed, I would say that, if lithotripsy cannot be performed without chloroform, the patient had better be cut. I have seen deplorable results ensue from chloroform being given in cases of lithotripsy—the patients being made chronic invalids for the rest of life, and actually put into a worse position than before they were rid of their calculi. Usually I keep my patients to bed only on the day of operation, and on that following it, for I find that confinement to the house injures a patient by lessening his strength; indeed, I have treated many cases most successfully as out-patients throughout. The after-treatment of my cases is as simple as possible; I do nothing unless there be a clear indication for it, and I never wash out a patient's bladder, unless imperatively needed, for it gives more pain than lithotripsy itself. No prudent surgeon would, I presume, ever think of withdrawing a fragment of stone from the urethra unless it were impacted; for any laceration of the canal is sure to be followed by traumatic stricture, and may be attended with fatal consequences through urethral fever or pyæmia.

I have cut seventeen patients for stone; twelve of them were boys, the remaining five adults, who had very large calculi. All my patients recovered, except the one already referred to. Before operating either for lithotomy or lithotripsy, I consider it advisable to keep the patient very quiet for some days, in order to reduce the general and local irritation to a minimum.* We ought to commence the external incision low down, for we then wound less vascular parts, which is all-important in feeble old men. The only disadvantage attached to it is that we may injure the rectum; but this is unimportant, as we can always close the fistula. Everything hinges upon the internal incision. The usual method, in England, is to make a very small hole in the bladder—merely piercing it; and the advocates of such practice found it upon grounds which are absolutely false. They say that if you exceed the margin of the prostate, and open up the deep fasciæ, you will get infiltration of urine, which will kill the patient. Now, infiltration of urine is a physical impossibility after lithotomy. How can you get infiltration when the urine is poured out as fast as it is secreted? Where is the urine to be infiltrated? All the tissues in connection with the wound are filled with coagulated blood a few minutes after the operation. They are, so to speak, varnished with blood, and no urine can affect them. Surgeons talk of infiltration of urine after lithotomy, but, so far as I know, there is not a single unequivocal case on record; the alleged cases of infiltration having been instances of cellulitis, occurring from the surgeon having bruised the prostate in extracting calculi from persons of bad constitution. The advocates of the limited incision are in this extraordinary position. Either two bodies can occupy the same space at the same time, or else the capsule of the prostate can be stretched like a piece of India-rubber, to permit the surgeon to extract the stone, and then immediately returning to its former circumference. Now, either of the above suppositions is absurd. Two bodies cannot occupy the same space at the same time; the prostate and the calculus cannot both be contained at the same time in a fibrous circle less than two inches in diameter. The fibrous jacket, in which the prostate is enclosed, is made of white cellular tissue; and if a student were to go up to the College of Surgeons, and tell the examiners that white fibrous tissue could be stretched like a piece of India-rubber, he would be deservedly plucked. It is impossible to extract a stone by dilatation. You may tear, but you cannot dilate. If there were no objection to the present method of operating, it would still, in my opinion, be open to condemnation, as it tends to make men timid or indifferent operators. No year passes in London without it being known to the profession that some surgeon has failed in the operation of lithotomy. Lithotomy may well boast that it has humiliated more surgeons than all the other operations in surgery put together. Many a surgeon operates brilliantly for years, and, at last, receives his *coup de grace* from lithotomy. At the present moment, London presents the melancholy fact of having a surgeon who has had much experience in cutting for stone, and who yet re-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

* I always perform the lateral operation. The median is not so successful method, and is admirably calculated to emasculate the patient. The medio-bilateral is founded on deductions from supposed facts which are fallacious.

fuses to allow the profession to learn his results. Can we come to any other conclusion but that his reticence is due to a want of success? The disasters that have occurred to surgeons, when operating for stone, have nearly always been caused through an insufficient opening being made into the bladder, the result being that the viscus receded before the pushing finger, and left the surgeon to grope about in the ischio-rectal fossa for that which he found not. Mr. Ellis has, long ago, proved that there is no such thing as dilatation of the prostate, and has very pertinently pointed out that the most successful cases of lithotomy occur in children, when the boundaries of the prostate *must* always be overstepped, on account of the very rudimentary condition of that organ. A surgeon will be heard to state that, in the case on which he has just operated, he has extracted the stone by a limited incision, and subsequent dilatation. But I would ask, what proof is there of such having been done? Not having examined the parts, how does he know whether he has, or has not, exceeded the bounds of the prostate. He cannot tell. On the contrary, all the specimens in the London museums which I have examined, prove incontestably that no surgeon has ever extracted a stone, unless a very small one, without exceeding the margin of the prostate. Some years ago, I carried out a series of investigations on dead subjects, and found that no ordinary sized stone could be extracted from the bladder without completely rupturing the prostate and its capsule. (*Path. Soc. Transactions*, vol. xvii, p. 186.) Three of the patients whom I cut for stone were troubled with incontinence of urine after the operation, and the reason is clear. When I first began to operate for lithotomy, I followed the plan taught me, making a small incision, and subsequently enlarging the wound with my finger. The result was that my first and second cases were troubled with incontinence. I then altered my method; the consequence was that all recovered without suffering from incontinence except one boy, from whom I was obliged to withdraw the stone without enlarging the wound, on account of the critical condition he was in from chloroform. I now come to that proof which will carry conviction, and I will, in the first place, explain what I mean by a free incision. No one would more strongly deprecate making a larger wound than is necessary than myself; at the same time, I believe that more injury has been caused to patients through making incisions too small than too large. I, first of all, make an aperture large enough to permit my finger to slip into the bladder without the slightest force being required. If, however, my finger should not slip in easily, I introduce the knife, and enlarge the wound. And in the bladder I grasp the stone with the forceps (in boys I extract the calculus with the forefinger only), and then commence to withdraw it. If there be the slightest resistance, I introduce a probe-pointed bistoury, and cut outwards and downwards till the stone glides out without the slightest traction being exerted. So far as I can ascertain, those surgeons who have adopted the cutting plan for extraction have attained a success wholly unapproachable by those who follow the so-called plan of dilatating, which is lacerating. Mr. Gutteridge, Mr. Brett, Mr. Carr Jackson, Mr. Vincent Jackson, and myself have cut 349 patients for stone, and the sum total of all the cases that died after operation only amounts to eleven. These results carry with them the incontrovertible deduction that a method of operation which only loses 3 per cent. of its patients must have a better basis for its support than one which permits 15 per cent. to die. I will now conclude by giving one of the most important judgments ever uttered on the subject of lithotomy.

"It has certainly appeared to me that the very result so much apprehended from a free incision of the neck of the bladder seems to have followed in most of my unsuccessful cases from a want of a sufficiently free incision; whereas my unhesitatingly cutting all opposing textures has, especially in my last sixty-eight cases, been followed with the happiest results. Indeed I have almost felt conscious, whenever a case has terminated unfavourably, or the recovery has been slow, that my internal incision has not been sufficiently bold, and that the operation has been protracted thereby." (*On the Surgical Diseases of India*. By Mr. Brett, p. 206.) Better surgical principles than these no book contains.

THE PATHOLOGY OF SICK-HEADACHE.

By FRANCIS E. ANSTIE, M.D., Assistant-Physician to, and Lecturer on Medicine at, the Westminster Hospital.

SOME remarks of Dr. P. W. Latham, in a recent paper in the *BRITISH MEDICAL JOURNAL*, which advert to my late articles on migraine in the *Practitioner*, call for a reply from me.

Dr. Latham has misunderstood the nature of my claim, and he might, perhaps, have given me credit for familiarity with such hackneyed authors as Tissot, Romberg, and Lélut. I had no idea of

claiming the origination of the idea that migraine was a neuralgia: the statement for which I did venture to claim a certain merit of priority was much larger than that. It was to the effect that migraine is almost the only neuralgia of the period of bodily development, and depends on inherited defects in the nutrition of the medulla oblongata, and that it is intimately mixed up with, and frequently interchangeable with other and more formidable nervous diseases, which are also the results of similar defects in the nutrition of the medulla; and that it is, so to speak, a matter of chance whether a person born of a certain race will have migraine, or epilepsy, or asthma. Your readers will perceive that this, which was stated in outline five years ago, in my article on "Neuralgia" in Reynolds's *System*, and at much fuller length in my book on *Neuralgia* in 1871, is quite different—whether true or false—from what had been said by any previous writer. But I am exceedingly pleased to see that Dr. Edward Liveing has, quite independently, arrived at conclusions which come very near to mine. He thinks that migraine is an inherited disease, and that each paroxysm is a nerve-storm which may range over the whole tract between the optic thalami and the nucleus of the vagus. I am greatly satisfied to be so far supported by Dr. Liveing's opinion, which I esteem as highly as that of any pathologist living in regard to questions of this kind. In agreement with Dr. Liveing, I also am obliged to reject the idea of sympathetic nerve-disturbance as a primary phenomenon in migraine; I believe them to be only secondary. The papers of Dubois-Reymond and Möllendorff were long ago carefully studied by me; and the views which they take are rejected upon grounds which will be found stated at length in the chapters on "Pathology" and on "Complications" in my book on *Neuralgia*. I believe that the sympathetic phenomena in migraine are mere secondary matters, standing on a level with vasomotor secondary disturbances, which may occur in neuralgias of every situation and form.

[The above should have been inserted in last week's *BRITISH MEDICAL JOURNAL*, but the MS. was accidentally mislaid.—ED. B. M. J.]

A CASE OF UTERINE HYDATIDS.

By SPENCER T. SMYTH, M.D., F.R.C.S. Eng.,
Great Yarmouth.

THE subject of this history was S. J. T., aged 13 last April, of plethoric habit of body, her general configuration being equal, in many respects, to girls of more mature age. The catamenia made their first appearance just prior to the age of thirteen, and continued regularly to do so, until within three months of her present attack. No cause could be assigned for the amenorrhoea; the general state of health continued good, so that no medical aid was sought. Her mother noticed that she was more indolent than usual. The abdomen was swollen, as also were the mammary glands. She occasionally manifested symptoms of nausea. One morning in December 1872, I was requested to visit her, owing to severe flooding. Upon examining the abdomen externally, I found the uterus enlarged, forming a tumour equal in size to that of a three months' pregnancy. I stated to the mother that, if she were older and married, I should have regarded her case as one of threatened abortion. Much dark blood with coagula had been discharged, accompanied with violent pains. No examination was at this time made *per vaginam*. The areolæ were of a dark colour. Ergot was administered, which (after a few days) had the effect of restraining the hæmorrhage. Upon my second visit, I found her tolerably free from pain, with quiet pulse, without any febrile disturbance; the loss was entirely checked. Still, however, the abdomen was enlarged, and the line of the uterine parietes well defined. On the next day, she was visited by my partner, Mr. Wylls. The flooding had recurred with greater violence, accompanied with the throwing off of a mass of hydatids, attached to the lining membrane of the uterus, which was in a highly hypertrophied, indurated state, as if the result of inflammatory action. She is steadily recovering from the attack, although very anæmic in appearance. Upon interrogation, she stoutly denies having had sexual intercourse, although I strongly suspect that such had occurred.

REMARKS.—Both Sir C. Clarke and Dr. Kennedy mention that hydatids of the uterus may occur without previous sexual intercourse, although, in the majority of instances, they are the result of conception, being an enlarged condition of the villi of the chorion. Danger arises, at the time of expulsion, from hæmorrhage; frequently they are discharged piecemeal, the portion remaining *in utero* keeping up the flooding. If, in this case, conception had not occurred (from her own statement), the occurrence of hydatids must be viewed as the result of inflammatory action. Their symptoms simulate pregnancy very closely, but without the feeling of quickening, *ballotement*, and sounds of the

foetal heart and placental murmur. The treatment to be pursued must be that for hæmorrhage occurring before delivery. Ergot must be given, the vagina (if the case deem it) must be properly plugged, and the uterine cavity emptied (if possible) of its contents.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE ADMINISTRATION OF ETHER.

[Continued from p. 36.]

GUY'S HOSPITAL.

THE following are particulars, drawn up by Mr. Carey, late House-Surgeon, of a dozen cases in which ether has been administered for the purpose of procuring anæsthetic sleep in patients of Mr. Cooper Forster at Guy's Hospital, prior to undergoing surgical operations. Mr. Forster, who has kindly forwarded them for publication, writes to us:—They are taken from amongst my patients indiscriminately; and the others resemble those narrated in almost all particulars. I have been a witness to, and I believe a saviour of, four cases in the theatre of our hospital, where I believe death from chloroform must have ensued had the patients been a few seconds more without artificial respiration and a galvanic current transmitted along the course of the phrenic nerve—*i. e.*, in the neck and to the scrobiculus cordis. In the four cases, I was standing by as a looker-on. Time must prove whether ether may give the same untoward results. I think I can speak of the administration of chloroform, as I was the first person who gave it at Guy's Hospital, and continued to do so to all the cases for one year and a half without one fatal result.

I. Nov. 6th. Ether was given to a child for an operation for dead bone. It took seven minutes to bring the patient under its influence. The child remained anæsthetised fifteen minutes. The quantity given was about four ounces, in three renewals. The pulse before operation was 84; in the stage of excitement, 120; it then settled down to 100. A quantity of secretion from the glands about the mouth was noticed, and this produced a rattling noise in the throat during breathing. The liquid was limpid, and acid to test-paper. There was sickness both during and after the administration, salivary fluid being chiefly vomited. The ether was given with Mr. Rendle's methylene-inhaler, a towel being wrapped over the upper end. The vapour was given as nearly as could be unmixed with air.

II. Nov. 7th. Ether was given in the theatre for an operation on necrosed bone in an adult. In eleven minutes, complete anæsthesia was produced, which was then kept up for twenty minutes. Sensibility returned almost immediately upon the cessation of the administration. The quantity given was about six ounces. The pulse was constant, about 80, full and regular. No buccal secretion was observed. There was no distress, little struggling or blueness. The patient was sick after the operation. The manner of giving the ether was the same as in the last case.

III. Ether was given to a child for operation on dead bone and opening sinus about the knee. It took five minutes to produce anæsthesia. The operation lasted about twenty-two minutes. The pulse was very full, firm, and constant, about 84. The hæmorrhage from the divided arteries was free, as in a person not under the influence of an anæsthetic. The quantity of ether given was about four ounces and a half. There were much blueness, sweating, and sickness. A large quantity of secretion was noticed in the mouth. The ether was given with an impervious chamois-leather cone contrived by Mr. Dunnage, and containing a sponge soaked in ether.

IV. Ether was given to a syphilitic adult for the removal of necrosed bone from the cranium. Anæsthesia was produced in eleven minutes. The operation lasted twenty-five minutes. The quantity used was about four and a half ounces. The pulse was regular and firm. The patient was sick. The respiration, as in the previous cases, was regular. The ether was given with a stiff leather cone, perforated with a few holes at the apex, and containing a sponge.

V. Ether was given to a syphilitic adult, for Mr. Forster's dresser to apply nitric acid to a phagedænic sore. The patient laughed and struggled much, and was anæsthetised in fifteen minutes. The operation was performed in seven more. The influence of the ether did not pass off until two or three minutes after its use was discontinued. The quantity used was about two ounces. The pulse was about 92, constant, full, and regular. There was no buccal secretion or sweating. The patient was sick after the operation.

VI. Ether was given for circumcision in an adult with spreading soft sores. In nine minutes the patient was brought under the influence. The operation lasted thirty minutes. The quantity used was about three and a half ounces. The pulse was regular, full. The patient was sick. Mr. Dunnage's cone was used.

VII. Ether was given to a cachectic adult in a case of fistula. There was much struggling and resistance. The patient was brought under its influence in twenty-one minutes. Anæsthesia was maintained about fifteen minutes. The quantity used was about seven ounces. The pulse and respiration were regular. There was sickness afterwards and during the administration. A layer of spongio-piline was substituted for the sponge in Mr. Dunnage's cone.

VIII. Ether was given in a case of operation for imparting motion to a stiff shoulder-joint. The patient was brought under its influence in six minutes. The influence was maintained about three minutes. The relaxation of muscles was very complete. The quantity used was an ounce and a half. There was sickness. This patient took the ether very quietly.

IX. This case was one in which it was determined to open a knee-joint which had been destroyed by chronic disease, in order that sulphuric acid might be applied. The patient, a child, was brought under the influence of ether in ten minutes, and remained under fifteen minutes. The quantity used was about two and a half ounces. There was much oral secretion of mucus, and sickness.

X. Ether was administered for Mr. Forster to tap a sanguineous cyst in a healthy young man about sixteen years of age. It took eight and a half minutes to bring the patient under the influence of the anæsthetic. The operation was performed in a few seconds. The quantity given was about an ounce. The pulse was uniform, full, regular, about 92. There was some struggling, and a little blueness. The patient was sick. The manner of giving the ether, as in both the cases that follow, was with Mr. Dunnage's stiff leather cone lined by spongio-piline.

XI. Ether was administered for Mr. Forster's dresser to open an abscess in a child. The patient was brought under its influence in eleven minutes and a half, and remained under the influence ten minutes. The quantity given was about an ounce and six drachms. The pulse was full, regular, 92. There was sickness afterwards.

XII. Ether was given in the case of an old man, in whom it was intended to straighten an ill-united thigh. It took thirteen and a half minutes to bring the patient under its influence. Anæsthesia was kept up for twenty-three minutes; it being, however, difficult to produce complete relaxation of the muscles. The quantity used was about three and a half ounces. The pulse was 72, full, regular. The patient was sick after the administration.

Mr. Carey found that the anæsthesia of ether, like that of chloroform, did not follow an invariable rule of sequence with respect to the parts in which anæsthesia was produced. For example, with ether, as with chloroform, he noticed that in one patient there was anæsthesia of the conjunctiva; pain, however, still being felt in the lower extremities. In no case was there any interruption to the regularity of the respiratory process. The tongue-forceps was not used in any. Sickness was noticed in all.

Mr. Cooper Forster has not had chloroform given to any one of his patients since November 6th, and the foregoing twelve are typical of all that have had ether since that date.

ST. BARTHOLOMEW'S HOSPITAL

OPERATIONS, SATURDAY, JANUARY 4TH, 1873.

Fracture of Temporal Bone of Left Side in consequence of a Fall of twenty feet: Removal.—Mr. Savory removed a portion of the temporal bone of a boy who had fallen twenty feet in the morning, and in whom no symptoms of depression existed as yet. The boy, on admission to the hospital some hours before, was quite sensible, and apparently little affected by the accident; but, inasmuch as the fracture was compound, and there was obvious depression of an angle of broken bone on the brain or dura mater, Mr. Savory determined to operate at once, and not to wait until the symptoms became urgent. If a case occurred in which there was depression of bone and symptoms, every surgeon would at once interfere and remove the source of the mischief; but Mr. Savory thought that in a case like the present, where symptoms would be almost certain to supervene in a few days, it was also the duty of the surgeon to raise or remove depressed bone. On its removal in the present case, both tables of the skull were found depressed, and the dura mater was found apparently quite uninjured. The scalp was stitched over the wound in the ordinary way.

Ununited Fracture of Radius and Ulna at Lower Third.—Mr. T. Smith operated by very forcible rubbing together of the ends of the bones, to

induce their union. The man had quite lost the use of his right arm in consequence of the fracture, only a fibrous union taking place. This union had also a faulty position. After the severe rubbing, the arm was put up in anterior and posterior splints.

KING'S COLLEGE HOSPITAL.

OPERATIONS, SATURDAY, JANUARY 11TH, 1873.

Exostosis of Alveolar Ridge.—Sir William Fergusson removed a small exostosis of the left alveolar ridge in a woman who had for some time worn artificial teeth, and who stated that this growth came on her gum in consequence. Sir William removed the growth more to satisfy her own mind and that of her anxious friends than because it was necessary for her health or comfort; although it might have grown larger. With it, he removed a portion of the ridge. During the administration of chloroform, there was a slight fluttering of the pulse, and it was thought best not to push to perfect anaesthesia.

Cleft Palate.—This boy had been operated on successfully for hare-lip some time ago, and he now submitted to the closure of the cleft palate in the ordinary way.

GENERAL HOSPITAL, BIRMINGHAM.

CASES OF DISLOCATION.

(Under the care of Mr. T. H. BARTLEET.)

FOR the notes of these cases we are indebted to Mr. Bennett May, House-Surgeon.

CASE I. Dislocation of Head of Femur into Sciatic Notch of five weeks' standing.—J. W., aged 34, a labourer, five weeks and three days previously had his hip dislocated by the fall of a tree across his loins while engaged in unloading timber. The limb was much bruised, and the surgeons who examined him failed to detect the nature of the injury. He walked into the hospital with the aid of a stout stick. The limb was found slightly shortened, less than half an inch. The knee and foot were rotated inwards. The great toe rested against the ball of the great toe of the sound limb. The great trochanter was a little behind its usual position, and the head of the femur could be felt through the atrophied muscles. Flexion, rotation, and abduction were to a great degree prevented. He complained of but little pain.

The patient being completely anaesthetised, Mr. Bartleet effected reduction by manipulation. Having first freely flexed, extended, adducted, abducted, rotated, and circumducted the femur, to break down any adhesions, he forcibly flexed the leg on the thigh and the thigh on the belly, inclining the knee to the opposite ilium; and then, by a combined movement of abduction and circumduction, while straightening the limb, the bone was slipped inaudibly into the socket. The fact of reduction was at once evident by the resumption of its normal position by the limb. The after-progress was good.

CASE II. Dislocation on Dorsum Ilii.—J. W., aged 14, had his thigh dislocated by a fall of a bank while excavating. He came to the hospital half an hour afterwards, with the usual symptoms of the injury. There was shortening to the extent of two and a half inches. Reduction was effected as in the last case, the bone falling into place with an audible snap.

CASE III. Subcoracoid Dislocation of Humerus of seven weeks' standing.—The patient was a robust female, aged 48. The injury was caused by a fall with the arm extended. There was said to be much swelling at first; and the symptoms must have been obscure, as the case was supposed by an experienced surgeon to be one of fracture. When she presented herself at the hospital, the signs of dislocation were well marked. It is hardly fair to call this and a following case of dislocation of the humerus examples of reduction by manipulation, although it was the main agent in the treatment at the time. Mr. Bartleet, having freely rotated the limb, maintained a prolonged extension with the heel on the axilla, aided by assistants. The limb was considerably lengthened by this. Replacement not occurring, Mr. Bartleet directed an assistant, by means of a fillet round the upper part of the arm, to use traction outwards and a little backwards, so as to disengage the head of the humerus from the coracoid process. While this was being done, he, by a combined movement of rotation with the extension downwards and backwards, caused the bone to resume its normal position. The case went on well, and there remained very little stiffness of the joint.

CASE IV. Vertical Luxation of the Patella.—A muscular young "navvy", aged 25, sustained this injury by muscular action, intensely exerted to save himself from falling, he having slipped whilst wheeling a load of earth up an inclined plank. On presenting himself at the hospital, the limb was perfectly straight, but could be slightly flexed

without causing pain. The patella was found to be luxated on its axis; its inner edge in a prominent line in front of the knee, its outer edge resting in the groove between the condyles of the femur. An effort was made by Mr. Bennett May, the house-surgeon, to tilt it into place by direct pressure on its edges. This failing, he forcibly flexed and immediately straightened the knee. On the second attempt, the bone sprang with an audible snap into its proper position, just as the extending process was commencing. Recovery was uninterrupted, and the patient left the hospital with complete use of his limb.

CASE V. Unreduced Dislocation of the Humerus into the Axilla, of nine months' standing.—E. S., aged 48, a fat woman, dislocated her shoulder by a fall. She saw a bone-setter, who said it was "not out". Nine months after the injury, she came to the hospital. The symptoms of dislocation into the axilla were well marked. The movements of the arm in every direction were fairly free, and were still improving; and she was free from pain. Mr. Bartleet therefore decided not to interfere with the dislocation.

CASE VI. Partial Dislocation of both Bones of Elbow outwards, of five months' standing.—The patient was a young man aged 23. The injury had occurred five months previously. There were considerable deformity, and complete ankylosis of the elbow-joint in a semi-flexed position, but comparative freedom from pain. Under these circumstances, and also taking into consideration the fact that prolonged unsuccessful efforts at reduction had been made by a surgeon in a neighbouring hospital, Mr. Bartleet decided not to interfere.

CASE VII. Dislocation of Humerus into the Axilla, of sixteen days' standing.—The patient was a labourer, aged 33. The injury was caused by a fall. A surgeon to whom he applied made an unsuccessful attempt at reduction with the heel in the axilla. Failing, he sent the man away with the dislocation unreduced. He presented himself at the hospital sixteen days afterwards. The symptoms of the injury were well marked. When completely under chloroform, Mr. Bartleet freely moved the limb, and used firm and prolonged traction, with the arm extended parallel to the head and neck. This failing, the dislocation was reduced insensibly, after prolonged extension with the heel in the axilla, assisted by traction laterally by a fillet, and by rotation and adduction of the arm.

Clinical Remarks by Mr. BARTLEET.—We have lately had in our wards several cases of dislocation, of which an unusual number have been old standing unreduced dislocations. Such cases must always be looked upon as important—important to the patient from the deformity and disability they occasion; important to the surgeon, not only from the anxiety they give in deciding what is best to be done, but also because they are, if neglected, lasting monuments of his failure. Now I do not wish to imply that I consider an unrecognised dislocation always a disgrace to the surgeon who fails to detect it. Circumstances connected with the case, such as refusal of the patient to submit to a complete examination, or delay in procuring advice, or complication in the injury itself, such as fracture with dislocation, or great swelling of the parts injured, may render diagnosis very difficult, perhaps impossible; but I want to impress upon you all that dislocations are usually not only more easily treated, but also more easily detected, directly after the injury, so that in these injuries "readiness" is most important. The time lost in consulting authorities, or sending for a friend, may add greatly to your difficulties.

I wish to call your attention to two or three points in connection with this class of injuries, and especially to those cases in which, for various reasons, immediate reduction has not been effected.

Firstly, their diagnosis is generally easy: the lapse of time has allowed the absorption of matters effused around the joint, and the non-use of the muscles covering the joint has caused their atrophy, so that the form and outline of the joint are more evident, and the nature of the injury is more readily seen. You must remember that considerable mobility of the limb often exists in these cases, the head of the bone having accommodated itself to its new location; and you must not, therefore, be misled by not finding the immobility, which is so marked a symptom in recent dislocations. Prognosis and treatment must be considered together, since the one hinges upon the other. If no treatment be adopted towards reducing the dislocation, in all probability the extent and sphere of motion enjoyed in the injured limb will gradually increase. We must always bear in mind that in an old dislocation the replaced head of the bone, when reduced, may act as a foreign body, just as with an old irreducible hernia when reduced after operation; and we must also bear in mind the danger that forcible efforts at reduction may occasion to neighbouring parts, as arteries, veins, nerves, new adhesions, or even bones and important viscera, or even the terrible accident of avulsion of a limb.

Formerly, definite periods were fixed, after which it was not held advisable to attempt reduction of an unreduced dislocation. Sir Astley

Cooper's rule was twelve weeks for a shoulder, eight weeks for a hip, after which the attempt at reduction was not thought justifiable. Modern observation has supplied a better rule, which is, to be guided by the amount of motion the limb has attained in its new position; for by this we not only gain a knowledge of the amount of necessity for improvement, but we may also shrewdly surmise the amount of change that has occurred in the articular surfaces of the displaced joint by the amount of accommodation that has resulted in its new situation.

Lastly, as to the manner in which dislocations are best reduced—and this applies with equal force to recent and long standing dislocations—I believe that reduction may usually be most easily, most safely, and altogether most satisfactorily, accomplished by manipulation; or, at all events, by other means than the mechanical increase of power gained by pulleys. In fact, I consider the use of pulleys to be very dangerous, unless with them an instrument be used for measuring the amount of force employed.

The great mechanical advantage which we gain in the treatment by manipulation, by using the limb as a lever, and by forcing the muscles into our service to pull the dislocated bone into place, more than compensates for the loss of the multiplication of force by pulleys; for, during the use of pulleys there is often difficulty in employing manipulation of the limb, and we have to depend more upon direct traction.

The treatment of these cases after reduction you have seen in the wards. The limb must be kept perfectly still for two or three weeks, when passive motion should be carefully employed to prevent the continuance or permanency of stiffness of the joint.

REVIEWS AND NOTICES.

THE HEART AND ITS DISEASES.*

It is greatly to be regretted that the author of this book should have permitted himself to be hurried, on whatever grounds, into the publication of so immature and unequal a production. It bears on the surface marks of negligent haste in a profusion of typographical errors quite unexampled in our experience, while a style not without a certain picturesque freedom and vividness is frequently allowed to degenerate into inexcusable looseness. Some passages, indeed, are scarcely intelligible; and others, from neglect of punctuation or peculiarity of diction, become absurd. There is scarcely a page from which examples could not be produced, but we cite only the following. "If the student will attend to tricuspid lesions, combined murmur and lesions, etc., *before he is in possession of his alphabet and gets muddled*, it is very possible that he has only himself to blame." Among the misprints disagreeably prominent are those affecting well known names, such as Gairdiner for Gairdner, Grave for Graves, etc. The constant occurrence of "anœmic" for "anæmic" has probably another explanation.

Were these and such as these the only faults, the book might be accepted under protest; but it is too obvious that neither by patient and prolonged personal observation of the important class of diseases on which he writes, nor by laborious and exhaustive study of the labours of others, has the author qualified himself for the position of teacher and guide which he assumes. On certain points in which *à priori* reasoning occupies a conspicuous position, he has previously contributed papers of real value, which are embodied in this work; but practical difficulties, which must have presented themselves to every one seriously engaged in the study of heart-disease, are entirely ignored; well known and important diagnostic characters are omitted, and valuable prognostic indications overlooked. The single example of mitral constriction will fully illustrate this. There is no recognition whatever of the difficulty in the identification of the precise time-relations of the presystolic murmur. We are told simply that "mitral obstruction has a murmur, often a distinct one, found immediately before the ventricular systole;" that "we have a murmur heard at the tricuspid point of maximum intensity in the fourth intercostal space, about an inch in front of the nipple, which is presystolic." Of course the murmur is presystolic; but, if it were sufficient merely to say so, it would not be so frequently confounded with the more common systolic murmur; and we should not see, as we often do, the most competent observers hesitate and consider long before deciding between the two. The minute directions given by Gairdner, Hyde Salter, Fagge, and others, for discriminating the time of the presystolic murmur, point to

a real difficulty; and, if it have never been experienced by the author (which we can scarcely imagine to be possible, if he have seen cases of the kind), he is bound to remember that it has given serious trouble to others. But it will be noticed that, in the passage quoted, the murmur is said to be heard at the *tricuspid* point of maximum intensity—an erroneous statement in itself, the error being rendered curiously complicated by the fact that the spot assigned is not the point at which tricuspid murmurs are loudest, nor yet the seat of maximum intensity of regurgitant mitral murmur, if, as is probable, tricuspid be a misprint for mitral, this being further to the left; while neither obstructive nor regurgitant mitral murmurs have any constant relation with markings on the chest-wall, but vary in seat with the position of the apex-beat. While the acknowledged difficulty of identifying the presystolic murmur is thus neglected, no mention whatever is made either of the accompanying thrill which is so constant a characteristic in mitral stenosis, and so useful an aid in its diagnosis, or of the peculiar modification of the first sound, which becomes short and sharp like the second, and is frequently taken for it.

There is scarcely room for equally flagrant errors and omissions in the account of other lesions of the valves; but there is a general want of exactitude in description. Pulmonary murmurs are spoken of as feeble, whereas they may be loud and rasping; and no mention is made of anæmic murmurs produced in the pulmonary artery. The pulse of mitral regurgitation is said to be irregular in volume only; the irregularity in time, commonly associated with it, being attributed to changes in the heart-wall. This might be passed over as a simple matter of opinion, but it gives irregularity of rhythm in this affection undue prognostic import. The cause, again, of the variation in the force and time of the pulse, is not the mystery it is made by the author, but is found in the varying pressure on the dilated left auricle at different periods of the respiratory movements. The entire chapter on the valvular diseases of the heart is extremely weak; and, after all, these are by far the most common heart-affections. The repeated tabular statements of the diagnostic points produce a confused impression on the mind, and defeat their object, diluting rather than concentrating the distinctive indications. It is entirely left out of sight too that a valvular lesion giving rise to murmur may be considerable or slight—a matter of infinite importance both to practitioner and to patient. The production of aortic regurgitation by strain, being rather new, is made almost unduly prominent, the mode of causation in strikers and colliers being described in detail three times. The work done by these men is chiefly by the arms; but, as is well pointed out, the entire muscular system is in a state of tension, in order to give effect to their efforts; the chest also being fixed by closure of the glottis. There will thus be resistance to the capillary circulation in the rigid muscles, and propulsion of the blood towards the heart by compression of the veins, which give rise conjointly to high arterial tension, and this tells on the valves, and sets up inflammation in them by over-stretching. The author gives an additional cause of strain, in the obstruction to the passage of blood along the arteries by muscles lying across them; but to this we attach little importance. And he attributes the increased centripetal flow in the veins to the fact that the muscles in the limbs contract towards the trunk, and so urge it on, making no mention of the valves; nor does he assign any place in the causation of the stress on the valves to the compression of the contents of the chest during violent efforts of the kind described.

Looking at the work as a whole, there is nothing in the arrangement of the subjects to call for any special notice. The order differs in some details from that of previous writers, but not in principle. The characteristic feature of the book is an endeavour to apply more fully the results of recent researches on the physiology of the circulation, and particularly to bring to bear the additional knowledge of the nervous control of the heart and arteries recently acquired. This is in the right direction, and is worthy of all encouragement, though the author's confidence might probably have been chastened had he watched for a longer time the course of such investigations. He has, however, studied Dr. Rutherford's lectures, and perhaps other works; and he reasons ingeniously from them. Some points, too, he has thought out for himself. The significance of palpitation as a symptom is one of these, his account of which is interesting and instructive. We attach less value to his remarks on irregularity and intermittence, from which important qualifications are omitted. Another matter on which he contributes useful observations, is tricuspid regurgitation. He is undoubtedly right in his estimation of the serious import of permanent and decided incompetence of the tricuspid valves. We do not altogether agree with him when he denies that regurgitation from the right ventricle may be temporary. All signs of it are sometimes observed to disappear. The value of increased intensity, or, as the author calls it, accentuation of the aortic or pulmonary second sound,

* The Heart and its Diseases, with their Treatment. By J. Milner Fothergill, M.D., M.R.C.P. London: Lewis. 1872.

as an indication of increased pressure or tension in the systemic or pulmonary circulation respectively, is brought out more distinctly than usual. Accentuation of the pulmonary second sound is especially important, as indicative of the degree of obstruction caused by mitral disease. The effects of digitalis in procuring a better supply of blood to the heart, and so improving its nutrition by increasing arterial pressure, while at the same time it affords the heart a longer period of rest by diminishing the frequency of the pulse, have already been pointed out in the author's essay on this important remedy. The chapter on treatment is unquestionably the best in the book, and may be read with profit by any physician. Throughout the whole work, indeed, are scattered remarks of value, which will repay the experienced practitioner; but, unfortunately, the book is exceedingly imperfect, and is rendered unsafe as a guide to the student by omissions and errors of the most unaccountable kind. Some not already mentioned, which occur to us, are the omission of the simple expedient of applying pressure with the stethoscope when there is doubt as to the endocardial or pericardial origin of a murmur, and of all reference to the absence of the second sound in the neck in aortic regurgitation; the statement that the radial pulse is synchronous with the systole of the heart, whereas it is always appreciably behind it, the interval varying with the arterial tension. Again, reduplication of the sounds is said to be rare and of no great value—a proposition both parts of which are open to dispute. Another objectionable feature is the resort to vague and hypothetical causes, such as "exhaustion of the sympathetic". The sphygmograph, too, is singularly misrepresented as antagonistic to the *tactus eruditus*; the fact being, that it promises to revive this lost art, as we might almost call it. For the first time, the old distinctions of *pulsus frequens, rarus; celer, tardus; magnus, parvus; durus, mollis*, can be rendered easily intelligible to a class of students by means of the trace; and, once understood, they are readily appreciated at the bedside.

We have left ourselves no space for an extended notice of the chapter on Combined Heart and Kidney Disease. It exhibits the author's strong and weak points very fully—ingenious and often interesting *a priori* reasoning, insufficient observation, and fragmentary reading.

The general conclusion at which we have been compelled to arrive is, that a limited number of observations, and these rather registered as impressions on the mind than as exact and minute records in a notebook, have been made a basis for very broad generalisations; and speculations have been freely indulged in, without being confronted and adequately tested by facts. Dr. Fothergill has just succeeded in showing that, with a greater capacity for taking pains, he might have given the profession a book both useful and acceptable.

REPORTS OF THE MIDDLESEX HOSPITAL REGISTRARS FOR 1871.

THESE valuable annual reports are fully up to the mark of their predecessors, and contain the results of much laborious work, consisting of tables and abstracts which cover a hundred and sixty pages. The Medical Registrar, Dr. KING, after the usual general table of diseases, gives in a tabular form details of all cases of acute rheumatism admitted during the year. The abstract points out that, of the 123 patients under treatment, recent cardiac affection on admission was noted in 34 cases; of these, 1 died, 23 were discharged with persistent murmur, and 10 were discharged with heart-sounds normal or but slightly roughened. In 8 cases, the heart-sounds, though normal or only slightly roughened on admission, were accompanied by a distinct murmur on discharge. Seventeen were admitted and discharged with old cardiac mischief, which was added to, in some instances, while under treatment. Thirty-five passed through the attack without any signs of cardiac complication, and in 13 cases merely slight roughness or prolongation of the heart-sounds could be detected. Six cases were attacked with pericarditis while in the hospital, though admitted and discharged with the heart-sounds normal. He further notices that a family history obtained in 41 out of 123. Similar tables and abstracts are given of chorea, sciatica, and phthisis. With regard to the cases of phthisis, it is noted that, so far as the results tend to show, the probability in favour of the disease being transmitted from male to male, or female to female, is two-thirds greater than the probability that it will be transmitted from one sex to the other. A valuable table, which is also abstracted, gives the results in some detail of a hundred and eleven necropsies. This completes an admirable medical report.

The report of Mr. MORRIS, the Surgical Registrar, affords an instructive abstract of the surgical work of the hospital. It is presented mostly in the tabular form, general and special tables being given. At the Middlesex Hospital, cancer-patients are specially provided for, and large numbers are received into the wards or are treated as out-patients. Details of 107 cases are given by Mr. Morris, with the results of operation, if any, and other particulars. It is the custom in

this hospital either to sponge into the fresh wound after the removal of cancer, as after all other operations, a solution of chloride of zinc, or sulphurous acid, or carbolic lotion; or to employ the carbolic spray. A large number of the cases are treated on Lister's principle. During the last three years there has been an increase in the number of cases of pyæmia; for, whereas in 1869 pyæmia originated in the surgical wards three times, in 1870 it arose three times, and in 1871 nine times. A very important hernia table is given. Of the 12 cases in which strangulation existed, 6 were femoral (5 females and 1 male), 3 scrotal, and 3 oblique inguinal (2 females, 1 male). An operation to relieve strangulation was performed in ten cases, in each of which the sac was opened; in the remaining two cases, chloroform and taxis were sufficient without a cutting operation. Death happened in three of the cases operated upon; one case was complicated with bronchitis, and the hernia had been reduced *en masse* before the operation relieving the constriction was performed. The average duration of the existence of the rupture in the strangulated cases was about ten years; the longest time, over twenty years; the shortest, three days. The average duration of symptoms of strangulation before admission was fifty hours; the longest time, one week; the shortest, one hour and a quarter. Tabular statements of compound fractures, operations, and seventy-nine necropsies, complete a most valuable report.

ON LIGATURE OF THE ILIAC ARTERY; AND EXCISION OF THE KNEE-JOINT. By R. G. H. BUTCHER. Dublin: 1872.

THIS pamphlet contains two cases of practical interest. The first is an instance where Mr. BUTCHER performed the operation of ligature of the external iliac artery for an extensive aneurism of that vessel. The patient was seventy-six years of age. The application of the ligature was followed by violent suppuration of the sac, seriously imperilling the old man's life. An ultimate cure was thus effected. The particulars of this interesting case are well worth perusal.

The second case narrated is an example of disease of the knee-joint where Mr. Butcher performed the operation of excision, and where an excellent result followed. After the cure had been perfected, the patient caught cold, and died from an attack of acute phthisis. Mr. Butcher was enabled to preserve the parts, and to show by an illustration of the preparation how rapidly and effectually a firm ankylosis of the adjacent bones was produced in the course of a few weeks. The author has taken the opportunity of describing the present state of a patient on whom he performed the operation of excision of the knee-joint twenty years since; and he has clearly proved what some are disposed to deny, that after excision the limb may preserve its symmetry and usefulness for any number of years. The reader will also find some excellent practical remarks on several points connected with the operation which will repay study.

COLUMN FOR THE CURIOUS.

HYDROPHOBIA.—Though all modern experience establishes the belief that this disease is invariably fatal, the following reported case of recovery is from a source which invests it with a certain degree of interest. Dr. Mead, in his third essay on Poisons, says: "I have by me a letter from the learned Dr. Boerhaave, in which, with his usual exactness and judgment, he relates two cases of hydrophobia." The first was treated by cold affusion, etc., with a fatal result; but of the other he goes on to say: "The other case had a more happy event; for, though the dread of liquids was attended with foaming, roaring, and the most mischievous rage, yet by large doses of nitre (to which laudanum and diacodium were sometimes added), by cooling the head continually with vinegar and rose-water, bathing the feet every night and morning in warm water and vinegar with salt, keeping the body open by tamarinds, syrup of violets and frequent clysters of water and nitre, and, lastly, eating almost constantly lemons with a little sugar, the poor wretch was most perfectly recovered."

LEAD AS AN APPLICATION TO ULCERS.—Some time ago, Dr. Mulvany, R.N., sent a communication to the JOURNAL, if I remember rightly, respecting the use of sheet lead as an application to ulcers by the negroes on the West Coast of Africa. The following is from Allen's *Synopsis Medicinæ*. Schmitz says that, in a corroding herpes, plates of lead macerated a long time in aqua aluminosa are good. Haldanus says that a great deal of care is to be taken lest an ugly cicatrix remain after a burn, and that this is to be prevented by applying thick plate of lead anointed with mercury.

GEORGE F. ELLIOTT, M.D., Hull.

LOCAL SECRETARIES will oblige by sending estimates of the number of new members, so that the proper number of JOURNALS may be ordered to be printed.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 18TH, 1873.

THE CASE OF THE EMPEROR NAPOLEON.

TOLERABLY full materials for a judgment on the case of the late Emperor Napoleon III are now before the profession. The first consultations on his case, when it began to assume a serious aspect, are published among the private papers of the Tuileries seized and issued from the press by the Republican Government; and our Paris correspondent forwards to us copies of them. We have, on the other hand, the details of the illness and operation of the Emperor in this country, which have been published also with even a greater fulness of detail than is compatible with English sentiments of propriety, or than would have been possible had the Emperor's attendants been only Englishmen. We have further the *post mortem* examination, or rather the summary of it; and the addendum which one of the physicians has appended, discussing, at an oddly selected moment, the precise causation and early history of the case.

Examined by the light of these contemporary and historical documents, the facts may be read clearly enough; and, if they are such as to give some cause for regret, they leave little or no room for reproach. The anæmic and debilitated condition from which the Emperor formerly suffered may be traced back to the six years of captivity at Ham, and the accompanying confinement, insufficient aëration, and moral disturbance. This damage was partially repaired in subsequent years. Then came the signs of incipient calculous disorder, of which all the conditions are traced in the history before us. Three days before the declaration of war, the Emperor submitted his condition to the opinion of some of the most sagacious surgeons and physicians of France. They accurately analysed and described his condition. They traced his disorder to calculous pyelitis; and they advised a search for the calculus, which was the cause of existing sufferings and the threatening source of the deeper and hidden dangers which have shortened the days of the third Napoleon. But reasons of State overpowered professional monitions. The advice was rejected, as it was informally tendered; and the elaborate document drawn up in writing by M. Germain Sée was never even submitted for the signatures of Nélaton, Ricord, and the other consultants, on whose opinions, expressed in council, it was founded, and whose views it may, of course, be safely held to express. It remained in the hands of M. Conneau, to whom it was in the first instance forwarded; and it is now disinterred by the singular vicissitudes of a strange fortune, to bear testimony to the terrible exigencies which the government of a State imposes upon its ruler, and the firmness with which he put aside personal considerations when the functions of the State called him to a position incompatible with his duty to himself. Napoleon III started for the frontier intent on the Franco-German war, and on placing himself at the head of his armies, the prey to intolerable suffering, which was increased by every jolting of the carriage, and which almost forbade him to sit in the saddle. He started, moreover, with the knowledge that the surgeons whom he had consulted were altogether opposed to the risks which he was running; and that as an individual, if not as an emperor, he was bound to stay at home and get rid of his calculus.

The subsequent events—his foreign durance, and the unsettled affairs of France, which called, as he believed, for incessant watchfulness and for such an outward character of readiness as should not discourage the imperialist "party of order" in their labours for the Bonapartist cause in France—deprived him of further opportunities for an effort for his bodily cure until recently, when matters had reached a pitch which

rendered intervention absolutely necessary as a condition of existence. But at this time the hidden changes in the renal tissue, due to the mechanical effects of the calculus, had secretly advanced to such an extent that the healthy structure was very greatly reduced. That little, however, was still performing its function. When renal disease springs from a primary and constitutional cause, it is easy, by the light of scientific investigations, due chiefly to the labours of Bright, George Johnson, and other English physicians, to trace its progress and to determine its extent, and the degree to which it must influence practice. But when, as in this case, the wasting of the kidney and dilatation of the ureters are due to a backward pressure from the mechanical obstacles interposed by a large vesical calculus, there are no such means of gauging its character and extent. The vesical irritation sets up a series of conditions which destroy the value of information otherwise acquired by microscopical and chemical investigation; and as the remaining healthy renal tissue continues, to a certain point, to perform the appointed work, the means of diagnosis are at fault. There are, unfortunately, no direct physical means of examining the state of the kidneys as there are of ascertaining the physical condition of other organs more superficial, or, like the heart and lungs, less silent. This is one of the hidden rocks, of which skilful navigators are aware, which they fear, but on which they must sometimes, in hostile conditions of wind and weather, perforce be driven. It has been especially studied and pointed out more than once by Sir Henry Thompson, who indeed has been more clear and explicit in defining the characters, origin, and dangers of the condition than any one else; and who, both in his papers in the *Medico-Chirurgical Transactions* and in his published monographs, points to it as the one condition which is the despair of lithotomists as of lithotritists.

The choice of operation, he has been forced to conclude, does not in such a case affect the result. It is certain that this condition affords the key to the events of the present case. The operation itself, performed, of course, with extreme care, and in this case, as has been demonstratively ascertained, with the nicest skill and manipulative success, inflicted absolutely no vesical injury; neither scratch nor injury of any kind were to be found on the surfaces over which the small and delicate lithotrite which Sir Henry Thompson uses had been passed, and in contact with which it had been manipulated. The shock conveyed to the renal system by the introduction of an instrument, and that amount of inevitable irritation which follows the ordinary proceedings of lithotripsy, were aggravated by the long-standing local irritability; and, reflected upon renal organs in which only a shell of healthy tissue was left, they produced the fatal tendency to uræmic poisoning of the blood. A slight and insidious drowsiness, of which the significance was recognised and combated by suitable local applications, gives the key-note to the subsequent events. On the night preceding death, the local symptoms were very satisfactory, but the uræmic drowsiness was slightly marked. The Emperor's strength was good and his pulse was firm, but the uræmic poison circulating in the blood presently produced the suddenly fatal results which are occasionally characteristic of it.

The death has been characterised as one of fatal syncope. To speak with clinical accuracy, it might more properly be described as uræmic failure of the brain and of the nervous centres supplying the heart.

In pure heart-syncope consciousness is retained to the last moment, and death is even more sudden, and marked by a somewhat different class of symptoms. Here cerebral incoherence lapsing into unconsciousness and stertor preceded death. The brain was affected by the urea accumulating in the blood, and heart-death ensued upon the brain-death. It is a striking confirmation of the fatal character of the hidden lesions existing in this case, and of their equally fatal character whether the cutting or crushing operation be chosen, that this week we hear of the death of a prominent personage in Dublin, who was cut owing to the largeness and hardness of the calculus, and whose death was due to the same causes which proved fatal to the Emperor. Such cases lie on the border-land: either opera-

tion may be considered applicable, according to the mechanical conditions of the case. The one offers no more security than the other. What is certain is, that if either be selected, a certain number of wiseacres are always to be found who will say that the other ought to have been chosen.

HOSPITALS AND DISPENSARIES.

AN useful discussion on this subject is springing up in the columns of the *Daily News*. Mr. Jodrell writes to that paper an excellent letter, in which he observes that it is a common opinion among benevolent people that contribution to hospitals is the best of all charitable investments; and no doubt it is so, provided they are administered on sound principles. But hospitals, like other charities, have their abuses; and it is important that these should be generally known, in order that they may be remedied; for, if we consider the great number of these contributions, and the vast sums which they have annually to dispense, there is no saying what amount of mischief they may not do if we shut our eyes to what is amiss in them. He does not speak of minor blemishes in this or that hospital, for these are of small moment; but there is, he says, one crying evil which prevails more or less in all the medical charities—free dispensaries as well as hospitals—the indiscriminate admission of out-patients, which is as ruinous to the hospitals as it is demoralising to the classes who are relieved by them; for it is notorious that their waiting-rooms are thronged with a miscellaneous crowd of applicants who have no right to be there, but who are allowed to participate in the benefits of the charity in competition with the really necessitous, who alone are the proper objects of it. The consequences of this are obvious. The medical staff being overtaken by the multitude of patients, those who are the real objects of the charity receive a smaller share of attention than they are entitled to, and that at a greatly increased cost to the hospital; while the intruders, by the mere fact of obtaining gratuitously that for which they ought to pay, are initiated in habits of mendicancy and dependence, and the hospital is converted incidentally into a great school of pauperism. The best, if not the only, remedy for these evils may, he believes, be found in the establishment of a system of dispensaries on the provident principle; in which, for a small weekly subscription, the well-to-do portion of the labouring population might, without any loss of self-respect, obtain relief better adapted to their wants than that which they now receive as mendicants at the hospitals, and at a cost quite within their means.

But it is obvious that these institutions cannot be set on foot with any chance of success, so long as those who would naturally join them are drawn away by the offer of gratuitous relief at a neighbouring free hospital. And this is the reason why provident dispensaries, although not altogether unknown in London, have never thriven there as they have done in several of our manufacturing towns, where they have been many years in successful operation, and in some places have become almost self-supporting. It appears, then, that the present system of indiscriminate admission of out-patients is doubly mischievous; first, as the direct cause of the evils which he has thus briefly enumerated; and, secondly, by presenting an insuperable obstacle to the only measure by which those evils can be effectually remedied. To describe them, as was lately done, as “shortcomings and defects which beset all human effort,” is merely to hoodwink the public, and lull them into quiescence by extenuating the gravity of the evil and representing it as unavoidable. What is wanted, on the contrary, is to awaken their attention to it, and to stimulate them to apply the remedy. We all declaim against indiscriminate almsgiving by individuals; yet it is practised by wholesale in hospitals, and not a word is said about it. The lesser mischief is universally acknowledged, because, until quite lately, it encountered us whenever we went into the streets. The greater mischief is ignored, because people neither see it in action nor trouble themselves to follow it to its consequences. These are seen, or at least fully appreciated, only by the few who occupy themselves on an extensive scale with the condition of the poor; and those who have most to do

with London pauperism best know for how large a share of it London charities, and the hospital at the head of them, are answerable. With these opinions and statements of Mr. Jodrell we entirely concur.

From the governing bodies of these institutions he has little hope of any amendment. It is only by the constitutional remedy of stopping the supplies that any impression can be made upon them; and the subscribers have this remedy in their own hands. If they do not employ it, it is because they do not realise to themselves either the magnitude of the evil or by how easy a process it might be got rid of. Whatever could be done by private effort to rouse them from this apathy in his own district, he has already done; but printed appeals emanating from a private source are seldom read, and therefore produce little effect, however widely they may be circulated; and it is only through the public press that public opinion can be either formed or informed. To that press, therefore, he commends the subject as one in which he believes some of our highest social interests are involved.

Mr. H. Denman, who acts as Secretary to the Provident Medical Institution and Lying-in Charity, 20, Pimlico Road, in a letter of the 3rd instant to the editor of the *Daily News*, endorses the statements of Mr. Jodrell on the subject of hospital dispensaries. Whilst agreeing with Mr. Jodrell as to the pernicious effect of the indiscriminate reception of out-patients at the hospital and free dispensaries, of which, however, he has no hope of amendment from the governing bodies until the charitable public effect the needed reform in hand by checking the supplies to them, he suggests that these supplies be transferred to those bodies seeking to establish the provident system exclusively, or at least with such modification as the invariable application of a strict test. As an example of this system, Mr. Denman instances the society where he is an officer. In proof of the validity of his opinions, he mentions that the Medical Committee of the Charity Organisation Society in their report strongly advise “that the funds contributed by the benevolent should be given in preference to the assistance of those who are inclined to help themselves.” At the same time, he reminds the benevolent, the institutions striving to establish the provident system in the metropolis have sore need of help in their early day; for, he says, they have much to contend against. This, he considers, results from the impression among the charitable that they must receive a *quid pro quo* for their contributions in the shape of letters of recommendation, although Dr. Nankivell and other students of the question have expressed their belief “that the aid given to provident charities should be rendered as supplementary to the payment of members, and not for the gratuitous relief of non-members.” Mr. Denman believes that there are agencies at work injurious to the success of the provident charities, besides the pernicious influence of the gratuitous advice given at hospitals and free dispensaries. These agencies Mr. Denman asserts to be the jealousy of small medical practitioners, “who, under the mistaken idea that provident charities are more calculated to interfere with their private practice than free ones, adopt the provident dispensary tariff, and even exhibit in their surgery windows the copy of proposed rules issued by the Medical Committee of the Organisation Society for the use,” as Mr. Denman considers, “of such institutions possessing a governing body and a public status, and not of private individuals, who, though designating their surgeries ‘provident dispensaries’, are under no obligation to reject any applicant on the ground of unfitness.” In conclusion, Mr. Denman mentions, as another source of injury to organised provident charities, the establishment of petty clubs or medical agencies, whose meetings are held at public-houses. In the announcement of such an one, Mr. Denman mentions the fact that “the name of a qualified practitioner appears, apparently as an advertisement.” The tendency to establish “small medical provident clubs for church districts, under the auspices of the clergyman, and officered by a medical man probably of the congregation,” Mr. Denman considers to be an unfortunate one; because, though these institutions may be excellent in themselves, and necessary in localities where provident institutions do not exist, they undermine the income of the neighbouring provident charities, and detract from their success.

CHARITY CANVASSING.

How many of our poor there are who shrink from parading their sorrows before the world, but silently endure the ills that have come upon them. These, too, are, generally speaking, the best men and women of their class, upon whom poverty has come through no fault of their own, and who would die rather than appear to trade upon their misfortunes. It is just this class of persons, the most deserving of charity, that our charities too often fail to reach, and this is mainly owing to the vicious system of election which obtains in too many instances. We are glad to see that public opinion is at last being thoroughly aroused to recognise the importance of this question, and to feel that it is but a species of refined cruelty to call upon the sick and suffering for two or three years' hard work, and upon the poor and needy for a heavy outlay of money, to give them even a chance of success.

What candidates stand the best chance, under the present system of canvassing for votes, but those who are most bold and hardworking, those who have the most means and the most friends to enable them to prosecute an active canvass? And what is the position on the poll occupied by the shy and retiring gentleman or gentlewoman, incapacitated by sickness, whose friends, perhaps, are all gone, and whose means do not suffice to purchase food from day to day, to say nothing of postage-stamps and the payment of printers' bills?

A very graphic description of a charity election-day has recently appeared in one of our daily contemporaries, and a very painful picture it is, though not more painful than true. Perhaps the worst part of the picture is that which shows the trafficking in votes which goes on on these occasions—a part of the system which has grown immensely of late, but which is peculiarly disagreeable, associated thus with charity.

We rejoice to think that one of our own medical charities is free from the objections we have been referring to, and that the British Medical Benevolent Fund connected with our own Association may be regarded as a sort of pioneer in the better way of doing good. No canvassing and no unnecessary publicity are there, so that a man or woman may receive assistance without losing that self-respect which we should endeavour to encourage. As an example of the working of the Fund, we may refer to an election of five annuitants which took place at the last monthly meeting of the Committee; and we would first remark that not one of the candidates knew that this election was pending. Their names had been entered from time to time on a list of candidates as they were found eligible (being over sixty years of age), and the papers relating to each case had been carefully preserved and added to from time to time as reliable testimony came to hand.

Sixteen members of the Committee being present, the chairman read out the list of candidates (thirty-two in number), together with some particulars of each case, as tabulated by the honorary secretary. This having been done, and certain questions respecting particular candidates having been asked by various members and answered, the choice of the meeting fell quite unanimously on the following, who were accordingly declared by the chairman duly elected annuitants of £20.

1. The widow, aged 73, of M.R.C.S., L.S.A., who practised in Staffordshire. She had been on the list of candidates since 1867. Her children are in situations, but are not able to do much for her. One daughter is an invalid at home with her. She has no means but what she gets from friends, which is not more than £18 *per annum*. Relieved from Fund once (£10).

2. The widow, aged 72, of M.R.C.S., L.S.A., who practised in Suffolk. She has been supported by the occasional help of friends, and the earnings of three daughters from teaching, this source being precarious from their ill-health. She has been relieved by the Fund four times (£40).

3. M.D. Edin., aged 71, in practice in a northern county for twenty years. Owing to an unfortunate investment, he lost all his money a few years since. He is now suffering from stone in the bladder and paralysis. Relieved from the Fund once (£10).

4. A surgeon, aged 77 (in practice before 1815), in Oxfordshire. He has worked hard for many years in a poor neighbourhood, and has been

unable to make provision for his old age; he is, moreover, crippled in both hands. Relieved twice (£20).

5. M.R.C.S., L.S.A., aged 56. He has been an invalid for some years, and is now nearly blind and suffering from paralysis. Himself and his wife are entirely dependent on help from friends. Relieved once (£10).

We have said that none of the candidates knew that an election was pending; the unsuccessful were, therefore, spared the attendant worry and excitement and the pain of disappointment, while the successful were gladly surprised at the welcome news of their good fortune. One incident in connection is worth mentioning: a gentleman calling to inquire for one of the new annuitants the morning following the election, found that the poor man was so touched with his good fortune, which had been intimated to him by a letter from the honorary secretary, that he had immediately gone to the nearest church to return thanks, saying that his first act should surely be one of thankfulness to God for this new and unexpected mercy. May we soon hear that the Committee have been able in like manner to rejoice the hearts of all those who are still on their waiting list of poverty and suffering.

POISONED MILK.

To the particulars of three previous epidemics of fever, widely propagated by the distribution of infected milk, which have been chronicled in these pages, we have now to add a notice of two other remarkable instances. The famous investigation of the epidemic of typhoid fever at Islington by Dr. Ballard, which he ascertained to be due to the infection of the milk served by a dealer with the typhoid poison, finds to-day its counterpart in Leeds, and at Moseley, near Birmingham. We have already referred to the outbreak of typhoid at Moseley which led to representations in London, and we mentioned that the Local Government Board promptly responded to the representations made by the residents of Moseley and Balsall Heath as to the outbreak of fever, and Dr. Ballard was instructed to make an inspection of the two districts. On Saturday Dr. Ballard, having completed his investigation, had an interview with the Local Board of Balsall Heath. He said that he had traced the outbreak to the use of specifically poisoned milk, which had been supplied to the families amongst whom fever had broken out. Dr. Ballard also stated that the soil of the district had become infected, and that it would be necessary for the Local Board to supply pure water free to the inhabitants, the expense to be borne by the ratepayers. Dr. Ballard having made some important suggestions to the members of the Board, a vote of thanks was accorded him, and a resolution was passed appointing a committee to make arrangements for carrying out the instructions of the government inspector.

We read also of a similar instance. A virulent outbreak of typhoid fever, in several streets near the Leeds Town Hall, a few weeks ago attracted the attention of the authorities. The epidemic, very fatal in its character, pursued a somewhat eccentric course. It attacked families in some parts of fashionable squares and left others untouched. It raged in certain middle-class streets and passed over others. Though it was found that the drainage in some parts of the affected district was slightly defective, this did not satisfactorily account for the attack. The authorities next turned their attention to the food-supply of the infected houses, and they then discovered that one milk-dealer, living in the centre of the town, supplied the whole of the infected houses; and it transpired that he received his daily quantity from a farm near Harewood. Thither the health-officers of the town at once proceeded, and found that six persons were there suffering from the fever. The milk-cans were generally kept in the kitchen, which closely adjoined the room where the fever-patients were laid, and one woman attended both to the sick inmates and the dairy. The theory is that the germs of disease in the air settled down in the milk-cans before they were daily sent out with their stock of lacteal fluid. The Sanitary Committee of the Leeds Town Council at once stopped the sale of milk from this infected quarter. To show the severity of the epidemic,

it may be stated that eighty people were thus secretly attacked, and twelve of the patients have since succumbed to the virulent disease.

In the former case, it was suspected that the "cow with the iron tail" was the real culprit, and that it was the water added to the milk which caused the germs of poison. This, indeed, suggests itself in the first instance in all such cases.

DR. BRODIE having resigned the office of Medical Officer to Queen Charlotte's Lying-in Hospital, a vacancy ensues.

IT is stated that relapsing fever has made its appearance in Manchester and also in the Staffordshire Potteries.

AN examination of candidates for appointments as assistant-surgeons in Her Majesty's Indian Medical Service takes place at Burlington House on February 17th.

THE oration in honour of John Hunter will be delivered on the 14th of February next, at the Royal College of Surgeons, by Mr. Hancock, the President of the College.

THE offices of Assistant-Surgeon, and Physician or Surgeon for the treatment of Diseases of the Skin, at Charing Cross Hospital, are vacant. Dr. Sparks is, we understand, a candidate for the appointment to the skin-department.

At a special meeting of Governors of the National Orthopædic Hospital, on the 13th instant, Dr. W. J. Little was appointed Consulting Physician, and Mr. William Adams Consulting Surgeon. The appointment of Mr. Osman Vincent as Surgeon was confirmed.

THE second Lettsomian Lecture on Urethral Discharges will be delivered by Mr. Henry Lee at the meeting of the Medical Society on Monday evening next. It is intended that these lectures shall appear in the *St. George's Hospital Reports*.

A NEW hospital for sick children has been opened at Pendlebury, Manchester. Accommodation has been provided in the new building for 170 beds, and Mr. Oliver Heywood has offered to add an additional wing, at a cost of £2,200. A luncheon followed the opening ceremony, at which the Bishop of Manchester and Mr. R. N. Philips, M.P., were present.

THE recommendations to the Council of University College for the filling up of the appointments of Assistant-Physician, Assistant-Surgeon, and Assistant to the Medical Officer of the Skin-Department have been adopted, and the following gentlemen have been accordingly elected to the respective appointments—viz., Dr. Gowers, Mr. Marcus Beck, and Dr. Tweedy.

IN view of the existence of relapsing fever in various parts of the country, and the possibility of its extension to the metropolis, it has, we believe, been decided by the Local Government Board to leave the Hampstead Hospital available for the reception of patients suffering from the disease. It is not at present likely, therefore, that the plan for transferring to that hospital a certain class of inmates from the workhouses will be carried into effect.

MEDICAL BENEVOLENCE.

THE eminent and regretted Dr. Louis of Paris has bequeathed to the Medical Association of the Seine a legacy giving an annual income of £60. The French societies are richly endowed with annual prizes bequeathed by deceased physicians. It is a little surprising, seeing how much we are accustomed in this country to depend for our progress and the material prosperity of our institutions upon the public spirit and benevolence of individuals, that medical men in their wills have so rarely remembered the profession and the institutions amidst which they have passed their lives. Our societies and our colleges seem to have but a weak hold on the affections of the members and fellows.

LONDON INTERNATIONAL EXHIBITION FOR 1873.

A MEETING of surgical instrument manufacturers was held on the 10th inst., at 29, St. James's Street; Mr. Louis Blaise in the chair. The conditions imposed by Her Majesty's Commissioners for the Exhibition for 1873 having been fully discussed, it was unanimously resolved: 1. "That the surgical instrument manufacturers do not exhibit, unless the conditions requiring their productions to be submitted to a Committee of Selection be withdrawn"; 2. "That they may exhibit all the articles of their manufacture as a whole, and not in sections or subdivisions, as proposed by the Commissioners"; 3. "That the condition upon which the foreigner and Englishman exhibit shall be one and the same."

OUT-DOOR HOSPITAL PRACTICE: MEETING OF GENERAL PRACTITIONERS.

A MEETING of general practitioners, to protest against out-door hospital practice, was held at the London Tavern on January 9th—Dr. Percy Leslie in the chair. The chairman said that he was first led to consider the question by the fact that in the town in which he was formerly in practice the medical officers of a dispensary refused to receive salaries. He could not understand this, until he found that they made more practice in consequence of their honorary official position than they could have done by being salaried officers. This injured deeply both the profession and the public. True charity had nothing at all to do with the matter. There was no charity in giving medical relief to those who were quite able to pay for it, but the reverse: it was pauperising those who ought to be independent. The groundwork of all gratuitous institutions was necessity, which gave origin to our Poor-law system; but in the hospitals this was overlooked. All public and private hospitals should be under the supervision of the Poor-law Board, and no cases should be admitted save those of necessity. The hospitals undersold the general practitioners. They attended to any person presenting himself or herself without a price, compelling general practitioners to lower their prices or lose their practice. If a medical man were to advertise himself as these hospitals did, he would be universally scouted by both the public and the profession; yet what one man could not do, the staff of a dispensary or hospital could do without shame. The hospitals took away the patients of the general practitioner both directly and indirectly; indirectly, because the general practitioner had moribund children and old people thrown upon his care who had all along been attended at the hospitals, but who at last had to send to him. Dr. Leslie thought that the provident dispensary system was to be the cure for all this mischief. By way of summary to his remarks, Dr. Leslie presented twelve objections to the hospital system, derived from various sources. They were briefly as follows. 1. The mortality in hospitals is greater than in private practice. 2. Crowding in the out-door department carries infectious diseases. 3. Hospital patients were seen at the rate of one hundred and twenty in an hour and ten minutes. 4. The cost per bed in London hospitals is from £450 to £1,000; the maintenance and interest about £100. 5. The system demoralises the working classes. 6. Many persons in respectable circumstances avail themselves of the cheap privilege. 7. The loss of time at waiting-rooms necessitates the neglect of home and children. 8. The teaching capabilities of hospitals would not be diminished, while the wards would still be filled from the various affiliated dispensaries. 9. The hospital becomes a good investment for heads of households and employers of labour, at little or no expense to themselves. 10. The hospital system encourages the loss of the sense of obligation to support relatives in time of sickness, etc. 11. Hospitals and free dispensaries, as at present conducted, have been declared "to be a delusion and a snare to the public". 12. Diseases are made worse by attending at hospitals. Dr. Ford Anderson said that many attempts had been made to bring about hospital reform, and he referred particularly to the labours of the Committee appointed at a meeting in the rooms of the Royal Medical and Chirurgical Society two years ago. Nothing could be more complete than the work of that Com-

mittee so far as pointing out abuses and suggesting remedies were concerned, but since the report was laid on the table nothing had been done. All efforts for hospital reform had hitherto been undertaken by pure physicians and surgeons (so called), and he thought the present meeting derived its importance from the fact that it was the first effort on the part of general practitioners to reform hospitals, and he was sure that they could exert great pressure on the public and the profession if they were united. Dr. Anderson then proposed the following resolution, which was seconded by Mr. Hanks—"That we form ourselves into an association for the reform of the hospital out-patient system." The meeting was then addressed by Messrs. Nelson Hardy, Soutter, Harvey, and others, and a vote of thanks was unanimously voted to the chairman. The first meeting of the association was held at the Medical Club, Spring Gardens, on Thursday evening last, when a circular was agreed upon, inviting the general practitioners of London to join the association.

IRRESOLUTE COUNCILS.

THE terror which the ladies who desire to drink of the springs of knowledge inspire in the minds of well-regulated Senates and Councils is not a little remarkable. No sooner does any governing body, by a small majority, agree to admit the ladies to a chance of learning some useful art or science, than "a reaction sets in." The abilities of our weaker counterparts, previously disparaged, are magnified; their designs are canvassed, their advance checked. A few weeks since, the Pharmaceutical Society took the bold step of admitting ladies to their courses of chemistry and botany. They did it cautiously, lest they should be overwhelmed with a crowd of fair chemists and fascinating botanists. The ladies did not show the overwhelming desire to involve themselves in these rather arid studies which was feared; nevertheless, it was resolved, as a matter of precaution, that the female students should be allowed to look on and to listen, but not to touch. The laboratory was maintained as a sanctuary: test-tubes might be watched or furnaces explored in the lecture-room, but nothing "practical" was to be attempted. Not content with this vantage-ground, and fearful that even too much of temerity had been shown, the Council has resolved still further to "protect" the male students from the danger of being passed in the race. It has determined to exclude the female students from examinations and competitions; their knowledge is not to be tested, nor their industry rewarded. To us all this seems very pitiful: it reads not like the straightforward work of men of sense, but as though the old women on the Council had determined to keep the young ones back—after they had ascertained that, according to their charter, they could not legally exclude them altogether—had determined they would do their utmost to handicap and discourage them.

THE "MEDICAL RECORD."

THIS new weekly publication, issued by Messrs. Smith, Elder, and Co., of which two numbers have now appeared, and of which we may be expected, according to custom, to give some account, aims at supplying a want which has been much felt by a large and increasing body of practitioners. It has a line marked out for it, entirely distinct from that of any other weekly medical periodical in this country, and resembling most nearly that of the famous and successful Berlin *Centralblatt*, which is to be found in every village in Germany, and which circulates in this country largely among German scholars, and indeed all over the world. The *Medical Record* publishes no original papers or lectures, hospital reports, reports of societies, leaders, or original correspondence, nor does it discuss political or social subjects; it is, in fact, a year-book issued in weekly instalments, and therefore placing its readers always at the level of contemporary science. Its mission is to analyse, report, and abstract the published proceedings and observations of investigators and clinical practitioners as recorded in the 270 principal journals, flying-sheets, bulletins, and transactions which make up British and foreign medical literature. The whole of these are passed through the

hands of a staff of more than fifty reporters, each selected for known eminence in the department which he undertakes, and each of whom is responsible for the worth and accuracy of the abstract which he furnishes, and which he signs in every case with his own name. The most eminent persons in London, Dublin, and Edinburgh, and elsewhere, have welcomed the project, and have offered their aid in a work which promises to lighten the labour of every practitioner, student, and teacher of medicine, and to make it easy for all to keep themselves abreast, by weekly reading in a convenient form, of the best work and best thoughts of the busy pioneers of improved practice and advanced science, from whom most of us now are separated by the barriers imposed by difficulties of language, time, cost, and the immense bulk and diffusion of scattered foreign medical literature. The reporters in the first two numbers include—Dr. Burdon Sanderson, F.R.S., Dr. Lockhart Clarke, F.R.S., Dr. Cobbold, F.R.S., Dr. Berkart (Victoria Park Hospital), Dr. Ferrier (King's College), Dr. Klein (Brown Institute), Dr. J. F. Payne (St. Thomas's Hospital), Dr. Hughlings Jackson (London Hospital), Mr. Marcus Beck (University College Hospital), Dr. Bruce (Charing Cross Hospital), Mr. Mac Cormac (St. Thomas's Hospital), Mr. Haward (St. George's Hospital), Dr. Sydney Ringer (University College Hospital), Dr. Playfair (King's College), Dr. Corfield (University College), Inspector-General Dr. Macpherson, and Dr. Edis (Hospital for Women). Other reporters named in the published list are—Mr. Turner, F.R.S. (Edinburgh University), Rev. Dr. Haughton (Trinity College, Dublin), Dr. Macalister (Dublin), Mr. W. Stokes (College of Surgeons of Ireland), Dr. Rutherford, Dr. Murchison, F.R.S., Mr. Callender, F.R.S., Mr. Durham, Mr. Berkeley Hill, Dr. H. Weber, Dr. Bastian, F.R.S., *cum multis aliis*—names which will probably be held to insure that the English record of contemporary medical science will not be less trustworthy and valuable than its esteemed and popular German prototype.

CHOLERA.

DURING the week ending December 29th, cholera broke out in ten districts of Moravia, in addition to twenty-five in which cases had already occurred. In the period above-mentioned 137 persons were attacked with the disease, making, with 97 remaining under treatment, a total of 234 cases; of these 118 recovered, and 57 died. In Silesia, during the same period, there were 105 new cases, the total number of cases in the week being 177; among these, there were 67 recoveries and 29 deaths.

MEDICAL ETIQUETTE.

IN reference to a paragraph under this heading in the *Times* of Tuesday last, to which we last week referred, Mr. Purcell writes:—"I was fetched by the sister of the deceased from my residence, brought with me some medicine, administered a dose to the patient, and had him removed from the outer room of the police-station into the inspector's, where there was a fire. I had given directions as to what was best to be done under the circumstances before the arrival of Mr. Mills, who, ignoring my presence, apparently took the case completely off my hands as if there were no medical man present. However, I remained a full hour, hoping by that time he would have seen the necessity of retiring, but instead of so doing, he sent for more medicine (he having used up what I had supplied), and it was then I perceived that he presumed on his official capacity of police-surgeon to violate one of the first rules of professional courtesy, putting common civility out of question. I then thought it high time for me to leave. Had the deceased been removed to any other place than the police-station, Mr. Mills, I feel satisfied, would have pursued another course, and I would have been left undisturbed in my endeavours to soothe the dying man's last moments. As to the holding of the inquest, the jury embodied with their verdict of 'Death from natural causes' that in their opinion an inquiry was necessary. So much, then, for the propriety of the certificate of death given by Mr. Mills. And as to my right to the *post mortem*, the Coroner placed that beyond a doubt at the time."

ST. GEORGE'S HOSPITAL.

MR. WARRINGTON HAWARD has recently succeeded Dr. Whipham as Museum Curator; Dr. Laking has been appointed Medical Registrar; and Mr. Claridge Surgical Registrar.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

THE next meeting will be held on Saturday, January 18th, at 7.30 P.M. A letter will be read from the "Society for Organising Charitable Relief and Repressing Mendicity," inviting the Association to name two representatives to serve on a special committee of that society for improving the dwellings of the poor throughout London. Mr. R. Liebreich will read a paper entitled "A Contribution to School Hygiene."

THE INFIRMARY FOR CHILDREN, WATERLOO ROAD.

WE regret to learn that Mr. Rendle, Surgeon to the Royal Infirmary for Children and Women, Waterloo Road, has, in consequence of differences existing between him and the governing body, been compelled to resign his position at that institution. Mr. Bellamy, who was afterwards appointed as successor to Mr. Rendle, has also sent in his resignation.

OVERCROWDING.

ANOTHER case of overcrowding has been brought to light. In the course of the proceedings at an inquest on a young woman, who had died in St. Giles's, it was stated that the deceased had been left in a sort of back washhouse, not more than two and a half yards square, and about six feet high. It was inhabited by the father, deceased, and a sister. A witness said there were many more places like it in the parish.

EXAMINATION OF MIDWIVES BY THE OBSTETRICAL SOCIETY OF LONDON.

ON Saturday last, four candidates for the diploma of the Society passed very creditable examinations. The written questions were: 1. Mention the duties of a midwife when summoned to, and in attendance upon, a case of labour; and describe a case of natural labour from its commencement to its termination. 2. What symptoms during the latter months of pregnancy would lead you to suspect the existence of placenta prævia, and how would you detect it? 3. In cases of sudden hæmorrhage occurring during or after labour, what would you do? 4. How would you advise the bringing up of a child (1) when partly, (2) when wholly, deprived of its mother's milk?

MEDICAL REVIEWING.

THE observations which were published in our recent review on *Works of Modern Surgery* have met with a very satisfactory reception. They were hailed by the thinking part of the profession generally, with a pleasure which expressed itself in a considerable correspondence from men of eminence, who have written to us with the object of endorsing the statements there made regarding the offensiveness and worthlessness of a great deal that passes for reviewing in contemporary medical journals, and which is in truth nothing but a series of misleading puffs, by careless and half-informed writers, of vamped-up books written more for the profit of the author than of the reader. Of the justice of the verdict delivered in that particular review there is, we believe, but one opinion, and that affirmative. Most of our contemporaries have felt moved to comment upon the review, and that in terms which are perfectly satisfactory in respect both to the expressions of approval in some quarters and to the curiously weak suggestions of partisanship in others, which are of a character that refute themselves. We have again to record a deliberately unfavourable verdict of a work by a very able, industrious, and deserving young physician; and we refer to it because, while the grounds of that verdict are such as we have satisfied ourselves to be beyond doubt, we observe that the work has nevertheless received that ignorant and indiscriminate praise of which we have before complained as an offence and injury to the profession and to authors themselves.

The author of this work is a physician of capacity and energy, who has shown himself capable of original research and possessed of clinical acumen. If he has now ventured on a work which is hurried, incomplete, and unsound, it is probably because he has been tempted by observing the indiscriminate favour with which works marred by the same faults have been received by ill-informed and uncritical professional reviewers, and because he relied—evidently with good cause—on receiving in any case a sufficient number of favourable reviews to float the book. In the interests of British medical science, of the general body of readers, and of really laborious and exact workers, it is desirable that an impartial and highly informed standard of medical criticism be firmly established. It is, we fear, a course which may sometimes give pain to persons to whom it would be a gratification to give pleasure, but the private feelings involved must give place to larger public considerations.

BRITISH MEDICAL BENEVOLENT FUND.

THE Annual General Meeting of this Charity was held on January 14, at 11, New Burlington Street; Dr. Burrows, President, in the chair. The report showed that the past year had been a very successful one; the receipts, notwithstanding the absence of any legacy during the year, being above the average, while a sum amounting to nearly £1,900 had been distributed among thirty-four annuitants and 124 other applicants. The donation of £100 by Her Majesty the Queen, and the substantial assistance rendered by several of the City companies and other friends of the charity, were duly set forth. The names of Sir W. W. Gull, Bart., Sir Richard Wallace, Bart., and Dr. Warburton Begbie, were added to the list of Vice-Presidents. Dr. Felce (to whom a cordial vote of thanks was passed) was elected an honorary life-member, on his retiring from the office of honorary secretary, a post which he has held for the past four years, and in which he is now succeeded by Mr. N. H. Stevens. Mr. Erasmus Wilson and Dr. Felce were elected to fill vacancies in the committee. Votes of thanks were accorded to Messrs. Churchill for the use of a room for the meetings, to the editors of the medical journals for their kindness in advocating the claims of the funds, and to Dr. Burrows for presiding at the meeting.

THE CLINICAL SOCIETY.

THE Council of the Clinical Society includes some "peculiar people". They are not contented with one peculiarity in the year—viz., the attempt to alter the social Christmas customs of the country, but they come forward at the annual meeting with a proposition singularly free from anything to recommend it. The Clinical Society, during a period in which it might have been satisfied to remain and be considered a struggling infant, has, by rapid but fitful strides, reached adolescence, not, we believe, so much from any extraordinary inherent qualities in itself, but because it has secured office-bearers unusually well qualified to aid in its birth and upbringing. And of these the Clinical Society has been unusually fortunate in its presidents—Sir Thomas Watson, Sir James Paget, and Sir William Gull. They have reared the young Society with surprising rapidity, and carefully tended it in the occasional illnesses of infancy. To Sir William Gull the Society has been most deeply indebted during his period of presidency. With singular tact and rare ability, he has nursed dying debates, illustrated from the rich stores of a great clinical experience, and with epigrammatic force, numerous points of either commonplace or dubious interest, and has repeatedly raised the level of debate from a stale dullness and debility to one of force and vitality. For many of its most interesting discussions, the Society has been wholly indebted to points skilfully raised and ably stated by its presidents. The only pity is, that the Council did not secure the services of these gentlemen for a longer period. With such an example before them, the Council proposed to the members, at the annual meeting on the 10th instant, that "the President, at the termination of his year of office, shall not be eligible for re-election in the succeeding year." The supporters of the resolution, as we have observed, sadly failed to offer any explanation of their reasons for proposing such an

alteration in the rules of the Society; and, accordingly, the members, very naturally and by a large majority, declined to accept their recommendation. The annual report showed that the Society continued progressively to increase in wealth and strength. Several alterations in the rules were passed.

INFIRMARY FOR EPILEPSY AND PARALYSIS.

SINCE June, the work of this hospital has been carried on in new premises, situated in Portland Terrace, Regent's Park, within five minutes' walk of Primrose Hill. The accommodation afforded is much more extensive than that provided in the old house in Charles Street. There is room for as many as thirty beds; but, in consequence of want of funds, the Committee are only able to provide fourteen. The new hospital is liberally supplied with baths, galvanic and electrical apparatus, and the other necessities in the branch of medical practice, to which the institution is devoted.

THE HOSPITAL FOR DISEASES OF THE SKIN.

THE old hospital in Blackfriars Road has been pulled down by the Corporation, to enlarge the roadway; and the Committee of the hospital have secured more commodious rooms at 52, Stamford Street, on the other side of the water. They were occupied, and used for seeing patients, a couple of months ago; but the preparations contemplated by the authorities are not yet completed. It is intended that a very roomy and convenient set of waiting-rooms shall be provided for the patients, and a suitable consulting-room, with dressing-rooms adjoining, for the medical officers. A lecture-theatre and museum will be also added; and, as soon as possible, every convenience for clinical instruction shall be afforded. An extensive suite of baths will be erected. A considerable outlay will be rendered necessary to carry out the undertaking of the Committee; and they appeal for funds.

THE CHEMISTRY OF COFFEE.

ALTHOUGH the quantity of caffeine contained in raw coffee is known, no attempt has ever been made to ascertain how much of the alkaloid is contained in a cup of coffee; and it is also uncertain whether the beans should be slightly or strongly roasted, and whether the ground coffee must be boiled to extract its active principles, or whether simple infusion is sufficient. By extracting the coffee with water, either by percolation or by decoction, and evaporating to a syrup, which is then treated from five to eight times with chloroform at nearly 60 degs. till all the caffeine has been dissolved out, H. Aubert (*Journal of the Chemical Society*) has obtained a larger quantity than previous experimenters. Raw beans of the yellow Java kind yielded 0.709-0.849 per cent. by this method, while they gave only 0.474 by Garot's method of precipitation with basic lead acetate. When much roasted, coffee loses a certain quantity of caffeine, which sublimes, whereas it loses none by slight roasting. Notwithstanding this, the coffee made in the usual way by percolation from strongly roasted coffee, contains rather more caffeine than that made from an equal weight of slightly roasted coffee, as the roasting renders it more easy to extract. When coffee is prepared in the usual domestic fashion, by pouring six to ten times its weight of boiling water three or four times over ground coffee, nearly the whole of the caffeine is extracted, hardly one-fifth of it remaining in the grounds. The quantity of caffeine in a cup of coffee prepared from 16½ grams of coffee is about 0.1 to 0.12 gram. A cup of tea prepared in the ordinary way from five or six grams of Pekoe tea, contains also about 0.1 to 0.12 grams of caffeine. Caffeine acts upon the spinal cord, and causes tetanus, in doses of 0.005 gram for a frog, injected subcutaneously; for a rabbit, 0.120 gram (injected into the jugular vein); for cats, 0.200, injected in the same way; and the same quantity for dogs. It has a peculiar action on the muscles of frogs, especially when directly applied to them, causing them to become rigid and white, apparently from coagulation of the myosin. It does not exert this action on the muscles of mammalia. The tetanus is removed by artificial respiration; and if this process be kept up for about a quarter of an hour, no recurrence of the tetanus takes place, even though the respiration is then discontinued, showing

that the caffeine is quickly eliminated or destroyed in the organism. Occasionally it produces paralysis of the hind legs in rabbits, but the author is uncertain to what cause this is to be attributed. It quickens the heart, and at the same time reduces the blood-pressure. This effect he believes to be due to stimulation of the cardiac ganglia, combined with diminution of what he regards as cardiac tone, due to paralysis of the nerves passing from these ganglia to the muscular substance. The action of the caffeine does not explain the stimulating and reviving action of coffee.

A NEW FACULTY OF MEDICINE.

ON the proposition of Dr. Duchasal, member of the legislative council, it has been decided to create a faculty of medicine at Geneva. There are three cantonal universities in Switzerland, at Bâle, at Zurich, and at Berne. At these universities, German is the prevailing tongue, but for the French-speaking Swiss there is no university. Geneva will supply this want. Italian, French, and German are the languages of different parts of Switzerland; hence the difficulty which has hitherto been, and is still, felt as to the creation of a federal university. Besides their diplomas, an examination for the purpose of practice is imposed on the graduates by each canton.

THE UNIVERSITY OF BERLIN.

FROM the official report of the University of Berlin for the winter session 1872-3, it appears that there are 1918 matriculated students, of whom 404 belong to the medical classes. There are also 1796 non-matriculated students, of whom 67 are pupils of the military medico-chirurgical school. Of the matriculated medical students, 303 are Prussians; 26 belong to other German states; 49 to various countries of Europe; and 26 to other parts of the world. Numerically, they are further thus distributed: one each from France, Greece, England, Galicia, Livonia, Poland, Sweden, and Turkey; two from Italy; four from Hungary; two from Transylvania; six from Roumania; sixteen from Russia; two from Courland; three from Switzerland; four from Servia; one from Africa; thirteen from America; eleven from Asia; and one from Australia.

SCOTLAND.

TYPHOID fever is prevalent at Dunbar.

EPIDEMIC HOSPITAL FOR ARBROATH.

WE are glad to observe that the directors of the Arbroath Infirmary have intimated their opinion to the local authority that small-pox patients should not be admitted to the Infirmary; and we equally regret to see that the local authority, in order to shirk the responsibility of affording separate hospital accommodation for epidemics and infectious fevers, are making an attempt to alter the opinion of the Infirmary authorities.

IMPORTANT LEGAL DECISION UNDER THE PUBLIC HEALTH ACT.

SHERIFF HALLARD gave his decision against the local authority of Dunbar in the following case. A servant girl was dismissed, according to the statement of the local authority, or left her situation, by the account of her employer, because of her having contracted small-pox. She ultimately went voluntarily to her father's house. The local authority took action, and removed her to the hospital. They claimed the expenses of her treatment while in hospital from the girl's employer, maintaining that a domestic servant had an undoubted right to be kept in the house of her master, and provided with medicine and medical attendance for a reasonable time. The sheriff decided that the local authority, when they began to take action, found the woman in her father's house, whither she had gone voluntarily. The authority, acting as a public board, very properly removed her to the hospital; but they had no case for recovering the expenses of her treatment and maintenance.

Jan. 18, 1873.]

THE POST MORTEM EXAMINATION OF THE LATE EMPEROR NAPOLEON III.

THE following appeared in a special issue of the BRITISH MEDICAL JOURNAL of January 11th.

The *post mortem* examination of the late Emperor was made this day at Camden Place. It was conducted with great care by Dr. Burdon Sanderson, F.R.S., Professor of Experimental Physiology in University College, London, and Professor-Superintendent of the Brown Institute, an eminent physician and pathologist, whose attendance was specially requested for the purpose. The examination was conducted in the presence of Sir Henry Thompson, Dr. Conneau, Dr. le Baron Corvisart, Sir William Gull, Bart., Mr. John Foster, and Mr. Clover, and was so directed as to include an investigation of all the facts and conditions which could throw light upon the history of the case, the nature and origin of the malady, the immediate results of the operation, and the immediate and proximal cause of the disease. We subjoin an official summary of the results of the investigation.

In such circumstances, a sad, but not a fruitless satisfaction may be derived from the fact that the results of a minute, careful, and rigidly impartial investigation testify to the accuracy with which all the conditions were diagnosed which are of an order that can be ascertained during life. It will be observed that the necropsy disclosed that the disease was, as had been predicated, of old standing. The local conditions of the calculus, its size, shape, and proportions, were precisely those which had been diagnosed. Its chemical character was, as had been stated, phosphatic. It appears to be of a very rare and peculiar variety, and for this reason a more particular account of the calculus is omitted from the summary. The remaining portion of the calculus is reserved for a careful analysis by an eminent chemist, in whose hands it will be placed. Its physical condition is a matter of more immediate interest. For it is important to observe that the remaining portion bore striking testimony to the manipulative skill and delicacy with which the necessary operative proceedings had been conducted. It had been dealt with in the manner which is confessedly and evidently that best calculated to promote speedy relief, and which must cause the least possible irritation, but which involves such delicate manipulations that some of the most skilful surgeons have doubted whether they can be or ever are practically carried out. The portions seized had been completely crushed at each sitting, and nearly all had been successfully passed away. The calculus had not been attacked indiscriminately in different places, but as intelligently as if vision had guided the touch in one place only at a time: the bladder was not, therefore, encumbered by various large pieces of calculus, each remaining as sources of irritation, but one-half had been completely crushed and the detritus was gone, while the chief remaining portion was single. The lining membrane was intact and free from any abrasion whatever, nor was there any inflammation of the surrounding tissues. The condition of the kidneys was fraught with peril: it was of that character which is known to surgeons as being almost inevitably ominous of a speedily fatal end whatever form of operation be adopted, and whether any operation be performed or not. Nor are there any signs known to science by which the particular condition can be detected during life.

The sudden death of the Emperor was, from the character of the symptoms preceding death, considered to be due either to failure of the heart's action from inherent or external causes, or to arrest of the circulation by an embolic blood-clot. The result of the *post mortem* examination reduces us to the former alternative.

A detailed statement of the *post mortem* examination below summarised will be officially drawn up. The summary was compiled with great care and precision by those present at the examination, and they were entirely unanimous in it. It was afterwards submitted to Sir William Gull, who was compelled to leave, and therefore unable to assist in its preparation. It will be seen that Sir William Gull has added to it some observations which are interesting to medical science, and which express a particular view respecting circumstances in the probable early history of the case which are fairly open to discussion. They are chiefly of etiological interest, and, as they do not touch any of the points on which the treatment of the case necessarily turned, we need not now analyse them.

In so far as the necropsy entirely confirms the diagnosis, and justifies and supports the treatment adopted, its results will be satisfactory to all, and it is creditable to medical and surgical science that all its

predications were proved to be correct, and its proceedings found to be conducted in a faultless manner.

The most important result of the examination was, that the kidneys were found to be involved in the inflammatory effects produced by the irritation of the vesical calculus (which must have been in the bladder several years) to a degree which was not suspected, and which, if it had been supposed, could not have been ascertained. The disease of the kidneys was of two kinds: there was, on the one hand, dilatation of both ureters and of the pelves of the kidneys; on the left the dilatation was excessive, and had given rise to atrophy of the glandular substance of the organ. On the other hand, there was subacute inflammation of the uriniferous tubes, which was of more recent origin. The parts in the neighbourhood of the bladder were in a healthy state: the mucous membrane of the bladder and prostatic urethra exhibited signs of subacute inflammation, but not the slightest indication of injury. In the interior of the bladder was found a part of a calculus, the form of which indicated that half had been removed. Besides this, there were two or three extremely small fragments, none of them larger than a hemp-seed. This half calculus weighed about three-quarters of an ounce, and measured $1\frac{1}{4}$ inch by $1\frac{5}{16}$ of an inch. There was no disease of the heart nor of any other organ, excepting of the kidneys. The brain and its membranes were in a perfectly natural state. The blood was generally liquid, and contained only a very few small clots. No trace of obstruction by coagula could be found either in the venous system, in the heart, or in the pulmonary artery. Death took place by failure of the circulation, and was attributed to the general constitutional state of the patient. The disease of the kidneys—of which this state was the expression—was of such a nature, and so advanced, that it would in any case have shortly determined a fatal result.

Signed by all present.

J. BURDON SANDERSON, M.D.
DR. CONNEAU.
DR. LE BARON CORVISART.
HENRY THOMPSON.
J. T. CLOVER.
JOHN FOSTER.

Camden Place, Chislehurst, January 10th, 1873, 6.30 P.M.

Sir William Gull left Camden Place as soon as the necropsy was over, and was not present at the careful consideration and discussion of the facts which ensued by the other medical men assembled. He records a separate opinion on one point only, viz., the origin of the calculus, in the following terms.

"I desire to express the opinion that the phosphate of lime calculus which formed the nucleus of the mass was the result of the prior cystitis (catarrhus vesicæ), and not the cause of it. This nucleus was of uncertain duration, and may even have been more recent than supposed in the appended report.

"However this may be, it was encrusted by two distinct and recent formations of crystalline phosphate. The inner incrustation around the amorphous phosphate of lime was dense, and separated from the outer incrustation by a lesser cellular but crystalline deposit of triple phosphate. It seems, to my judgment, more in accordance with clinical experience to regard the cystitis as the prior lesion, and that this, by extension, as is common in such cases, affected subsequently the ureters and pelvis of the kidneys. No doubt, in the later stages of the malady the calculus, by its formation and increase, was an augmenting cause of the lesions.

"The other facts and statements I entirely endorse.

"January 10th, 1873."

"WILLIAM W. GULL, M.D."

THE DEATH OF THE EMPEROR NAPOLEON III.

OUR Paris correspondent writes under date January 13th: The death of the Emperor Napoleon has produced a great sensation here, which has shown itself in rather a characteristic way. In the first place, the French surgeons were greatly hurt that Sir Henry Thompson, an English surgeon, and not a Frenchman, was summoned to attend and operate on the Emperor. Sir Henry Thompson has never been forgiven here for succeeding in curing the King of the Belgians, when M. Civiale had failed. Civiale was detested by the Faculty, and was only helped to maintain his position by his indomitable energy and force of character. He was steadily excluded from posts of honour and credit in the Faculty and the Societies, and derided by the professors of the

Faculty. Nevertheless, his glory was the glory of France, which must be maintained, at all hazards, publicly, however we might delight to insult and torment him here. Accordingly, desperate efforts were made to palliate, to pervert, and ultimately to deny the facts; and when a young Englishman undertook to prove that Sir Henry Thompson had not effected the alleged cure, in the way publicly stated at the time, and Dr. Koepl, the King's private physician, refuted him directly in a letter which was printed in the English papers—if I remember rightly, in your organ—the attack was promulgated here, but its refutation was suppressed—for the greater glory of France, and according to the fashion prevailing among Parisians and ostriches. The news of the Emperor's illness and of the operation undertaken, therefore produced here a very painful impression. It must be added that the telegrams which reached Paris were of an unflattering, and, I may add, of an unfaithful character. It was asserted that French surgeons had overlooked a malady obviously of long standing, and had omitted to take surgical measures for its relief, which were called for long since, and from which a much better hope of relief might then have been drawn. This is quite contrary to the fact; and to prove it to you, it is only necessary that I should lay before your readers the following text of a report on the Emperor's health, drawn up by MM. Germain Sée, after a consultation on July 1st, 1870, between MM. Nélaton, Ricord, Fauvel, Sée, and Corvisart. The following is the report.

"*Diagnosis.*—1. Cutaneous and muscular hyperæsthesia of anæmic origin. This hyperæsthesia is characterised by superficial pains in the skin of the thighs—pains which are increased by the slightest touch, but, on the contrary, are diminished by pressure, and which return under the most various influences, particularly through cold. In the muscles, near the joints of the feet, there is much sensitiveness, spontaneous or provoked, of the muscular attachments. This sensitiveness, in the form of shooting pains, sometimes also appears under the influence of cold. This does not prove that the pains are rheumatic; cold does not cause rheumatism alone. The patient has never had articular rheumatism, although these pains commenced twenty years ago, at a time when there were two serious causes of anæmia. This nervo-muscular hyperæsthesia is, in fact, almost always due to anæmia.

"2. The anæmia, of which scarcely any other trace than the pains remain, was at a former time much more strongly marked: it was caused by a captivity of six years—that is to say, by insufficient supply of air, and by moral influences. A physical cause must be added to these different causes of anæmia—namely, a rather considerable hæmorrhage, which was almost constant for six years. At the present time, the anæmia has almost disappeared; there is no *bruit* either in the vessels or in the heart; the pulsations and sounds of the heart are weak, but perfectly regular; there are no traces of palpitation; and if there have been syncope at times, this proves that there still was anæmia, but not disease of the heart, as would have occurred with rheumatism.

"3. Some signs of gout have appeared here and there in the joints of the feet, and even recently, but without rheumatism and without any other internal complication than a lesion of the bladder. From time to time, indeed, there has been flatulence—sometimes irritability of the stomach and intestines—but that is an habitual condition in hæmorrhoidal subjects. We conclude, then, that the digestive disorders, as well as the peripheral pains, are due to hæmorrhoids and to consecutive anæmia; but it remains now to interpret the lesion of the bladder.

"4. *Alteration of the Urinary Passages.*—In five years he has had four attacks of hæmaturia. After one which occurred in 1867, the urine remained for a year muco-purulent, after which it became clear. Since the month of August 1869, when there were acute and serious symptoms in the urinary organs, the urine has constantly contained a certain quantity of pus, calculated at the minimum at one part in forty, and during the acute stage at one part in three or four of the whole urine. Very often, also, there has been dysuria, the slowness in passing urine in the morning being very marked; at other times, the flow of the liquid has been interrupted; sometimes the difficulty has been so great that it has been necessary to have recourse to the sound: this occurred at Vichy three years ago, and also in August 1869. It must also be remarked that since that time, riding on horseback, or the shaking of a carriage, has often reproduced the pains in the kidneys, the abdomen, or the fundament. But a disease characterised by these three phenomena—1, repeated hæmaturia; 2, purulent urine for more than three years, with more or less marked alternations; 3, frequent dysuria, characterised by spasm or by inertia of the bladder—can

only be referred to calculous pyelocystitis. If there had only been purulent urine, it might be considered a simple catarrh. If there were no need to take account of what occurred before the month of August 1869, it might be considered a perivesical abscess opening into the urethra. But the previous attacks of hæmaturia, the persistence of the purulent urine for a year, the frequent return of dysuria, and the augmentation of the pain by shaking, compel one to think of cystitis of calculous origin; the calculus having been either formed and encysted in the bladder, or having had its primary seat in the kidneys. There has also occasionally been an excess of uric acid and urates in the urine. We therefore consider catheterism of the bladder necessary for the purpose of exploration, and we think the present time opportune, because there is now no acute phenomenon. If, in fact, the dysuria, or the purulence, or the pains, increase or reappear, there would be fear of provoking acute inflammation by the exploration.

"Paris, July 3rd, 1870."

"Professor G. SÉE.

This document was handed on July 3rd to Dr. Conneau. It was seized among his papers by the agents of the Government of September 4th, and published in one of the volumes of the collection of papers found in the Tuileries and elsewhere. The report, it is alleged, was not presented for the signatures of the other consultants, nor was it laid before the Empress. *L'Union Médicale*, which has published it, adds the following reflections.

"It results from these facts, and from his document, entirely to the honour of French medical science, that French physicians, on July 1st, 1870—that is to say, two years and a half ago—had as distinctly as possible, and by rational signs alone, diagnosed the existence of a vesical calculus in the Emperor, had solicited and counselled direct and immediate exploration; and that it is not until thirty months afterwards, that the foresight and the diagnosis of our compatriots have been verified by English physicians. But by its date of the 3rd July, 1870, the document acquires considerable historical importance. Is it not extremely probable that, if this consultation had been communicated to the Empress, the exploration would have taken place, the Empress would have demanded and obtained immediate treatment, and that the declaration of war, made three days afterwards, would have been certainly deferred and perhaps abandoned? What an immense responsibility, then, has been assumed by those who kept secret this consultation, who did not communicate it to the Empress as the consulting-physicians demanded, and allowed the Emperor, in so severe a state of disease, to engage in the fatal war. On what hangs the fate of peoples and of empires! 'On a grain of sand in the bladder!' Bossuet has already said."

The *Gazette des Hôpitaux* adds some further unpleasant observations of its own. It says: "If now we examine the fatal result of the operation practised in England, may we not ask, with the most competent men, whether the operation of lithotomy was not contraindicated by the antecedents, and if cutting did not offer more chance of success in the presence of a voluminous calculus and of a bladder already the seat of repeated accidents."

The news of the death of the Emperor has been the signal for a series of attacks on his medical attendants in all the daily papers. The *Figaro*, *Pays*, and *Liberté*, have joined in chorus. First, we heard that the Emperor was killed by chloroform; then that he was killed by crushing instead of cutting; then that he was poisoned by opium; then that he was killed by rough manipulation—by the use of too large instruments. These attacks are too common here; the unscrupulous character of the French daily press is too well known to make them important. But they are the more discreditable, that they are in some cases signed by, and in others alleged to proceed from, medical men, who do not disdain to pander to the national foibles, and to cultivate vanity at the cost of truth, and *malveillance* at the cost of honour, generosity, and self-respect. Sir Henry Thompson has, however, many friends; and if our daily papers care to publish the truth—which is not likely—they will no doubt have the opportunity of doing so. The publication of the *post mortem* examination, which, with the singular note appended to it, cannot, I suppose, be considered satisfactory, has not had a good effect. The general burden is, "We told you so;" and I hardly dare show my face in the hospitals, so perceptibly fierce are my French friends and so intolerably patronising. We are more than ever convinced that Paris is still the centre of science.

REPORTS

ON

SANITARY ENGINEERING IN HOUSES,
HOSPITALS, AND PUBLIC
INSTITUTIONS.

BY WILLIAM EASSIE, C.E.

IV.—RULES RELATIVE TO DRAINAGE.

THE chief adjuncts to a perfect condition of drainage having been explained in the former papers, it will perhaps be found useful to add a few remarks on the subject of each class of goods—*i.e.*, the manner in which they should be used, and what errors are mostly to be guarded against.

House-Drains.

1. Drain-pipes, whatever pattern be chosen, should be bedded in proper clay, and have the joints well luted; for, if the joints be badly made, the liquid drainage will escape, and the sediment which is left behind may collect to such an extent as to choke the drain altogether.
2. If any drain-pipes be laid inside the house—and in crescents and streets this is unavoidable—the pipes should in that case be laid upon a bed of concrete, and covered over with a few inches of the same material.
3. Where the drain-pipes pass through the walls, it is wise to turn a relieving arch over them; for, if a settlement should take place in the building, the superimposed weight will in all likelihood crack the pipes, and cause the drain to leak at a most dangerous place, or perhaps break them, and cause the greatest annoyance.
4. When drains are laid in new-made ground, unless care be taken to ram the earth sufficiently hard round about them—and this is next to impossible—the pipes will open at the sockets, and sodden the ground in their neighbourhood to a dangerous extent. It is best in such a case to rest the pipes upon boards laid upon occasional piles, or what is better, upon piers of brickwork.
5. The only kind of drain-pipes to use is the glass-glazed or salt-glazed earthenware pipes. All others present a roughness inside which gathers “fur”, and engenders a vegetation sufficient in time to impede the passage of the sewage and other wastes.
6. A matter of paramount importance is the declination which is given to the pipes. If this be inadequate, stagnation will ensue, and a costly and troublesome flushing be repeatedly necessary. Inside a drain in use, everything should be in gentle motion. If laid too flatly, the heavier effete matters are deposited and clog the way; and if the incline be extravagant, the water will hasten away and leave the solid wastes behind. In a late work, a writer states that too great a fall cannot be given to a drain; but I have noticed that when the fall of the tributary drain has been in excess, that part of the main drain which received the contents of such house-drain has been almost choked up. The authorities formerly recommended a quarter of an inch fall to each foot, but the best practice is to allow a fall of $2\frac{3}{4}$ inches, or three inches to every ten feet.
7. Drain-pipes can be too large. Some people use nine-inch pipes throughout a house, and think it commendable; whilst the reverse of this rather would be true. A four-inch drain-pipe for sinks, backyards, and basements, is ample. Even the closet-drains in a house need not be more than six inches in diameter. Six-inch pipes well laid will suffice for the largest house, and in the hugest mansion nine inches will not be required until it is sought to carry the sum total of the smaller sized drains away in one channel to the sewer or manure-tank. Drain-pipes of too large diameter are incompatible with that steady onward movement of the sewage which every addition to the contents of the drain beneficially increases.
8. The junctions of the drain-pipes should never be of the right-angled kind; and an obtuse-angled or curved junction should be used; in other words, the sewage should be delivered in the line of the flow of sewerage. A T or L shaped delivery is very apt to cause a deposit at that particular part of the drain.
9. It is considered wise to give the drain a little extra dip wherever a bend or a junction occurs in its length, in order to counteract the effects of friction. A very small amount will usually suffice.
10. In laying down a system of drains to a house, etc., it will often prove beneficial and save much expense on some future occasion if

what is called a dummy junction be here and there laid in the march of the drain. The orifices of these junctions should, however, be stopped up with the disc-plugs sold for the purpose.

11. A larger pipe should never deliver into a smaller pipe, or even a pipe into one of the same diameter. There should be a difference of three inches between the larger pipes, and of two inches between the smaller ones: for instance, twelve-inch pipes can deliver into fifteen-inch pipes, nine-inch into twelve-inch, six-inch into nine-inch, four-inch into six-inch, and two-inch into four-inch pipes.

12. Where a diminishing of the drain-pipe is found needful, the proper tapering pipes should be used: any other contrivance is at the best unworkmanlike.

13. A certain number of access-pipes will be often found useful if laid in a length of drain, say one to every ten of the socket-sealed pipes. Some pattern or another of these pipes with a movable cover might wisely be inserted close to all angles, bends, and junctions, and a well-hole built round them to facilitate inspection.

14. The pipes should be so laid in or about a house that the human ordure may enter nearest the sewer, or, what is the same thing, nearest the point of delivery of the house-drain or the disconnection arrangements. The wastes from the sinks should enter the house-drain between the closet delivery and the house; and the rain-water—from town roofs and from country houses, if not stored—nearest to the house. By this means a persistent movement of the sewage is better obtainable.

15. A flap-trap should be affixed to the end of the house-drain at its connection with the sewer or manure-tank, so that if the sewer be surcharged at any time it cannot flow up the tributary pipes. This contrivance will also tend to prevent a return of foul gases.

16. The communication with the sewer should be made with additional care, and is most durable if cement be used instead of common mortar.

17. From the disconnecting trap on to the sewer, at least where the distance is great, an egg-shaped drain-pipe should be laid. This section secures the maximum speed of flow and the minimum chance of any solid deposit.

18. When pipes of the proper kind are well and sufficiently laid with proper fall, the best means of occasionally flushing them should be provided for. Drains should be flushed at least once a quarter, and the outlet, an access-pipe opening, or the point of disconnection watched to see that the flow is unimpeded. A little lime-water thrown down a sink or closet is a good test, provided that the operator is acquainted with the line of drains, and knows when the whitened fluid should normally appear. Some people flush the drains by removing the sink-trap and allowing a cistern to be emptied through the water-tap into the drains; but this is for the most part useless, and the very term “flushing” means the imparting of a rushing action to a body of water—at least that is the only effectual method of cleansing underground channels. To provide an efficient quantity of flushing material, the rain-water may be stored in an upper or underground cistern; and when the drain is opened, the water having been caused by flowing or pumping to fill a large vessel above such opening, one side of the vessel should be removed at a certain moment and a thorough scour thus ensured. Proper openings for this purpose should be left in the drain both below and above the point of disconnection; but these should never occur inside the house, as is but too common, for, as the water runs down, the foul gases levitate and invade the house. A flushing arrangement may be made hopper or funnel fashion, so as to fill the sectional area of the drain, or nearly that with the cleansing fluid. Sometimes a disinfectant may with advantage be added to the water. After this wholesale flushing, in all likelihood any siphon-traps in the line of drain will be emptied, and it is needful to pour a small supplementary supply of water gently into the drain before leaving it. Should the drain from some cause be stopped up, which will be readily ascertained, a series of swivel-jointed rods, such as are used by chimney-sweepers, but with a roller at one end, or a series of Malacca canes screwed together, should be pushed up the drain. It is here where the access-pipes perform excellent work, since if the rods or canes cannot reach the matted obstructions at one place, they can do so from another point.

19. A correct drainage plan, showing the different size of pipes used, the positions of bends and junctions, the site of syphon-traps and access-pipes, the depth from the surface, and the nature of the ground, should always be prepared when the drains are first laid down. This may save much future inconvenience and outlay.

Brick-Drains and Sewers in Private Grounds, etc.

20. No reliance should be placed in old brick-drains. If in the house, they should be removed or opened up, the site disinfected, and filled with

concrete. The portions outside the house should be dug up, as they otherwise harbour rats and other vermin.

21. As a rule, no brick-drains need be laid down inside private grounds or residuary estates, as this material is now chiefly confined to the main sewers of towns. Earthenware-pipes are manufactured up to thirty-six inches in diameter, and will be found cheaper and better.

22. Should it, however, for some reason be imperative to build brick, barrel, or egg-shaped drains or culverts, the old-fashioned square drain with flag-cover should never be used, but rather the circular or egg-shaped pattern. The bricks should, moreover, be moulded to the proper radii; and if invert blocks of earthenware or grouted bricks be not adopted, the bottom portion of the drain should be laid in cement. The inverts of different sized brick-drains should never be laid upon the same level, but the difference in height should act as a fall for the lesser drain. Ventilating arrangements, such as already figured, will also be found indispensable, and perhaps deodorising media in addition.

23. Where drains of any kind are subjected to tidal influences, it will be prudent not to rely upon ball-valve traps to resist the evils of backwater and any compression of the gases, but to break the connection of the outlet-drain or sewer above the high-water line.

Disconnection and Ventilation of Drains.

24. The house-drain should be disconnected from the main drain or sewer, in some efficient manner, as already pointed out.

25. The point of disconnection should be made as near to the house as is convenient, as foul gas will generate wherever sewage is diluted with water.

26. There should be only one disconnection between the sewer and the house. All house-drains should lead into one main collecting pipe on the house side of the delivery into the sewer or sewage-tank.

27. All waste-pipes or overflows from closet-trays, cisterns, or lavatories, and all rain-water pipes, ought to deliver above ground.

28. Where a proper disconnection cannot be carried out, as is the case in many town-houses, an efficient ventilation of the drains should be provided; and the safe rule is to fix an upright tube with easy bends—if bends be unavoidable—at the head of every drain and at the end of every ramification of the drain. The ventilating-pipe should be at all events equal to half the sectional area of the drain. An inch-pipe is quite inadequate to the work to be performed. If a sink or wash-basin must perforce communicate with the drain, a ventilating-pipe should be carried from the underside of the trap out to the open air and to the top of the roof.

29. Rain-water down-pipes are sometimes solely relied upon as ventilators; but this is wrong, for such pipes often terminate under the sill level of dormer windows, and, when most needed, are performing their own duties in clearing the water from the leads and gutters.

30. The soil-pipes of closets should in all cases be well ventilated below the trap, and the pipe carried to the highest part of the exterior. It might in some instances be well to ventilate the trap of the closet itself.

31. Where there is any danger that the ventilators of a house on a lower level may taint the atmosphere of a house or building at a higher level, the evil can be averted by fitting to the top of the ventilator a funnel containing trays of charcoal or other disinfectants. Several of these contrivances have been already described and figured.

32. If the ventilating-pipes do not terminate in a properly shaped column containing deodorants or disinfectants, the top should be protected from down-draughts and rain by some sort of hood.

Water-Closets.

33. The water-closets are best confined to one part of the house, and ought to be built one over the other. The building which accommodates them should, wherever possible, project out from the house; a separate tower is, however, most desirable. They should never open into a passage of the house, but command a vestibule or anteroom.

34. The windows in the closet and vestibule should reach ceiling high; and if they be made so that they can shut entirely to the top, or if they be unprovided with ventilating-glass in the upper panes, air-bricks should be inserted in the line of cornice. Closets too often ventilate into a badly ventilated staircase.

35. The soil-pipe should be made of the strongest lead, as the sewer-gases often injuriously affect it. Iron soil-pipes are objectionable, and also iron continuations of the lead-pipes—at least indoors—because lead and iron will not join properly together. Iron also expands and contracts very much, and the joints open and allow the effluvia to escape. Earthenware-pipes should always be held inadmissible.

36. A zinc safe should be fixed tray-fashion under the indoor-closets, in order to guard against any leakage of the working parts.

37. Common hopper closets should never be erected inside the house,

as they accumulate filth largely. Pans with a large evaporating surface are likewise objectionable, unless the supply of water be ample. An automatic flushing action should be arranged to all juvenile and all servants' apparatus.

38. The wooden casing or framing should be made so as to come readily asunder, and the clamped flap or lid should have a hole in it just over the pull-up handle, so that the contents of the pan can be discharged when the lid is down. The wisdom of this will be admitted after noticing the blackness caused on the lead-painted-underside of the flap by the action of sulphuretted hydrogen gas.

39. Where the expense is not objectionable, and in all cases where the ventilation of the soil-pipe is insufficient—a state of things always to be found in crowded towns and in badly arranged houses—a self-acting apparatus may be fixed above the seat, by which the flushing water can be mingled with some powerful disinfecting fluid at every discharge of the closet.

40. A housemaid's sink should be provided on every floor of a house; otherwise the closet will certainly be used for her purposes, the safe below filled with the overflows, and an influx of bad air drawn into the house every time the handle is lifted up to quickly empty the slops.

Traps.

41. The old bell-traps which permit the covers to be removed should never be used, for the reasons previously stated. An Antill trap, or some similar one which is difficult to untrap, is the safest of all.

42. The readiest manner in which to cleanse out a closed trap is to pour boiling water through it twice a week; this will melt all grease and otherwise clear it.

43. A house which is thoroughly disconnected from the sewer, and the soil-pipes of which are well ventilated, might, perhaps, as far as smell is concerned, safely dispense with traps altogether; still it will be found wise to affix one to the sinks, trough, wash-basins, bath-overflows, and cistern-wastes, if only to assist in keeping out the winter cold.

44. In ordinary cases, the pressure of air in the drains is not great, but sometimes the extra pressure proceeding from fermentation is sufficient to force the hydraulic seals of some traps. Traps may, therefore, be used which are too small, for other reasons than the liability to evaporation. A trap should interpose a good body of water between the air of the drains and that of the house. Of course, when foul gases are seen to bubble up through the trapping liquid, the necessity for a ventilation of the drains is very patent.

45. Where traps are in any way depended upon, care should be taken to keep them in cleanly condition. The least foul water left in the bottom of the trap will soon infect the rest.

46. Where houses, otherwise close and confined, are not, and cannot be, properly disconnected from the sewers, the latter derive air from various inlets, and this is drawn upon through the traps by the house-fires for the air necessary for combustion. In such a case, a supply of fresh air for the fireplaces should be brought from the outside at any cost. In some houses where even the house-drains are well ventilated, and where disconnection from the sewer has been attained, the fires have been known to suck up air from the empty spaces round about the foundations when the doors and windows were closed.

47. Where syphon-traps are attached to sinks or other wastes, they cannot be relied upon if the pipe runs quite full; for sometimes, and always when the incline is great, the syphon-action will empty the depression of the pipe, and leave the room open to the air from the drains. The cure is to make the trapping portion of the pipe larger than the pipe itself. A waste-pipe, however, should never run full.

I have now concluded the drainage portion of my subject. It could easily be lengthened; but the foregoing papers will be found sufficient, I trust, for all ordinary purposes. In formulating the above few rules, I have not hesitated to make use of some useful suggestions which have appeared of late in the public press.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

ANATOMY AND PHYSIOLOGY.—Dr. Humphry has given notice that his course of lectures on Practical Anatomy will be continued on Tuesday, January 14th, at 9 A.M., and daily at the same hour until the 27th, after which they will be continued on alternate days. The course of lectures on Anatomy and Physiology will be continued on January 28th, at 1 P.M., and on Tuesdays, Thursdays, and Saturdays at the same hour.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE third ordinary meeting of the session will be held at the College Green Hotel, Bristol, on Thursday evening, January 23rd, at 7 o'clock; G. STOCKWELL, Esq., President, in the Chair.

E. C. BOARD, } *Honorary Secretaries.*
R. S. FOWLER, }

Bristol, January 15th, 1873.

METROPOLITAN COUNTIES BRANCH.

THE ordinary meeting of this Branch will be held at 32A, George Street, Manchester Square, on Friday, January 31st, at 8 P.M.; when Dr. J. MILLNER FOTHERGILL will read a paper on "Strain in its Relation to the Circulatory Organs."

A. P. STEWART, M.D. } *Honorary Secretaries.*
ALEXANDER HENRY, M.D. }

London, January 15th, 1873.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the session was held at the York House, Bath, on Thursday evening, December 12th; T. G. STOCKWELL, Esq., President, in the Chair. There were present fifty members and three visitors.

New Members.—The following gentlemen were duly elected members of the Branch and of the Association. John Davies, Esq. (Bath); R. Carter, M.D. (Bath); T. H. Taylor, Esq., R.N. (Clifton, Bristol); W. G. Salmon, Esq. (Thornbury); A. E. A. Lawrence, Esq. (Bristol).

Papers.—1. Dr. Swayne read a paper on Puerperal Convulsions.
2. Dr. BEDDOE narrated a case of Fractured Spine with delayed consequences.—Dr. Fox and Mr. Dowson made some remarks.
3. Mr. BOARD narrated a case of Dislocation of the Knee, which led to observations from Mr. Leonard and Dr. Parsons.
4. Mr. BOARD narrated a case of Empyema.—Drs. Beddoe, Cole, Hensley, and Swayne made remarks.
5. Dr. COLE exhibited a pathological specimen of Liver from a case of Hereditary Syphilis, the history of which he described.
6. Mr. PRICHARD read a paper on Chloroform Administration.—Discussion was deferred till the next meeting.

LOCAL GOVERNMENT
AND
SANITARY DEPARTMENT.

THE BEDMINSTER UNION.

THE Bedminster sanitary authority met on January 7th to consider the Public Health Act. The chairman, in an opening speech, recommended that competent inspectors should be at once appointed, and also that the district medical officers should be appointed, at a slight increase of salary, "assistant medical officers" to a superior medical officer to be appointed by Government, and who should be an efficient chemist and analyst. The chairman, however, was not supported in these views, and finally the two following resolutions were passed.

"That the medical officers of the various districts under this sanitary authority be appointed medical officers of health under the Public Health Act of 1872, for their respective districts, till March 1874."

"That an inspector be appointed for this sanitary district alone, and that he devote the whole of his time to the duties."

The increase of the salaries of the medical officers for undertaking the increased duties of health-officer was the subject next considered. It was agreed to raise the salary of the medical officer for Bedminster, with a population of about 5,000, from £80 to £105; of the officer for Blackwell, Brockley, Chelvey, and Flax Bourton, with a population of 1,347, from £40 to £47; of the officer for Nailsea and Wraxall, with a population of 3,189, from £60 to £80; of the officer for Barrow, Gurney, and Long Ashton, with a population of 2,374, from £40 to £55; of the officer for Dundry and Winford, with a population of 1,460, from £20 to £30; of the officer for Clapton, Portishead, etc., with a population of 2,518, from £18 to £33; of the officer for Yatton and Kingston Seymour, with a population of 2,184, from £27 to £40

£37 to £40; of the officer for Kenn, Twickenham, and Walton-in-Gordano, with a population of 1,000, from £65 to £70. Thus, for an area of about 50,000 acres, with a population of 17,330, no fewer than eight medical officers of health have been appointed, at salaries ranging from £25 to £55. It was resolved to pay the inspector £150 per annum.

REPORTS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SECOND MEETING.—DECEMBER 4, 1872.

P. D. HANDYSIDE, M.D., President, in the Chair.

Effect of Occlusion on a large Artery.—Mr. JOSEPH BELL showed the common femoral artery and vein of a man, who had been admitted to his wards in consequence of the limb having been torn off by machinery close by the hip-joint. The abdominal cavity was opened, and the intestines protruded. The patient survived thirty hours. The artery and vein were, as usual, completely occluded by firm coagula, and the external coat was twisted to a fine point.

Cases of Calculi.—Mr. JOSEPH BELL showed an uric acid calculus which he had cut out of the membranous portion of the urethra of a boy, after it had caused complete retention for thirty hours. It was jagged and angular.—He also showed an oxalate of lime calculus, which he had lately removed by lateral lithotomy from a young man, whose bladder had been so much contracted by long cystitis as to embrace the stone very tightly, and to render the introduction of the forceps difficult.—He showed also an oxalate of lime calculus, removed by lithotomy from a boy, aged 9. Considerable and inexplicable hæmorrhage followed the operation. These three cases had made rapid and complete recoveries.

Cancer of Tongue.—Mr. ANNANDALE showed two half tongues which he had removed for cancer, after Dr. George Buchanan's method. He separated the two halves of the jaw, split the tongue, divided the mucous membrane with the knife, and then cut through the base of the organ by an *écraseur*.

Foreign Body in Larynx.—Mr. ANNANDALE showed a fish-bone which he had removed from the larynx of a child by tracheotomy. The child unfortunately died of bronchitis.—He showed also a piece of fat which he had excised from the inguinal region of a patient who had had an irreducible hernia.

Necrosis of the Femur.—Mr. ANNANDALE showed the limb of a little boy, which he had amputated for acute necrosis of the lower end of the shaft of the femur. The patient had been quite well four days before, and survived the operation for nearly three days.—He showed also a fragment of bone removed in a case of partial excision of the elbow-joint.

Case of Dilatation of the Bile-ducts.—Dr. T. G. STEWART described the case of a man, aged 24, who died after an illness of less than two months. The symptoms were those of gall-stone, but none was found. The stools had been bloody. The ducts were considerably dilated, but there was not, as usually is, any evidence of stricture. Dr. Stewart referred to cases described by Todd, Frerichs, Halliday Douglas, and others.—Dr. SANDERS believed that the disease was not congenital or chronic idiopathic dilatation of the bile-duct, but was due rather to a previous impaction of a gall-stone, which had dilated the ducts or prepared the way for inspissation of bile.

Tenotomy of the Superior Rectus.—By ARGYLE ROBERTSON, M.D. This muscle had often been divided in cases of convergent squint, along with the internal rectus. It was not of such cases that Dr. Robertson spoke, but of the use of the operation in alleviation of conditions in which the pupil was covered by the upper lid. 1. The treatment of ptosis, either congenital or paralytic, had hitherto been unsatisfactory. The operation of excision of an elliptical portion of the upper lid, if enough to raise the lid, was often too much, in that it prevented the full closure of the lid during sleep. The later plans of Von Gräfe, by displacing the insertion of the levator forward, or by excision of a portion of orbicularis, were alike unsuccessful. The possible drawback, however, to this operation of division of the superior rectus in ptosis, was the risk of double vision being induced; so it should not be done unless one eye only were available for vision. 2. The operation would be most useful in cases where from injury, or explosion, or disease, the lower part of the cornea was opaque, and a small piece of the upper part of the pupil was only available, especially in cases where the other eye was destroyed. The following case was related. J. R., aged 38, a miner, was injured by an explosion. He could just perceive light in one eye, the other being atrophied. The clear area of the cornea was only seen by forcibly raising the upper lid. Here, with much difficulty,

an artificial pupil was made; then, after division of the superior rectus, it was brought down so far that now, with a two and half convex lens, the patient could count fingers at a distance of fifteen feet, and, with a stronger lens, could read the newspaper.—Mr. JOSEPH BELL observed on the clearness, interest, originality, and value of the paper, agreeing with Dr. Robertson as to the risk of double vision after this operation for ptosis, and its value in cases of only one useful eye. He had trephined the skull of the patient, on whom Dr. Robertson had operated, at the time of the accident, which was a very severe one; and bore testimony to the otherwise hopeless character of the opacity of the eye

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 7, 1872.

Sir D. J. CORRIGAN, Bart., M.P., Vice-President, in the Chair.

Insidious Development of Extensive Exocardial Disease.—Dr. WALTER G. SMITH showed the heart and pericardium of a robust ploughman, who had always been in good health up to July. He then lost his appetite, and began to suffer from flatulence and thirst. Dyspnoea, a sense of oppression in the chest, and anasarca appeared sometime afterwards. He was admitted to hospital in September. There was now considerable oedema of the lower limbs; the pulse was 120; respirations above forty, and the heart's sounds were feeble, but without murmur. The urine was non-albuminous; from eighteen to twenty ounces only were passed in twenty-four hours. Under the use of digitalis and iron, the daily quantity increased to seventy or eighty ounces. Lividity of the face and delirium were the precursors of death from asphyxia. The lungs were found intensely congested and oedematous. The pericardium was much thickened, in places to the amount of one-third of an inch; its internal surface was coated with dense, rugous, or honey-combed, and creamy lymph. The heart was coated in the same way, and was soft. Its weight, with appendages, was 2 lbs. 8 ozs. The muscular walls were much attenuated, and were of a chocolate-brown colour. The left ventricle almost pitted on pressure. No rheumatic history could be traced.

Malignant Disease of the Thigh and Femur.—Mr. JOHN HAMILTON showed the knee-joint and thigh-bone of a man, aged 33, who had injured his knee seven months ago. Five months afterwards, he had much pain and swelling in the lower third of the thigh. In this situation was found a tumour, uniform on the surface, pale, without heightened temperature, excessive tenderness on pressure, or pain in its vicinity. It conveyed a sensation of fixity, and of obscure deep-seated fluctuation. While turning himself in bed, on the night of November 30, the patient felt a sudden "snap," and excruciating pain set in. The knee became rapidly swollen to a great degree. An exploratory puncture was made, and a little grumous fluid came away. The glands in the groin swelled, and the patient died in four days. The soft parts of the thigh were infiltrated with a dark red, turbid fluid. The tumour was encysted and occupied the lower anterior third of the limb. The bone was extensively diseased on its external and internal aspects, and from thinning of its mass through absorption of its laminated structure, had completely broken across. The pain and swelling were due to acute inflammation of the knee-joint and of the substance of the femur. The condyles of the latter, the patella, and the synovial membrane of the joint, were all in a state of inflammation; and ulceration of the cartilages had commenced.

Empyema: Psoas Abscess: Paraplegia: Death.—Dr. FOOT showed the viscera of a boy, aged 10, in whom an empyema of the left side had passed by a fistulous communication behind the internal arched ligament into the left psoas muscle, in which it made an abscess, and thence into the vertebral canal. When the boy was sent to hospital it was for paraplegia, accompanied with paralysis of the bladder, and incontinence of fæces; these symptoms had occurred rather suddenly. He lived nineteen days after the appearance of paraplegia, passing alkaline and ammoniacal urine, and suffering from bed-sores. After death, the exterior of the theca vertebralis was found thickly covered with adherent, brownish lymph, mixed with yellow patches of purulent matter; the inner side of the dura mater spinalis was quite unaffected, as also were the other membranes, and the substance of the cord. The deposit on the theca extended as high as the brachial enlargement. It was supposed that the pus gained admission into the spinal canal through the intervertebral foramina, which give exit to the branches of the lumbar plexus. The fistulous communication between the psoas abscess and the left pleura was plainly seen, and admitted the passage of a small catheter.

Hepatic Abscess, causing Empyema.—Dr. FOOT exhibited the parts taken from a man, aged 35, in whom an hepatic abscess had suddenly opened into the right pleura, death occurring twenty-eight hours

afterwards. The man had been four days under observation for pleuritis of the lower region of the right side; there was neither icterus nor ascites. The abscess was one of three of large size, all situated in the right lobe of the liver, and unconnected with each other. The liver was large (101 ounces), fatty, and showed nothing in its condition, or that of its appendages, to account for the abscesses. There was no disease of the colon; no history of injury of the hepatic organ, or of residence abroad. The abscesses had many of the characters of the tropical, and none of those of the pyæmic form; so that this case added another to the list of examples of abscess of the liver, whose etiology was enveloped in obscurity. Eighty-two ounces of fluid, a mixture of serum, pus, and blood, were found in the right pleura; the lung was compressed, collapsed, and sheeted with exudation fibrine.

Large Malignant and Postperitoneal Tumour in a Young Child.—Dr. HEAD exhibited morbid specimens from the body of a child aged 7. On the patient's admission to hospital, a large tumour presented a little below the left hypochondrium, extending upwards slightly under the ribs, and downwards to the brim of the pelvis. The diagnosis was at this period difficult; but the fact that the large intestine passed over the tumour precluded the likelihood of its being due to splenic enlargement. Shortly after this, another tumour formed over the eye, and now the question of the malignant nature of the abdominal mass was set at rest. At the *post mortem* examination, the eye tumour was seen to spring from the upper plate of the orbit. It afforded a good example of round-celled sarcoma. The abdominal tumour was subperitoneal, and in close proximity to it the spleen and kidney were discovered, both healthy, but having undergone considerable compression.

Vesical Abscess from Forcible Catheterisation.—Dr. WHARTON showed the bladder, prostate, and penis of a man, aged 75, who had occasionally suffered from temporary retention of urine, without over-distension. The prostatic catheter could always be passed with the greatest ease, but a non-professional friend had passed an instrument for the patient in his last attack of retention. At the necropsy, no stricture was met with between the glans penis and the neck of the bladder. The prostate was enlarged, the middle lobe being as large as a full-sized grape. Just behind it an abscess had formed. The vesical mucous membrane was vascular, and thrown into rugæ. A false passage ran through the middle lobe of the prostate, and this had evidently been caused by the forcible passage of a catheter, to which, also, the formation of an abscess was due.

Sudden Death from General Coagulation of the Blood.—Dr. HAYDEN reported the cases of an engine-driver, aged 33, of very intemperate habits, who had been admitted to hospital with evidences of disseminated tubercle in the right lung. In a few hours violent pulmonary symptoms set in, and in fifteen minutes the man was dead. The right lung was extensively diseased. Seven or eight ounces of serum were contained in the pericardium. The heart was pallid, having all its cavities plugged with pale and firm coagula. The left ventricle was concentrically hypertrophied. Fibrinous clots also lined the aorta, and projected into the left common carotid artery. Thrombosis had likewise occurred in the pulmonary artery. The heart had undergone granular degeneration, and the kidneys were in the second stage of amyloid degeneration.

CORRESPONDENCE.

CONTEMPORARY MEDICAL BIOGRAPHIES.

SIR,—I ask leave to say, in reference to some remarks on the subject in your impression of January 11th, that the publication of their photographic portrait of myself, as one of a series, was projected by Messrs. Barraud and Jerrard without my sanction or knowledge; that Mr. Weightman, the editor, informed me of their intention about a month before last Christmas; and that I declined his request that I would furnish him with my autobiography.

Understanding, however, from him that some biographical notice would certainly be appended to the portrait, I told him that, in a similar series published by Messrs. Churchill a few years ago, the main events of my professional life had been already detailed. From this Mr. Weightman's account of me has been compiled; and the "revision" which it underwent by me was restricted to the correction of errors or omissions concerning matters of fact; such as that I was no longer President of the College of Physicians, and the like.

I trust that no one will think—I feel sure that no one who knows me would readily suppose—that the eulogistic passages were written, suggested, revised, or approved by me.

I am, etc.,
THOMAS WATSON.
16, Henrietta Street, Cavendish Square, January 11th, 1873.

SIR,—Your remarks in the JOURNAL of January 11th on "Contemporary Medical Biography" are both just and seasonable. It is time every high-minded journalist and member of our profession should endeavour to put a stop to the growing system of medical puffery, and we find this disreputable practice openly attributed to men whom we have been accustomed to look upon as burning and shining lights in our midst. If it be really true (which, like you, I strongly doubt) that Mr. Weightman's sketches of the career of Sir T. Watson and Sir William Fergusson "have been carefully revised by themselves personally," it follows that these memoirs claim all the character, authority, and value of autobiographies; and, consequently, I am justified in assuming that Sir William Fergusson writes thus of himself.

"I never amputate an inch more than is necessary; and if . . . I spare a limb, it is my pride to do so. In this department of operative surgery I shine perhaps more than in any other. A more striking instance of steady, uniform success . . . is seldom met with in the annals of industry and perseverance, even when accompanied, as in my case, by great natural gifts and original genius." One might here ask, what about the proverbial modesty of genius? But I hope it is unnecessary. That Sir William Fergusson ever "carefully and personally revised" and sanctioned the account of himself, requires very strong evidence indeed.

Possibly your timely strictures may nip in the bud this sort of careful personal revision. If, unfortunately, this should not be the result, we may expect on future occasions to have other eminent personages endeavour to say by implication: "I have an eagle eye;" "I have the keenest of steady hands;" "I have an intuitive gift of diagnosis;" "I am a prince among midwives;" "I am the man who published a wonderful book 'illustrated by cases successfully cured';" and so on. Will the profession brook this? There are men who richly deserve the above encomiums, and by all means let us have their photographs. Let it then we should spare their blushes, and allow their memoirs to stand over for *post mortem* examination.

I am, etc., EDWARD BEWLEY.
Edington, Clara, King's County, January 13th, 1873.

DR. MURIE.

SIR,—Dr. Murie's friends here have read with much pleasure your kind and true words anent the unjust way in which he has been treated by the Charing Cross Hospital Committee. In London he is apparently neither understood nor appreciated. Is it too much to ask that you will follow up your generous remarks by publishing a *simple list* of Dr. Murie's anatomical papers, and thus let the medical profession know the heartless deed that has been done in the name of a great medical charity. Perhaps some suitable testimonial to Dr. Murie may be the outcome of your influential backing.—I am, etc.,
Edinburgh, 1872. A FORMER DEMONSTRATOR OF ANATOMY.

* * The comments which we have felt it our duty to make upon the extraordinary resolution passed by the Medical School Committee of Charing Cross Hospital, upon the application of Dr. Murie for a minor office in that school, have met with wide approval, and have been echoed in the most influential and independent quarters. The list of Dr. Murie's contributions is of such a length, that we regret that we cannot afford space for it.

THE CASE OF THE EMPEROR NAPOLEON III.

SIR,—The public expression of a certain difference of opinion among the distinguished medical men who attended the *post mortem* examination of the late Emperor, as to the clinical history of the case indicated by the conditions found after death, manifestly lays the subject open for some further consideration in a similarly public manner.

It does not appear to me that either of the opinions expressed sufficiently explains the morbid appearances found after death, or, at least, explains them in the logical manner of which they are susceptible. I venture to suggest that the "excessive" dilatation of the left ureter, and the "atrophy of the glandular structure of the left kidney," were changes which preceded the formation of the stone in the bladder, and were due to the formation in the left kidney of a calculus, which, after blocking up the left ureter for an indefinite time, and thus leading to dilatation of the canal behind the obstruction, and to atrophy of the structure of the kidney, slipped into the bladder and formed the nucleus of the future stone. The conditions found on the right side might well be the result of inflammatory changes subsequent to the formation of the stone in the bladder.

This view of the case—which rationally accounts for the *post mortem* appearances, and also for the somewhat confused and mysterious history of the case during life—is singularly supported by a drawing which I have before me (and which I shall be happy to show to any one inter-

ested in the subject), made by myself about twenty-five years ago from a case which I examined in St. Bartholomew's Hospital. This drawing shows changes in the kidney, ureter, and bladder of exactly the same kind as those found in the case of the late Emperor, but by a fortunate accident demonstrates the clinical history in a manner so clear that it leaves no room for doubt. A portion of the calculous matter which found its way into the bladder and constituted the nucleus of the stone remained behind in the ureter to tell the tale whence the mischief sprang.—I am, etc., HORACE DOBELL, M.D.,
Senior Physician to the Royal Hospital for Diseases of the Chest.

January 12th, 1873.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, January 9th, 1873.

Cumming, William Richard, East Acton
Groves, Henry Joseph Firth, Dorchester
Keer, George Edwardes, Wickham Market
Llewellyn, Rees Ralph, Whitechapel Road
May, William Allan, Colney Hatch

The following gentleman also on the same day passed his primary professional examination.

Powell, Harold M., Guy's Hospital
As an Assistant in compounding and dispensing medicines.
Druce, George Claridge, Northampton

MEDICAL VACANCIES.

THE following vacancies are announced:—

BALSALL HEATH, Worcestershire—Medical Officer of Health: £50 per annum.
BOLTON INFIRMARY and DISPENSARY—Two House-Surgeons; £120 per annum, increasing to £150, and £100 per annum, increasing to £130, furnished apartments, attendance, and board, respectively.
BOOTLE-cum-LINACRE—Medical Officer of Health.
BOROUGH OF BOLTON—Medical Officer of Health: £200 per annum.
BRADFORD, Yorkshire—Medical Officer of Health.
BRIGHTON AND HOVE LYING-IN INSTITUTION—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CHARING CROSS HOSPITAL—Physician or Surgeon for the Treatment of Diseases of the Skin.—Assistant-Surgeon.
CHELTENHAM GENERAL HOSPITAL AND DISPENSARY—Resident Surgeon to the Branch Dispensary: £120 per annum, furnished residence, and allowances for servants, coal, gas, etc.
EAST RETFORD UNION, Nottinghamshire—Medical Officer for the Scrooby District.
GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.
GERMAN HOSPITAL, Dalston—Honorary Assistant-Physician to attend Out-Patients.
HALIFAX UNION—Medical Officer for the Elland District: £20 per annum.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
ISLINGTON DISPENSARY—Resident Medical Officer: £160 per annum, apartments, and coal.
KILRUSH UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Carrigaholt Dispensary District: £100 per annum, and fees.
LEICESTER PROVIDENT DISPENSARY—Medical Officer.
LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST—Two Honorary Physicians.
LIVERPOOL UNION FRIENDLY SOCIETY—Medical Officer for the Birkenhead District.
MANCHESTER ROYAL INFIRMARY, DISPENSARY, LUNATIC HOSPITAL, or ASYLUM—Two Assistant-Physicians.—Two Assistant-Surgeons.—Obstetric Physician or Surgeon.—Ophthalmic Surgeon.—Dental Surgeon.
MERTHYR TYDVIL UNION, Glamorganshire—Medical Officer for Workhouse.
NAAS UNION, co. Kildare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Newbridge Dispensary District: £100 per annum, and fees.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NEWPORT UNION, Monmouthshire—Medical Officer for the St. Woollos District and the Workhouse: £180 per annum.
NEWRY UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Newry and Crobane Dispensary District: £120 per annum, and fees.
NORTH UIST—Parochial Medical Officer.
NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £100 per annum, rooms, board, and washing.
NOTTINGHAM, Borough of—Medical Officer of Health.
QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—Medical Officer for In-Patients.
RATHDOWN UNION, co. Dublin—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Powerscourt Dispensary District: £110 per annum, and fees.
ROYAL ISLE OF WIGHT INFIRMARY, Ryde—Honorary Medical Officer.
ST. GEORGE AND ST. JAMES DISPENSARY, King Street, Regent Street—Physician-Accoucheur.
ST. MARY'S HOSPITAL, Manchester—Medical Officer: £60 per annum, board, and residence.
SHEFFIELD GENERAL INFIRMARY—Assistant House-Surgeon.
SOUTH SHIELDS and WESTOE DISPENSARY—House-Surgeon: £100 per annum, partly furnished residence, coal, and gas.
STOCKTON-ON-TEES DISPENSARY—Apothecary: £120 per annum.

SUNDERLAND GENERAL INFIRMARY and DISPENSARY—Physician.
UNIVERSITY OF LONDON—Assistant Registrar: £500 per annum.
WALTON-ON-THE-HILL—Medical Officer of Health: £30 per annum.
WEM RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum.
WHITEHAVEN and WEST CUMBERLAND INFIRMARY—House-Surgeon: £100 per annum, furnished apartments, firing, gas, and attendance.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Henry Lee, Lettsomian Lectures on Urethral Discharges. No. II: Prostatic Discharges.
TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited. Mr. Duke: Ankylosis of the Hip after Disease. Mr. W. Adams: Fœtus with Arrest of Development of the Arms and Legs. Dr. Murchison: Spindle-celled Sarcoma of the Liver. Dr. R. King: Stomach from a Case of Poisoning by Hydrofluoric Acid. Dr. R. King: Membranous Casts from an Intestine. Dr. R. Liveing: Aneurism of the Thoracic Aorta. Mr. Barwell: Extensive Disease of the Femur. Mr. Barwell: Inflammatory Disease of the Tendons of the Fingers.
FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Burney Yeo, "Case of Congenital Absence of the Lower Portion of the Pectoralis Major"; Dr. Nieden, "On a Case of Lesion of the Upper Dorsal Portion of the Spinal Cord, with Excessive Lowering of Temperature and Pulse"; Mr. Teevan, "On the Results of twelve Cases of Operation for Stricture".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. RANSOME'S request shall be complied with.

MR. TENNENT (Leyland).—We fear that the MS. forwarded us is no longer in existence.

DR. MARTYN (Bristol).—We would particularly request that all correspondents would communicate with the General Secretary, and not with the Editor, on subjects concerning the business arrangements of the JOURNAL, including postal irregularities, changes of address, advertisements, births, deaths, marriages, etc.

ANDREWS & STYRAP.

SIR,—The President of the Ethical Branch, in our JOURNAL of the 21st ult., states that an audited account of the receipts and payments in full was transmitted to the contributors to the fund for the prosecution of the chemist Andrews. I beg to state that I have received no such copy, although I contributed with some others at the solicitation of the late Financial Secretary of the Ethical Branch. I would suggest that the balance-sheet in regard to this case be published in the JOURNAL, for the benefit of those who may be called on to bring forward such prosecutions in future. As I was not the author of the former communication on the subject, you will see that others as well as myself have had the balance-sheet alluded to withheld from them. I am, etc., W. EDDOWES.

Castle Street, Shrewsbury, January 14th, 1873.

NOVEL CHLOROFORM ACCIDENT.—We heard recently of a curious danger in chloroform inhalation which occurred in a metropolitan hospital. The administrator finding the breathing of the patient, a child, becoming impeded by the tongue falling back, pushed forward the jaw by pressing his thumbs behind the angles and dislocated it at both articulations. This was speedily reduced without apparent harm.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases," and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

ETHER AS AN ANÆSTHETIC.

SIR,—I have been requested to send you my impressions as to the use of ether as an anæsthetic. My experience is confined to having given it or seen it given about a hundred times in the theatre of this hospital, and of course for ophthalmic operations. Comparing it with chloroform and bichloride of methylene (both of which I have given several thousand times, and can therefore speak more confidently of them), I should place it below both for convenience, as to safety. I have never met with an accident with any of the three, or even with an alarming case, except once, in giving chloroform; so I cannot speak as to its relative safety. But as to convenience, it is very disagreeable to take, and the patient struggles and resists far more than in either of the others; the period of complete insensibility is neither as complete or so prolonged as with either of the others; and in the event of partial recovery, it takes a longer time and causes much more struggling to give enough to get them off a second time. The period of recovery is sometimes attended with furious uncontrollable delirium, in which the patient tears away his bandages, and conducts himself in a most violent manner, to the extreme danger of his eye, if after an important operation: of course this is exceptional, but I have seen minor degrees of it not infrequently. After vomiting is more frequent than with either of the others; but I have never seen severe vomiting for many hours follow anything but chloroform; its rapidity of action is about equal to chloroform. I believe I follow Dr. Joy Jeffries' directions exactly in giving it on a towel folded cone-shaped, with a sponge fixed into the apex, and upon this I pour about six ounces of ether; in this way a great deal of ether is distributed through the theatre, and given to the assistants; and I fancy some day we shall hear of an accident in operating by artificial light from the ether catching fire. I do not think that ether will ever be a general favourite in ophthalmic hospitals, from the reasons I have stated. Apologising for the length of my letter.

I am, etc.,

THE HOUSE-SURGEON.

Royal London Ophthalmic Hospital.

A HOUSE-SURGEON writes that he has used ether in one or two cases, but intends to employ it extensively. He finds the want of a good inhaler to prevent the waste of the ether. If he will follow out the directions given in the JOURNAL by Mr. Haward, he will, we think, obviate this. The inhaler employed by Mr. Norton at the Middlesex Hospital answers, we are informed, very well.

ASSURANCE EXAMINATIONS.

SIR,—I shall be glad to learn from any of your correspondents whether, in examining a candidate for insurance, they would make any difference in the case of one in whom the arcus senilis is well marked; there being no sign of degeneracy elsewhere. Would this be a sufficient ground for making an additional premium? January 15th, 1873. I am, etc., ARCUS.

MR. MILES.—The Royal College of Physicians of London does not recognise or sanction the assumption of the title of Dr. by its licentiates. Licentiates of the Royal College of Physicians of Edinburgh have no right, as such, to style themselves Dr.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Jan. 11th; The Manchester Guardian, Jan. 15th; The Ulster General Advertiser, Jan. 11th; The Scotsman, Jan. 14th; The Bath Express, Jan. 11th; The Birmingham Daily Post, Jan. 13th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Peacock, London; Mr. W. S. Savory, London; Dr. George Johnson, London; Mr. T. H. Bartleet, Birmingham; Mr. Waren Tay, London; Mr. T. C. Morgan, London; Mr. H. J. Rope, Shrewsbury; Mr. G. C. W. Hentig, London; Dr. John MacDonald, Woburn; Mr. Peter Bell, Edinburgh; M.D. Edin.; Mr. Southwood Smith, London; Dr. Shapter, Exeter; Mr. Soutter, London; M.R.C.S. Eng.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Paul, London; Mr. F. Wachter, Canterbury; Mr. Procter, Shifnal; Dr. Matthews Duncan, Edinburgh; Dr. Laffan, Cashel; A Member; Dr. Dobell, London; Dr. Ogston, Aberdeen; Mr. Cooper Forster, London; Mr. Curling, London; Mr. L. Blaise, London; The Secretary of the Clinical Society; Dr. Bewley, Clara, King's County; Mr. James Keen, London; Dr. Rabagliati, Bradford; Mr. W. Adams, London; The Rev. Dr. Haughton, Dublin; Dr. Barnes, London; Dr. Hughlings Jackson, London; Dr. Atthill, Dublin; Dr. Fussell, Brighton; Mr. Blackburn, Weaverthorp; Mr. Eassie, London; Sir Thomas Watson, London; Dr. D. Page, Kirkby Lonsdale; The Secretary of the Pathological Society; Mr. Callender, London; Dr. Hardie, Edinburgh; Dr. Lockhart Clarke, London; Dr. Ford Anderson, London; The Secretary of the National Orthopaedic Hospital; Mr. Ransome, Bedford; Dr. R. Carter, Bath; The Secretary of the Microscopical Society; Dr. Ross, Monaghan; Dr. Matthews Duncan, Edinburgh; Mr. Halliwell, Oxford; Mr. Teevan, London; Mr. W. Eddowes, Shrewsbury; Mr. W. Bird, York; Mr. G. Pottle, London; Mr. Clement Godson, London; Dr. Stanley Haynes, Malvern Link; Dr. Martyn, Bristol; Mr. Tennant, Leyland; Dr. T. Savage, Bordesley; Dr. Dudfield, London; Mr. Board, Bristol; Mr. Fowler, Bath; etc.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE II.—ON ACUTE BRIGHT'S DISEASE.

Synonyms.—*General Symptoms.*—*Microscopic Appearances in the Urine.*—*Morbid Anatomy of the Kidney.*—*Physiology of the Morbid Process.*

I HAVE told you that the first great division of cases of Bright's disease is into acute and chronic, and I now proceed to give you the pathological history of acute Bright's disease. The synonyms for acute Bright's disease, given in the *Nomenclature* of the Royal College of Physicians, are "acute albuminuria", "acute desquamative nephritis", and "acute renal dropsy". The renal disease associated with dropsy, which often occurs in connexion with scarlet fever, may be taken as a type of acute Bright's disease. I will first give you a sketch of the ordinary course of this form of disease, and I will then point out to you the chief varieties and modifications of the malady.

The attack is usually ushered in by a sense of chilliness, which may amount to actual rigors; a quick and throbbing pulse, a hot and dry skin, a dry and coated tongue, thirst, loss of appetite, pain in the back and limbs, headache, and restlessness. In some cases, frequent vomiting occurs at the commencement of the attack. In most instances, dropsy is a very early symptom; the patient's attention, or that of his friends, being arrested by an appearance of unusual pallor and puffiness of the face, and especially of the eyelids; the swelling soon becomes general, affecting the subcutaneous areolar tissue throughout the body, and often one or more of the serous cavities. The urine is at this stage more or less scanty, occasionally almost or even altogether suppressed; usually it is dark-coloured from admixture with blood, the colour varying from a slight smokiness to a deep blood tinge, and it contains so large an amount of albumen as to become nearly solid with heat and nitric acid. The specific gravity varies considerably, being as often above as below the normal point. There is usually more or less pain and tenderness in the loins; the pain is sometimes, though rarely, severe, and occasionally it extends to the inside of the thighs and to the testicles. There is frequent desire to pass urine, and sometimes a sense of pain or scalding in the urethra. There is often more or less of uneasiness in the epigastrium, with flatulent distension of the stomach, especially after food, and nausea and vomiting are of common occurrence. In some cases, inflammation of one or more serous membranes—the pleura, the pericardium, or the peritoneum—occurs, or respiration is impeded by an oedematous or an inflammatory effusion into the pulmonary air-cells and the smaller bronchi; or the head-ache, which is often present from the commencement, becomes more severe, and is followed by one or more attacks of convulsions, from which the patient may recover, or which may be followed by fatal coma.

When the progress of the disease is favourable, one of the earliest signs of amendment is an increased secretion of urine. It may be that for some days only a few ounces of urine have been passed in the twenty-four hours; it soon becomes more copious, of paler colour, of lower specific gravity and less albuminous, and the amount secreted may be as much as from four to six pints, the dropsy meanwhile diminishing daily. After an interval, varying from a few days to a month or more, the secretion of urine is reduced to the normal amount, the sediment diminishes and at length disappears, the urine gradually resumes its normal colour and ceases to be albuminous. At any time during the convalescence, there may be a temporary increase of blood and albumen, with a diminished secretion of urine and a return of dropsy, if the congestion of the kidneys be increased by exposure to cold or by errors of diet. In most cases, the dropsy disappears for days, and even for weeks or even months, before the urine has ceased to be albuminous; and in some cases, although the dropsy and the pallor of the skin pass away, the urine remains albuminous, and the renal disease passes into a chronic form.

Acute albuminuria is sometimes unassociated with dropsy from its commencement to its termination. The terms "acute albuminuria" and "acute renal dropsy" are, therefore, not strictly synonymous.

Microscopic Appearances in the Urine.—A portion of the urinary sediment in the early stage of acute Bright's disease, being placed under a quarter-inch object-glass, presents very characteristic appearances. The most striking objects are solid cylindrical moulds of the uriniferous tubes. The basis of all renal tube-casts is fibrine which has coagulated within the uriniferous tubes, but these casts assume various appearances according to the nature of the products which they contain and the condition of the tubes in which they have been moulded. The cases which are most characteristic of acute Bright's disease are "epithelial casts" (fig. 6). These casts contain gland-cells evidently derived from the



Fig. 6.—a. Epithelial Casts. Casts of the Uriniferous Tubes entangling Renal Epithelium and Blood-corpuscles. b. Scattered Renal Gland-cells and Blood-corpuscles. c. Pavement-epithelium from the Vagina. This is broader, flatter, and less granular than the renal epithelium.— $\times 200$.

convoluted tubes of the cortex; they also entangle blood-corpuscles, and some casts are entirely composed of coagulated blood; these are called "blood-casts" (fig. 7). Together with the tube-casts, many scattered



Fig. 7.—Blood-casts composed of Fibrine entangling Blood-discs.— $\times 200$.

renal gland-cells and blood-discs may usually be seen. In addition to the epithelial and blood-casts, we find in most cases of acute Bright's disease some small and large hyaline casts (fig. 8). The difference be-



Fig. 8.—Small and large Hyaline Casts composed of pure Fibrine.— $\times 200$.

tween a small and a large hyaline cast is readily explained by referring to fig. 2 in my previous lecture. The small casts, which are composed of pure fibrine, are moulded within the canal formed by the gland-cells, which retain their normal position within the uriniferous tubes; the

large casts, on the other hand, are formed within tubes whose gland-cells have been removed. The diameter of these casts, therefore, is about twice that of the small casts, and equals that of the tubes whose basement-membrane constitutes the mould in which they have been formed. The larger casts may be simply hyaline, or they may entangle here and there a cell-nucleus or the fragment of a cell.

In cases of acute Bright's disease, the small hyaline casts are often present in considerable numbers, while the large hyaline casts are usually less numerous, and may be entirely absent. On the other hand, there are unquestionably acute and curable cases in which the large hyaline casts are most numerous. When the disease has lasted beyond a month or six weeks, we find often in adults, more rarely in children, that more or less oil begins to appear in the tube-casts and in the desquamated renal epithelium. The appearance of oily cysts and cells (fig. 9) excites less alarm now than it formerly did.



Fig. 9.—Oily Casts and Cells.— $\times 200$.

It indicates that in certain parts of the kidney the secreting cells and the inflammatory exudations are undergoing fatty transformation; but I have seen many cases of complete recovery after oily cysts and cells in great numbers had appeared in the urine continuously for many weeks.

Morbid Anatomy of the Kidney.—When acute Bright's disease (acute desquamative nephritis) has proved fatal, both kidneys are found diseased; they are enlarged and their weight is increased, each kidney weighing from six to eight ounces, or even more. The increased weight of the kidney is partly due to infiltration with serous fluid; the tissues contain an excess of water in proportion to solids; the capsule readily peels off the surface, which is smooth and mottled, presenting an irregular combination of red vascular engorgement, with anæmia and pallor. The fine lobular divisions formed by the minute venous radicles on the surface are more or less obliterated. Some of the stellate veins are much enlarged and distended. Here and there appear spots of hæmorrhage—some of the size and shape of a pin's head, others irregular in form. On section, there appears a marked distinction between the cortical and the medullary portions: the former presents the same mixture of congestion and anæmia as appears on the capsular surface; the spots of ecchymosis, too, are here visible, but they sometimes take a linear course, especially near the base of a medullary cone. The cones are much darker than the cortex, as if from venous congestion. They appear to be compressed by the swollen portions of the cortex which pass between them, while the bases of the cones are expanded and spread out into the cortical portion, thus having, as Rayer suggested, the form of a wheatsheaf. The mucous membrane of the pelvis of the kidney, and occasionally that of the ureter, is more or less congested.

A microscopic examination of the kidneys shows that the morbid products are contained within the convolution-tubes of the cortex. Most of the tubes are abnormally opaque, in consequence of being filled with epithelial cells which have been formed within them and thrown into their cavity (fig. 10). The tubes are crowded with these cells in different degrees; some being stuffed full, while in others there is little or no evidence of desquamation having occurred, there being only a single layer of epithelium on their walls, and this being quite normal, or appearing more than usually opaque, granular, and swollen. This condition has been called the "cloudy swelling" of the epithelium. The most crowded tubes are usually found in those portions of the cortex

which to the naked eye appear pale and anæmic. In these parts the intertubular capillaries are compressed and emptied by the distended and swollen tubes. Occasionally, in examining a section of the tubes,

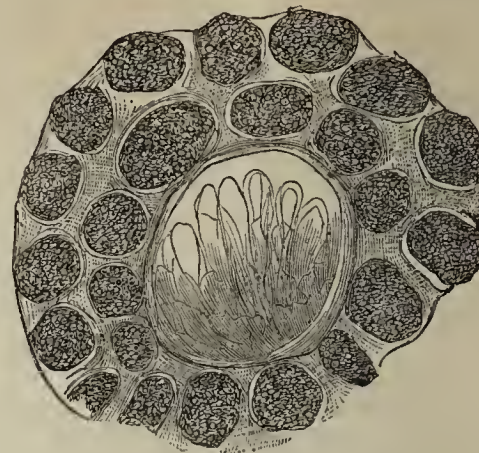


Fig. 10.—Sections and Knuckles of Tubes rendered opaque by their accumulated contents. A Malpighian body near the centre more transparent than the surrounding tubes.— $\times 200$.

portions of their contents, being squeezed out, present exactly the appearance of the "epithelial casts" which have been before described as existing in the urine.

The hæmorrhagic spots before spoken of, as appearing here and there on the cortical surface and on the face of a section, are seen to be tubes injected with blood which has flowed into them from ruptured Malpighian capillaries (fig. 11). In some tubes, the epithelium is found



Fig. 11.—Malpighian Capsule and Convoluted Tube—the former partially, the latter completely filled with blood from ruptured Malpighian capillaries—thus forming a hæmorrhagic spot in the cortex of the kidney.— $\times 45$.

to contain more or less oil. Most of the straight tubes of the cones appear to be quite normal, while others are opaque and filled with cells more or less disintegrated, which seem to have been washed into them from the convoluted tubes. There is no evidence that the epithelium of the straight tubes has been morbidly changed.

Some Malpighian bodies are of a deep red colour, with fully injected capillaries; more frequently, however, the Malpighian capillaries appear of a lighter colour than the surrounding opaque tubes; their walls are more opaque than in the normal state, and their surface often appears rough and finely granular, as if from the coagulation upon them of some of the fibrinous materials which have transuded through them during life. The nuclei in the walls of the capillaries are abnormally conspicuous. Occasionally, as I have before mentioned, there is evidence of rupture of the capillaries, in the fact that the capsule and the adjoining tube are filled with extravasated blood. (See *antea*, fig. 11.)

Physiology of the Morbid Process.—The morbid anatomy of this form of Bright's disease being such as I have described it to be, it remains that we attempt a physiological explanation of the phenomena. I say a physiological explanation, because I wish to impress upon you that these morbid phenomena are modifications of normal physiological processes which admit of explanation only by reference to physiological principles. The structural changes in a kidney affected with Bright's disease are the result of a modified process of secretion. The cortical or secreting portion of the kidney is obviously the part which is chiefly affected, and a microscopical examination shows that the gland-cells which line the convoluted tubes are the structures primarily and essentially affected. The secreting cells of the kidney, like those

of other glands, have the power of separating from the blood and discharging from the body not only the constituents of their own proper secretion, but also other materials foreign to that secretion. Many salts and many odorous and colouring matters, when introduced into the circulation through the stomach, are speedily and completely eliminated through the kidneys, apparently without causing structural change or inconvenience. We do not hesitate to give for weeks or even months consecutively large doses of such medicines as iodide of potassium, a salt which is known to be largely eliminated by the kidneys. It is, however, important to observe that certain materials, which when secreted by the kidneys in moderate quantities for a short time are quite harmless, may cause decided structural change by their long continued secretion in larger quantities. We have an instance of this in the case of diabetes. Diabetes is not primarily a disease of the kidney, but kidney-disease is a frequent result of diabetes—indeed, healthy kidneys are rarely if ever found in subjects who have died of diabetes; and the probable reason is, that the long-continued secretion of large quantities of sugar so alters the secreting cells of the kidney, rendering them granular, swollen, opaque, and oily, that at length they lose the power of secreting urine; the urine becomes albuminous, and complete suppression of the secretion is often the immediate cause of death. Again, when in consequence of obstruction of the gall-duct, or other disease or accident, causing an accumulation of bile in the blood, bile-products in large quantities are secreted by the kidneys, desquamated renal epithelium, tube-casts, and sometimes albumen, are found in the urine. The excretion of these new products sometimes causes a mild form of desquamative nephritis. I refer to these facts to illustrate a physiological principle. It is certain that neither renal gland-cells nor tube-casts are ever found in normal urine, and it is highly probable that the desquamative process never occurs in the kidney except as a result of the excretion of some abnormal materials by the gland. It will scarcely be denied that scarlet fever is associated with a blood-poison. This poison does not always and of necessity implicate the kidneys, as in the vast majority of cases it affects and inflames the skin; but we know from abundant experience that the risk of renal complication is greatly increased by exposure of a patient to cold while the rash of scarlet fever is out, or even while the skin is desquamating after the disappearance of the rash. It would seem that by exposure to cold the cutaneous inflammation and desquamation are suppressed or checked, and an analogous morbid process is set up in the uriniferous tubes of the kidney. That a poison is thrown off from the skin of a scarlet fever patient, and that the poison is contained in the epidermic scales, we have very good reason to believe; and analogy renders it in the highest degree probable that the implication of the kidneys is associated with the excretion of a morbid poison by their gland-cells. The morbid phenomena result from a modified physiological function. This explanation can scarcely be considered hypothetical; it appears to be the obvious interpretation of unquestionable facts. Meanwhile, the modified cell-growth within the kidney chokes and distends the tubes with desquamated epithelium, the circulation through the gland is impeded, the secretion of urine is checked, and urinary constituents, both liquid and solid, accumulate in the blood. The circulation of urinous blood causes general febrile excitement, with a quick and throbbing pulse, usually a more or less extensive dropsical effusion, and in some cases inflammation of the serous membranes or of other tissues, or serious disorder of the cerebro-spinal functions.

When under favourable circumstances the morbid poison which excited the renal disease has been eliminated, or in part, perhaps, decomposed, the desquamation of epithelium ceases, the secretory process again becomes normal, the urine is copiously secreted, the blood and the tissues are then freed from retained impurities, and from excess of water.

The copious flow of urine which occurs during convalescence from acute Bright's disease is thus explained: during the acute stage of the disease, the constituents of the urine, both solid and liquid, have accumulated in the blood, and have thence been effused into the areolar tissues and into the serous cavities. Now, urea is a most powerful diuretic: when injected into the veins of a dog, it quickly excites an abundant flow of urine; and as soon as the circulation through the kidney again becomes free, the retained urea exerts its natural diuretic influence upon the gland. The accumulated water serves as a vehicle for washing out the urea, and the copious flow of urine thus induced speedily removes the retained urinary solids and water from the blood, the areolar tissue, and the serous cavities into which they had been effused, and thus the dropsy is removed.

This abundant flow of urine, in favourable circumstances, takes place without aid from diuretics or drugs of any kind. I have seen it occur while only a bread-pill or coloured water was given as a *placebo*.

[To be continued.]

NOTES AND OBSERVATIONS ON DISEASES OF THE HEART AND LUNGS.

By THOMAS SHAPTER, M.D., F.R.C.P.,
Senior Physician to the Devon and Exeter Hospital, etc.

[Continued from page 206 of number for February 24th, 1872.]

THE more manifest examples of a deficient systolic impulse of the heart in connection with physical disease have been reviewed. These being eliminated from the inquiry, it remains to consider when the existence of a deficient impulse is dependent solely on functional disorder, and whether as such it have hostile tendencies, or may be considered as entirely free from them, affording assurance of danger neither to life, nor threatening future injury to the heart itself; and, finally, it remains to consider when such deficient impulse is proper to the individual, and consistent with a sound and healthy condition, present and prospective.

Those in whom a feeble impulse occurs as a functional disorder are, irrespectively of sex, usually of the leucophlegmatic temperament. This feeble impulse is met with, in both sexes, chiefly amongst those whose distinctive mental quality is that of being unimpassioned, and who are constitutionally prone to that form of indigestion characterised by cold and clammy extremities. The physical signs, on examination of the heart, are very negative. The impulse, though weak, may be excited by exertion to a more powerful action, and even to throbbing, without any sensation of distress, and although it be, as is most probable, accompanied by an acceleration of the breathing. When the heart is thus excited to unusual action, it will be found that the sounds are more audible and somewhat altered in quality—the first sound suggesting, rather than being of, a sharp ringing tone, while the second is prolonged, and perhaps reduplicated; still, they are less sonorous and distinct than in weak impulse from dilatation. The general symptoms marking this disordered condition are flatulent dyspepsia, anorexia, perhaps a depraved appetite, a foul breath, with tendency to constipation; indifference to exertion, both mental and bodily; a general languor, with lowness of spirits, passing at times into a distressing despondency; shortness of breath upon exertion; and, in extreme cases, a marked liability to œdematous swellings, not only of the feet and ankles, but of the face and the person generally. Where this state occurs in females of the hysterical constitution, there may be super-added a tendency to faint—a casualty which is somewhat unusual in these cases. This disordered condition is not in itself dangerous, and is certainly very amenable to general and medical treatment; nevertheless, the neglect of its indications may lead to grave physical complications. In its simple form it is to be regarded as a blood-disease, rather than an affection of the heart.

Exercise, both of the mind and body, though at the time it may seem to increase some of the symptoms, by inducing exhaustion, is for the most part beneficial, and should always be enjoined. The dyspeptic tendencies must be sedulously counteracted by a well regulated diet, with the occasional administration of such ferruginous tonics and aloetic and other deobstruents as the system will bear.

In the instances in which a feeble impulse appears to be the normal condition of the individual, it will generally be met with—perhaps more frequently in females than in males—in those of slight make, disposed to be of or above the average height, having good but moderate appetites, and enjoying an even good health. They do not appear generally capable of great mental or physical efforts, and they rarely or never engage in violent or prolonged exertion—the quiet regular walk being esteemed to be exercise sufficient. If by any unaccustomed effort the heart's action be accelerated, it is unaccompanied by any very continued, exhausting, or painful disturbance of the breathing, and there is certainly no undue tendency to fainting. They usually present fair mental qualities, with remarkably easy even tempers, not easily roused to excitement; of good but quiet tastes, being æsthetically rather than animally disposed, finding their pleasures in the enjoyment of scenery and the cultivation of the fine arts—in books, music, or painting. They are often good instrumental musicians: they pass through life amiably and agreeably, without ambition, and neither achieve nor even plan any great designs.

In reconsidering the preceding illustrations of a diminished and feeble impulse, can we feel, without being too didactic, that approach has been made, by aid of the physical indications, to the accurately and surely distinguishing that which depends on diseased and urgent conditions from that which has its origin in natural and harmless causes? In the former, it has been shown, there are not only the signs of the diseased conditions themselves, but, for the most part, the more the heart is thus impaired, whether this be from dilatation, from

muscular weakness, or from fatty metamorphosis, the more marked is the weakness of the impulse, while the sounds are, as the case may be, altered in character; they may be muffled almost to extinction, or they may be more sonorous and more distinct than is proper to the normal heart. In the latter, the heart has its normal position and dimensions, and though the impulse be feeble and the sounds partake of this character, they are natural in tone and quality.

We now pass on to the consideration of the opposite condition of the heart—viz., where the heart's impulse is increased in force.

The distinctive symptom of this form of affection is the occurrence of an abnormal violence, very various in degree, in the beat of the heart, usually but not necessarily associated with increased frequency, and then exhibiting those phenomena which are comprehended under the term "palpitation". Generally this form of disturbance is obvious to the person himself, but not necessarily so. It may be a chronic disease, accompanied by few or even no very unpleasant indications to the patient, or it may assume a paroxysmal character. Whether chronic or paroxysmal, an increased impulse may present various modifications; it may be a mere occasional flutter, or it may amount to a rap or to a blow of uncertain frequency; it may be associated with feelings of weight and fulness, and anxiety about the præcordia, or even pain. In a paroxysmal attack there may be sensations of choking, and the heart may seem to the sufferer to rise as it were into the throat; the respiration may also be more or less disturbed—now hurried, now suspended. Sometimes a train of more serious symptoms may be super-added, as vertigo, tinnitus aurium, impaired vision, with a feeling of distension of the eyeballs, clammy coldness of the extremities, fear of death, partial unconsciousness, with a feeling of faintness, or even actual syncope. A paroxysm such as this may be succeeded by a somewhat prolonged state of cerebral disturbance, as evidenced by heat of brow and vertex, with cephalalgia and an inaptitude to think or regulate the thoughts.

Such being the distinctive symptoms and the associated phenomena of an increased pulse in the heart's action, it becomes a matter of interest to inquire to what this may be due—whether to dynamic or to statical causes—and then there will remain to be explained the origin and *rationale* of the correlative phenomena. An abnormally increased impulse, whether chronic or paroxysmal, whether slight or well marked, whether simple or associated with grave symptoms, looking to origin and also to consequences, may be of minor consideration or of the most serious import. It may be merely the effect of a passing emotion or of some temporary over-exertion, or it may be the characteristic symptoms of important structural changes, or even of some fatal spasmodic attack.

To accurately estimate the source of an increased impulse is always of the utmost importance; perhaps, in the achievement of this, the professional credit of the physician is at stake. Besides the necessity for a correct diagnosis in order to pursue the right course of treatment, there may be the anxious inquiry of the patient; and the answer to be rendered may be of the greatest importance to his future well being and happiness. Again, increase of impulse is often presented in the case of those who offer themselves for examination when proposing their lives for assurance, and also now for the public service; their eligibility or otherwise is to be determined by the reliable interpretation of the "report" of the medical examiner.

To discriminate between an increased impulse caused by diseased physical conditions, and one solely of temporary or nervous origin, is therefore obviously of the first necessity. To do this, we must first ascertain if there be any organic complications; and when these have been satisfactorily estimated and eliminated, it is then further necessary, in order to arrive at a safe diagnosis, to discriminate between those abnormal impulses which may be indicative of acute inflammatory attacks, of coming structural changes, and of serious spasmodic complications, and those resulting from passing, and in no wise dangerous, causes.

Occasionally the conclusion can be promptly arrived at, that the abnormally increased impulse is solely due to passing nervous influences, and has neither present nor probably future organic complications; while at others this can only be done with difficulty, and after large investigation of the physical condition of the organ itself, with all concomitant circumstances, and then perhaps only after repeated examinations both of the heart and of these circumstances: even then it is often, indeed, a decision fraught with difficulty and doubt.

In the investigation of these cases, it is our first and most imperative duty to separately consider and duly estimate the essential phenomena which mark this disorder in the heart's action. The first point to be carefully examined into is the condition of the visible "ictus ventriculi" in relation to amount, position, and character; and in order to do this the patient should be examined both in the recumbent and

the erect positions. Normally, the amount of the "ictus" is thus not very remarkable—perhaps scarcely appreciable in the erect position, and not at all so in the recumbent. Any very pronounced appearance of the blow of the ventricle in both or in either of these positions must be considered as a departure from a healthy condition. The force of the impulse may be very variously increased, from only a very slightly exaggerated apex-beat to an obviously violent agitation of the whole heart, from an increase which is scarcely perceptible to a diffused and violently convulsive movement.

It may be granted that these departures from the normal impulse, be they great or small, are met with in organic diseases of the heart (rheumatic and other inflammations, hypertrophy, etc.) and in functional disorders (blood and nervous diseases); and also they may be apparently present, though not really so existing, from the contiguity of other diseased or misplaced structures.

Though there may not be a great deal to be learned from the increased condition of the impulse *per se*, yet a note is thereby sounded, exciting conjecture and showing the necessity for further observation. At any rate, it is necessary at once to eliminate from our inquiry all those cases in which there is really no alteration of force in the heart itself, but solely the appearance of it, from the accidental presence of the disturbing effects of contiguous morbid structures, and then, so far as is possible, to separate those in which the impulse is essentially statical from those in which it is dynamic only—that is to say, it must be sought to separate increased impulse caused by organic disease from that occurring in functional disorders. It may, however, be impossible to do this without considering the increased impulse in connexion with its position, its character, and the area over which it is diffused.

The natural position of the "ictus ventriculi" is a defined spot, small in extent, below and a little to the right of the left nipple in the interspace between the fifth and sixth ribs. Though the impulse be confined to this spot, it does not follow there may be no disease of the heart. On the other hand, we may assume, if there be displacement from this position, that this displacement is not due to passing functional disorder, but either to organic disease in the heart itself, or to some alteration in the normal position of this organ by contiguous diseased structures, or may be to personal peculiarities.

The natural character of the "ictus" is that of a slight blow to the feel, occurring rhythmically. When visible, it presents the aspect of a slight regularly recurring undulation; and both to the feel and to the sight it occupies only a very small space. The impulse may, however, be greatly increased in force; yet, if it be confined to its normal site and limits, it is not to be inferred there is of a necessity a diseased origin for this exaggeration in its ordinary force. The impulse, instead of being limited to its normal small spot, may be considerably enlarged in area, ascending even to the base of the heart. Over the whole of this space it may offer the character of a sharp blow, or of a diffused undulation, or of the heaving of a dull heavy weight. For the most part, alterations in the normal character of the impulse, whether in force, position, or character, should excite attention. They are too often suggestive, if not confirmatory, of extensive disease in the heart itself, especially if associated with rhythmical irregularities or a want of synchronousness with the pulse at the wrist. These several conditions of the heart's impulse, whether met with permanently or only occurring paroxysmally, offer a wide field for observation, and, by themselves, separately or collectively, not infrequently supply ample grounds for diagnosis. To appreciate more satisfactorily their value as a means of diagnosis, some of the more prominent instances of their occurrence may now be referred to, with the view of identifying them with those diseased or disordered states of the heart of which they may be pathognomonic. In order to do this, it becomes necessary to separate those cases where they are the characteristic signs of serious chronic or actively inflammatory diseases from those in which they are associated with nervous or dynamical disturbances only. It is necessary, however, before assuming there is an increased impulse, to ascertain there are no neighbouring organic consolidations, such as portions of indurated lung or liver, mediastinal tumours, pleuritic or pericardial adhesions or deposits: each of these may give the character of an increased impulse though it do not really exist. These sources of error need not here be dwelled upon—they belong to other investigations.

Supposing, however, that an increased impulse really do exist, and that at the same time the apex-beat is projected beyond the left nipple, it may be assumed that the area occupied by the heart is abnormally increased, and therefore that there is conclusive evidence of enlargement in this organ itself. If the impulse project not only to the left of the nipple, but also below the line of its normal level, whether it be only slightly increased or exhibit evidence of a maximum and most disturbing force, and in either case being for the most part slow, deliberate, and heaving, giving the impression of a massive weight feebly

and slowly moved, and maintaining in all these respects a tolerably uniform character, we may assume that the heart is not only enlarged, but that its walls are thickened. But if, after exhibiting this diffused heavy impulse, the heart fall back with a jog as it were, and the impulse itself be diffused over a large area, with a dulness on percussion, especially to the left of the sternum, we may further assume that the above diseased conditions are somewhat advanced. Extension rather than force appears to be the measure of the amount of diseased enlargement and thickening. There may be a considerable augmentation of impulse without enlargement; but an impulse diffused over a large area and without sharpness in the blow, so that it rather gives the impression of a deep-seated, extended, and perhaps feeble beat, and wanting in a clear definition of its extent, is a sure indication of thickening and enlargement of considerable extent. It is said that, when the impulse presents the above characters as regards force, but is limited to an extent less in area than is natural, the presence of a simply concentric hypertrophy is indicated. This is, however, a very doubtful condition for the heart to exhibit; and if it really do occur, is only of so rare occurrence, that it is the lot of but few practitioners to have met with and determined its existence. If the impulse and dulness on percussion be projected over an area above as well as below the left nipple, and at the same time the beat be dull and heavy, we may assume that there is an hypertrophied condition of the left ventricle; and, if this impulse and dulness are further traceable to the left of this vertical line, that the hypertrophy of this ventricle is far advanced, and involves a considerable amount of structural change, inasmuch as an hypertrophied condition of the walls of this cavity first induces vertical enlargement, and then, as it progresses, horizontal enlargement.

If the impulse be of the above character, and yet be not projected to the left of the nipple, while a dulness on percussion is, at the same time, traceable behind the lower part of the sternum and projects itself into the epigastrium, an enlargement of the right ventricle is indicated. Disease in this ventricle widens horizontally. This enlargement may be due solely to hypertrophy, more commonly however to hypertrophy with dilatation; but, in either case, it is necessary to bear in mind that, by elevating and thus mechanically displacing the left ventricle, an erroneous conclusion as to the existence of an hypertrophied condition of this ventricle may be inferred. In such case, the dulness traceable below and above the nipple does not necessarily indicate enlargement of the left ventricle. Nevertheless, it is so rarely the former is dissociated from the latter, that practically there is scarcely room for the doubt.

It has been stated that when hypertrophy of the heart is clearly indicated, there are no certain means of distinguishing which cavity is exclusively its seat; still, the existence of a basic dulness on the one hand, and on the other of a dulness projected to the right of and below the sternum should, as regards the condition of the ventricles, have its weight in our means of diagnosis. The indications of thickening and distension of the auricles are not so certain, but it will be borne in mind that the auricles are, generally speaking, only so diseased when ventricular disease is largely developed, or there exists extensive inefficiency in the mitral or tricuspid valves. If the dulness on percussion and the impulse be traceable, as above described, over a diffused area—whilst the force of the impulse is neither massive nor heaving, but abrupt, sharp, and rising as it were to the surface, presenting both to the hand and to the eye an undulatory vibration, and this diffused over nearly the whole area of percussion-dulness, now tolerably uniform in rhythm, now presenting much rhythmical disturbance, for the most part uniform in force, but on slight excitement statically increased, and thus presenting the phenomena of paroxysms of palpitation, perhaps of rare, perhaps of frequent recurrence—the presence of dilatation with hypertrophy may be inferred.

If the area of dulness be projected downwards as well as laterally, and the apex-beat be ill-defined and lost in a feeble weak impulse of an undulatory character, and which to the eye may appear strong and violent, and traceable over the whole area occupied by percussion-dulness, but offering to the pressure of the hand only a slight resistance, being, in fact, really a weak impulse, though, from impinging immediately on the surface, apparently a violent one—it may, under these circumstances, be assumed that the heart is mainly enlarged by dilatation, and that its walls are only slightly, if at all, hypertrophied.

Whether there be or be not percussion-dulness over an enlarged area, if the apex-beat be very distinct, and then diffuse itself into a superficial undulation obvious both to the eye and to the hand, giving the impression of a mass moving immediately below the surface, and in some cases dimpling on the diastole, we may suspect, whether the heart be enlarged or not, that it is adherent to the pericardium, and perhaps, through it, to the pleura also. If there be at the same time a bulging of the cartilages of the fourth and fifth ribs, this latter con-

dition most probably coexists. This præcordial fulness or bulging may also exist in hypertrophy with dilatation, though there be no pleural nor other adhesions; but it is never met with in cases of dilatation only.

[To be continued.]

ON MECHANICAL DILATATION OF THE CERVIX UTERI.

By J. MATTHEWS DUNCAN, M.D.,

Physician to the Royal Maternity Hospital, and Lecturer on Midwifery in the School of Medicine, Edinburgh.

THE following remarks are written as an acknowledgement of and response to the various comments on my paper recently published in this JOURNAL (November 9 and 16, 1872). I feel much indebted to my gynæcological and obstetrical brethren for their criticisms, and recognise their importance. In dealing with them, I shall suppose the reader to be acquainted with the statements of the various writers: this, in order to avoid tedious length.

Dr. Aveling's objections to the use of the metallic bougie are truly only statements of difficulties; and these difficulties every gynæcologist overcomes in daily practice. Besides, the difficulties or objections apply to every mode of dilating the cervix quite as much as to that by a series of metallic bougies. And again, if surgeons were governed by difficulties, as Dr. Aveling thinks gynæcologists should be, they would never use an urethral bougie or an exploring probe.

When Dr. Aveling comments on my use of great force by the bougie, he forgets that it is a rare application, and that I have not said, in the paper referred to, under what circumstances I think it justifiable. Besides, he forgets that he himself, using tangle-tents, applies force enormously great, and greater, though in a different way, than any I ever mention as exercised by bougie. When he says that he has always learned and taught that no force should be used in passing the uterine sound, and when he speaks of doing work by art, not by force, he is at least unintelligible. I can understand work being done by a small force, or by art and force, but not otherwise; and my object in the paper was to ascertain the amount and discuss the use of force.

His comment on the important element of time is ingenious, but not convincing. A surgeon who would dread leaving a bougie in the urethra for a day, would not hesitate to leave it there for a few minutes; and he would contrast the few minutes with the day; not (as Dr. Aveling ingeniously but erroneously does) "the few minutes multiplied into a series of daily applications" with the day. I am sure that in gynæcological practice time is very important, and that the safety of the bougie plan of dilatation is mainly owing to the shortness of the period of its application; a safety that is illustrated by a thousand analogies in surgery and medicine.

Dr. Atthill makes the same mistake, in using the term force, as is made by Dr. Aveling. If "gentle continuous pressure" and "no force" be not inconsistent and incompatible statements, I must acknowledge ignorance of the meaning and use of the simplest scientific terms. How gentle continuous pressure can be not a force, I cannot conceive.

When Dr. Atthill says that dilatation of the cervix uteri by tangle-tents has in his practice been followed by no unpleasant symptom, I can only say that there is here something to explain. The records of gynæcology contain superabundance of direct evidence of their often causing inflammation, sometimes even unto death. Indeed, this is almost demonstrated by his own statement, that the use of graduated metallic bougies often causes serious and even fatal consequences. They should be, and are, I believe, at least as innocent as tangle-tents. But both methods are in my opinion greatly, very greatly, more dangerous than that which I employ, using graduated metallic bougies. In my method the bougie is not left above a few minutes; the danger of the ordinary mode of using graduated metallic bougies arises from leaving them for hours or days in the uterus.

Dr. Atthill appears to think me blamable or unwise in recommending a method of treatment of disease by dilatation, which directly violates the law which Nature follows in dilating the healthy uterus. But I cannot see the force of the objection or criticism. To a great extent I agree with the distinguished pathologist, who recently described Nature when exemplified in disease as leading or enticing to the coffin, not towards cure; requiring from the physician opposition or resistance, not assent or imitation. I am not aware that gynæcologists, obstetricians, surgeons, or physicians acknowledge any such canon of treatment as is implied in the observations of Dr. Atthill.

Dr. Henry Bennet has so utterly misunderstood, and consequently misrepresented me, that I shall not enter on his remarks, except to

make the two following statements. I never anywhere said or suggested that a force of "four pounds" was required to pass a probe in a healthy woman, nor a force of even half a pound. Dr. Bennet's assertions as to the state of the healthy *os uteri*, *externum* and *internum*, are, I am convinced, erroneous and inconsistent with anatomy, physiology, pathology, and daily experience. It is well-known that some gynaecologists speak and treat as if every woman suffering from dysmenorrhœa or sterility had a strictured cervix; but it is not necessary, in order to account for such proceedings, to resort to Dr. Bennet's dictum that the *os uteri internum* is normally closed during life, except at certain times.

These remarks render it unnecessary for me specially to consider the observations of Dr. Boulton; and those of Dr. Greenhalgh raise no question upon which I am called to make comment.

I thank each of the gentlemen above referred to for their valued criticisms; and I end by saying that I believe the treatment of spasmodic dysmenorrhœa by mechanical means appears to me, at present, to be best effected by the use of a graduated series of metallic bougies, applied as I have elsewhere described—never at any time allowed to remain in the uterus above a few minutes. [See *Edin. Med. Journal*, May 1872.]

ON PALSY OF THE VOCAL CORD FROM INTRACRANIAL SYPHILIS.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P.,

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I WISH briefly to draw attention to the occasional nervous origin of syphilitic aphonia, if such an expression may pass. Suppose a patient, who is manifestly the subject of syphilis, becomes aphonic. It would be unsafe—especially if he had any evidently nervous symptoms—to conclude, without looking into his larynx, that he had syphilitic disease of that organ itself. It would be as unjustifiable as concluding, without ophthalmoscopic examination, that his blindness, if he were blind, too, was owing to syphilitic changes in the eye itself. There is another possibility; the fact is that, in some cases of "syphilitic aphonia" there is no other abnormality discoverable in the larynx than paralysis of one vocal cord. In these cases the palsy may safely, in a person presenting outward signs of syphilis, be put down to syphilitic disease affecting the rootlets of the eighth nerve. The recognition of this possibility is obviously of moment. For there is as much practical difference betwixt affection of voice from syphilitic laryngitis and affection of voice from syphilitic disease of the eighth nerve, as there is betwixt affection of sight from syphilitic iritis and affection of sight from paralysis of the third nerve.

I am convinced that, in physicians' practice, aphonia from intracranial syphilis is not exceedingly uncommon; at any rate, it is so far from being very rare, that we can be practically certain that aphonia in a syphilitic patient is owing to syphilitic changes in the larynx itself. And if the patient have paralysis of any cranial motor nerve—for example, the third nerve—the question surely will arise automatically, "Why should not this patient's aphonia also be due to affection of a nerve-trunk as well as his double vision?" "Why should not the eighth nerve suffer from syphilis as well as the third or fifth?" For it is as certain that the eighth nerve supplies the muscles of the vocal cords, as it is that the third supplies the muscles of the eyeball.

I have seen several cases of paralysis of the tongue, palate, and vocal cords from, as I believe, intracranial syphilis; but I will refer only to two cases of palsy of the vocal cords in which *post mortem* examination disclosed syphilitic disease involving, among other parts, the eighth nerve. I would first remark, however, that in these cases, and in all other cases of palsy of the intrinsic muscles of the larynx which I have published, the larynx has been examined for me by my colleague Dr. Morell Mackenzie.

In the *London Hospital Reports*, vol. iv, 1868, p. 314, I have reported the case of a man who had paralysis of the *portio dura*, of the tongue, and palate and vocal cord, all on the left side. Dr. Morell Mackenzie examined the larynx, and established for me two things: (1) that the left vocal cord was paralysed; and (2) that there was no other sort of affection of the larynx. The patient subsequently died hemiplegic from blocking of cerebral arteries. The points of this case which I wish to make prominent are (1), that there was, among other lesions, intracranial syphilitic disease involving all the nerves of the medulla oblongata on the left side, the eighth nerve, of course, among them; (2) that the larynx was found on *post mortem* examination, as Dr. Morell Mackenzie had predicted, free from local syphilitic disease. Mr. Frederick Mackenzie dissected the larynx, and only atrophy of the left crico-arytenoid muscle.

The other case (*op. cit.*, p. 318) is (in so far, I mean, as it illustrates the occurrence of aphonia from intracranial syphilis) so like the one above mentioned, that I will only say of it, that Dr. Morell Mackenzie found, as in the other case, palsy of one vocal cord, and no other affection of the larynx itself; and that Mr. Frederick Mackenzie reported of his dissection of the larynx—"except atrophy of the intrinsic muscles on one side, nothing of any importance was found."

I will not enter into the consideration of purely physiological topics. Bernard's experiments on the spinal accessory and pneumogastric nerves, and on the different sources of the motor fibres which the trunk of the pneumogastric contains for the double set of movements—vocal and respiratory—of the larynx, are well known, and may be read in any work on physiology. I have given a short account of this subject in the *London Hospital Reports*, vol. i, 1864. (The two cases mentioned in this paper are recorded in the fourth volume.) At page 363, vol. i, 1864, I give a brief account of Dr. Lockhart Clarke's researches on the relations of the nuclei of the spinal accessory and lingual nerves.

A CONTRIBUTION TO SCHOOL HYGIENE.*

By R. LIEBREICH, Esq.,

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THE contributions to school hygiene which I shall put before you do not refer to questions which would come under your consideration as a matter of course. I rather wish to draw your attention to a subject which hitherto has not been considered as belonging to your domain, but the close connection of which with general hygiene it seems to me most important to prove; I allude to the lighting of the class-rooms, and the shape and position of the tables and seats. At first sight, it might appear that this could only refer to the special hygiene of the eye. But this is not the case. Indeed, badly lighted rooms and improper school-furniture spoil the eyes and increase short-sightedness. But this is not the only bad effect. The lungs and viscera become compressed, the spine and shoulder-blades are kept out of their normal position, by the constrained attitude in which the youthful body, at the very time of its growth and development, is kept for hours every day. Thus the way is prepared for the development of chronic diseases; and this must not only considerably impair the health of individuals, but also tend to promote physical degeneracy, and deteriorate the vigour and *physique* of the nation.

If the bad attitude of the children in schools could be only ascribed to want of attention on the part of the masters, and to carelessness on the part of the children (as is generally assumed), then, indeed, you would have nothing to do with the matter. It is, however, easy to prove that, with the present arrangements, it is impossible for the children, from physiological as well as from anatomical reasons, to remain straight for any great length of time, but that they could be enabled to do so by a proper distribution of light, and by well adapted school-furniture.

The proper light is most easily obtained if the class-room be of an oblong shape; the windows being in one of the long sides, and the tables arranged parallel to the short walls, so that the light may fall from the left side. The desk of the master ought to be placed near the short wall towards which the scholars look.

Light coming from the right hand is not so good as that from the left, because the shadow of the hand falls upon that part of the paper at which we are looking. Light from behind is still worse, because the head and upper part of the body throw a shadow on the book; but the light that comes from the front, and falls on the face, is by far the worst of all. In the first place, it does not attain the object desired; and next, it is most hurtful to the eye. The object is to make the fully illuminated faces more visible to the master; but the children, instinctively desirous of avoiding the unpleasantness of the full glare, assume all sorts of positions which turn their faces from the master. In reading, they turn the head round the vertical axis, generally towards the right, in order to let the light fall on the book, which, when held straight before them, is completely in shadow; while in writing, or in reading (the book being on the table), they bend their heads as low as possible, in order to shade their eyes by the projection of the forehead. In this way the faces are much less visible to the master than if they were held upright and illuminated from the left side; and if, according to the regulations of the Committee of Council, the light also fall full upon the face of the master, he will be entirely prevented from seeing them. This method of lighting the room is very injurious to the eye, because,

* Read before the Association of Medical Officers of Health.

firstly, the retina becomes fatigued by the full glare upon it, and the diffused light renders the comparatively dark images of the printing and writing more difficult to be perceived. Secondly, the position assumed by the children, in order to avoid the disturbing influence of the light, places the axis of the eye in a very unfavourable direction, which induces short-sightedness, differences in the sight of the two eyes, and certain weaknesses of the muscles of the eye.

The lighting of the rooms in the evening ought to be as similar as possible to that by day. It is difficult to arrange gas-light well, but easy to arrange it better than has been done in most schools. Almost everywhere I have found naked gas-jets, which give an unsteady bad light. Glass cylinders would make the flame whiter and steadier. Reflectors would improve it still more. They might in most cases be made to perform at the same time the office of ventilators, carry off the bad products of gas-burning, and improve the general ventilation of the room. Ground-glass globes ought not to be used: they are useful for the ordinary lighting up of a room, as they diffuse the light more equally throughout all parts; but, for that very reason, they give an indistinct light for work, and, if they be opposite the eye, are dazzling and injurious. This property of diffusing light renders ground-glass useful for lighting up the darker parts of a room by daylight also, where there is no direct light from the window; but care must be taken that it is only used for skylights or the upper parts of windows. If lower, it is hurtful, and positively injurious if opposite to the eye. It ought, therefore, never to be used for the lower parts of windows to prevent looking out. In such cases it would be preferable to cover the lower part of the window altogether, as the light which comes through is of little importance.

If you have placed the seats in the right position, and taken care to have a suitable light, there will be no optical reason for the children assuming an injurious posture; and we have then to inquire into the mechanical causes for such a posture, viz., the form of the desks and seats. The faults of the furniture commonly used have been carefully analysed, and the following have been found to be the most important:

1. Want of, or unsuitable, backs.
2. Too great a distance between the seat and the desk.
3. Disproportion, generally too great a difference, between the height of the seat and that of the desk.
4. Wrong form and slope of the desk.

If the back be wanting or unsuitable, the strength of the muscles which keep the spine straight is not sufficient to maintain it long in an upright position; the body stoops, the lower part of the spine becomes bent forward, and thus the viscera and lungs are compressed, and the free action of these organs is prevented. If the child have to read a book placed on a table at too great a distance, it sits on the edge of the seat, a very unhealthy and fatiguing position. It rests the body on the two arms; and, if the distance between the desk and seat be too great, the chest is supported by the projecting shoulders, instead of the shoulders resting on the thorax. Soon this position becomes too fatiguing; the head, bent forward, becomes too heavy, and must be supported by one or both hands at the temples, or by the chin resting on both arms. It is still worse when writing; with desks and seats of the ordinary form, only one arm rests on the table—this is generally the right, while the left hangs, so that the elbow approaches the left knee, and only the tips of the fingers hold the book on the table. The edge of the book is no longer parallel with the rim of the table, but slanting, or even perpendicular to it. If we observe the position which the upper part of the body assumes, we find that the lumbar vertebræ bend forward, those of the chest towards the left, and those of the neck forward with an inclination to the right; at the same time, the lower part of the shoulder-blade stands too far off from the ribs, and is elevated too much towards the right, and the shoulder-joint is raised and pushed forward. To be in such a position for several hours of the day, at a time when the body is rapidly developing, must naturally produce permanently bad effects. Statistics prove this to be the case. In Switzerland, for instance, 20 per cent. of all schoolboys, and 40 per cent. of girls, have one shoulder higher than the other. The well-known orthopædic surgeon, Eulenberg, also state that 90 per cent. of curvatures of the spine, which do not arise from a special disease, are developed during school-life. These statements have particularly struck me, as coinciding exactly with the period of the development of short-sightedness; and I have paid the more attention to this relation between spinal curvature and short-sightedness, as they seem to form a vicious circle, in so far as short-sightedness produces curvature, and curvature favours short-sightedness; while evidently the same bad arrangements are at the foundation of both these anomalies.

How can these great evils be removed?—First of all, the benches must have backs, and these must not be high, and not slanting backwards, as I found them in some schools. These only favour a negligent re-

clining posture; the body slides forward, and the position becomes unsuitable for reading, and impossible for writing. The back ought to be straight, and consist of a piece of wood three inches broad. If this be fixed at the proper height, viz., close above the hips, it supports the loins sufficiently to make it easy and comfortable for even the most delicate children to sit perfectly upright. The seat ought to be broad enough to support almost the whole length of the thigh, and the height of the seat such as to allow the sole of the foot in its natural position to rest on a footboard. The edge of the desk must be perpendicularly above that of the seat, and just high enough to allow the arm to rest on it, without displacing the shoulder. I must add another condition, which is of special importance for the eye; viz., that the desks should have an inclination, for reading, of about 40 deg., for writing, of 20 deg. The need of this arises from a physiological law, which is not so generally known as most of the other laws relating to the eye. It has, therefore, not even been considered by physicians, who have made the improvement of school-arrangements their special study. Of the possible combinations of the eye-muscles, some can be brought into action for a length of time, others only for a few seconds. Thus we can only with an effort look at a near object, if it be higher than the eye. On the contrary, we can look with ease at an object equally near, if it be below the eye. If we want to see distinctly with both eyes, not a point, but a line or a plane, a particular turning of both retinæ is required for each position of the object. Only when this turning can be produced by a combination of muscles which can be effected with ease and for some length of time, can we look at the object long without fatigue. Therefore you must not think that the natural position of the book while reading depends upon chance. It is a physiological necessity; if we strive against it, the eye becomes fatigued, and if the effort be repeated regularly and for a long time, a derangement of the harmonious action of the muscles of the eye is the consequence. This is the reason why it is fatiguing to look at the pictures of a gallery, hung high on a vertical wall, while we could see without fatigue the same number of pictures placed before us one after the other upon easels. For the same reason it is hurtful to read while lying down; and, as we have often occasion to observe, it produces great weakness of sight (asthenopia) in those who are forced to lie down much. Therefore it is necessary, if we want to look long at any plane surface, as, for instance, a book, to place it so that for the central position the axis of vision is set at an angle of about 45 deg. downwards, and we ought therefore to give the book an inclination which will place it nearly perpendicular to our axis of vision, viz., at an angle of about 45 deg. with the horizon. For writing, the same inclination of the book would be advantageous, but mechanical reasons prevent this, and we must be content with an angle of about 20 deg.

In order to answer both requirements, I have had a desk made, which by a very simple contrivance gives the desired position either for writing or reading. There is a flap which moves up and down. By the shape which I have given to this flap, and some small details in the construction, I have succeeded in giving, without mechanical inconvenience, the inclination of 20 deg. for writing, and 40 deg. for reading. For writing, the distance between desk and seat is zero; for reading it is five inches, which has no disadvantage, and enables the children to change their places more easily.

If we now turn to the practical question, In what way suitable furniture could be introduced into our schools? the first difficulty we meet is, the different size of children belonging to the same class. We must begin by distinguishing among the pupils, first, those who keep the same place, and, secondly, those who change places. Of course, perfect adaptation and entire fulfilling of the above mentioned conditions is only possible for those who come under the first head. As for the second category, we must be satisfied with adapting these conditions as much as possible to the average size of the children. In doing so, the imperfect state of all present arrangements will become apparent, when you will presently be able to convince yourselves that even the children who differ most from the average size are much more comfortably seated on the furniture which I am going to show you, than any child at any of the tables and seats hitherto used. These observations induced me to close a lecture delivered before the College of Preceptors last summer by the following proposals.

1. One and the same size and model of desk should be used for children and grown-up persons of both sexes.
2. The adaptation to the height of each child should be effected by varying the height of the seat and the foot-board.
3. The edge of the table is always to be perpendicular to that of the seat.
4. No seat is to be without a back, and the top of this is always to be as high as the edge of the table for boys, and two inches higher than the edge of the table for girls.

5. In all classes where the boys change places, the height of the seat is to be regulated in proportion to the average height of the pupils.

6. In all girls' schools, in all those boys' schools where the children do not change places, in boarding schools, and in private school-rooms, the seat of each child should be accurately regulated in proportion to its height.

To make this important arrangement practicable, I have invented a chair, the seat of which can be raised and lowered by means of a screw, while at the same time the back is brought forward in proportion. Such a chair will be a suitable seat for either a child or a grown-up person at the same desk, will follow the growth of the child, and enable it to be, whether reading or writing, in a comfortable and healthy position, which facilitates instruction and discipline.

REPORT OF FIFTEEN CASES OF ARSENICAL POISONING WITH UNUSUAL SYMPTOMS.*

By JOHN MORLEY, Esq., Barton-on-Humber.

As it seldom occurs for one individual to have suddenly thrown upon his hands so large a number as fifteen persons suffering from acute arsenical poisoning, I thought it would be interesting to you to place on record a few of the observations which I made and recorded at the time.

About two o'clock in the afternoon of February 21st, 1872, I was requested to proceed with all haste to Saxby, five miles distant, to attend two men who had been attacked with sickness whilst at dinner, and were considered to be in great danger. Having provided myself with sulphate of zinc and a stomach-pump, I found, on my arrival, fifteen persons ill, nearly all of whom were vomiting violently and frequently. The dinner-party consisted of seventeen relatives and friends of a deceased woman aged 80, whom I had attended six weeks for chronic inflammation of the lungs. All except two had partaken of pudding as well as meat, and these were the only persons who escaped. Upon testing the baking-powder which had been used in the composition of the pudding by sprinkling some of it on a red-hot poker, the alliaceous odour of arsenic was unmistakably present.

To those who had not already vomited freely, I gave sulphate of zinc, which acted quickly. Most of them had already taken mustard emetics; and I encouraged them all to drink freely of milk, whites of eggs, and gruel.

All complained of faintness, uneasiness about the stomach, with intense pain in the middle of the back. On the occurrence of vomiting, they were much relieved, and comparatively well for a short period, until the above mentioned symptoms returned, and did not finally cease until near midnight.

One girl, aged 14, became blind, lost her speech, and fell down in a state of syncope; but was restored by laying her on the bed and the application of warmth to the extremities.

A child three years old, in a state of collapse, was restored by a lady nursing it before the fire in a blanket; both its parents being among the sufferers, and unable to leave their bed. Several had severe rigors, which were relieved by placing them in bed and applying bottles of hot water. In only one case did I see blood vomited, and then only a few drops. In all, the conjunctivæ were injected.

At 6 P.M., four of the patients felt able to ride to Barton. Two of them went on to Hull. The others were obliged, on their arrival, to call in Mr. Sissons, by whom they were attended.

At 8 P.M., I was joined in consultation by Messrs. Eddie and Bennett; after which I returned home, leaving the patients in charge of the latter, who kindly remained in the village all night, and subsequently analysed the pudding, baking-powder, and the contents of the canister out of which the supposed rice-flour had been taken for the manufacture of the baking-powder. All of these yielded arsenic by the usual tests, which were performed in my presence.

February 22nd. We visited the patients remaining at Saxby on the following morning, and observed in all, except the children, that the congestion of the conjunctivæ had disappeared, and given place to a yellow tinge, in which the skin did not participate. There had been no diarrhoea, except in two women, one of whom had taken aperient medicine on the previous morning. Some of the patients complained of flickering of the muscles and disturbance of vision, preventing them from knitting, sewing, or reading; and, when they closed their eyes, they were troubled with shining particles floating backwards and forwards. One of them also complained of a nauseous taste.

* Read before the East York and North Lincoln Branch.

On February 28th, Maria S. informed me that she had been tormented for the last two days and nights with irritation of the skin, which she compared to being in a bagful of fleas. On March 1st, the irritation of the skin had ceased.

Very little treatment was required after the first day. It consisted of bismuth, with soda and magnesia, in peppermint-water. All the patients happily recovered.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE ADMINISTRATION OF ETHER.

[Continued from p. 62.]

CHILDREN'S HOSPITAL, BRIGHTON.

Mr. NOURSE, one of the surgeons to this hospital, writes:—I have given ether twice here, once for opening a deep-seated abscess, once for examination of a diseased hip. In the first case it answered well; the child woke up smiling, three minutes after the incision was made, and was quite unconscious of what had been done. In the second case, that of a nervous hysterical girl, opisthotonos came on when the inhalation had continued a short time. It was, therefore, suspended; but, on resuming it, the same effect followed. The ether was consequently withdrawn, and the next day chloroform was given, which acted as well as it usually does in such subjects. The quantity of ether inhaled in the first case was about three drachms; in the second case, about five drachms.

HOSPITAL FOR SICK CHILDREN.

For some time past ether has been given here by Mr. FLETCHER BEACH, the registrar, as an anæsthetic. The apparatus used is simply a cone of felt covered with oil silk or Lister's protective; and in the cone is inserted, after having been wrung out in hot water, a sponge, which can be changed from time to time, if necessary. Sufficient ether is poured on the sponge to saturate it, and the cone is applied as closely as possible to the face of the child. By pushing the ether from the first, struggling is considerably reduced. Two or three minutes suffice for the production of anæsthesia. Air is excluded as much as possible at the commencement, but admitted afterwards, according to the state of the patient and the length of the operation. Ether is added, from time to time, as it is required. There is often excitement on the return of consciousness, and the child is usually sick, but the sickness does not continue. Even in weakly children, at the end of a prolonged operation, the pulse is full and regular, showing the good effect of ether as a stimulant to the heart's action.

MIDDLESEX HOSPITAL.

CASE OF SUICIDAL POISONING BY OXALIC ACID; CYSTITIS; MORBUS RENUM; RECOVERY.

(Under the care of Dr. HENRY THOMPSON.)

It is difficult, in the following case, to estimate the exact relation between the renal and cystic symptoms and the effects of the oxalic acid. The notes are, however, of sufficient clinical value to deserve publication. It appears, from the woman's history, that fourteen years previously she had suffered from symptoms of ulcer of the stomach, during which she brought up a quantity of black blood. She had since suffered from pain in the epigastrium, and a year ago with a return of the vomiting, but without hæmatemesis. Her urine, though at times scanty, gave her no trouble, and no reliable symptom, pointing to disease of the kidney, was obtained from her. She had been much troubled for the past three years with a varicose ulcer of the leg.

A. G., a woman about 30 years of age, was brought to the Hospital, at 7.30 P.M. It was stated that she had taken, at 5.30 P.M., a pennyworth of oxalic acid in tea. This was afterwards ascertained, at the chemist's who had supplied the drug to her, to amount to half an ounce. She stated that, almost immediately after swallowing the mixture, she felt a burning sensation at the pit of the stomach and in her throat. She was violently sick, fainted frequently, and had severe pain in the abdomen. The surface of the body became cold, and purging of very offensive matters ensued; the vomited matters contained no blood. These symptoms increased up to the time of admission.

When the patient was brought into the hospital she was in a state of collapse; the whole surface of the body was pale and cold; and there appeared to be much mental anxiety. The pulse could not be counted; indeed, it was scarcely perceptible at the wrist; at the præcordial region it was found to be thirty-two in the minute. The tongue was slightly dry and glazed, and there was a burning sensation in the throat and pit of the stomach. There was no pain in the abdomen, but severe lumbar tenderness. She lay with the legs drawn up; the respiration was about thirty. The vomiting and retching were frequent; the matters vomited were composed of viscid mucus containing blood both mixed and in clots. The pupils were contracted almost to the size of a pin's point. Ice to suck, chalk, lime-water, milk, and mucilage were given freely; mustard and linseed-meal poultices were applied to the thighs, and a wet compress to the loins. Enemata, composed of three and a half ounces of strong beef-tea with half an ounce of brandy and five minims of tincture of opium, were administered every three hours. At 12 P.M. the skin was much warmer, the pulse, 44, more distinctly felt, and countable at the wrist: she was still very prostrate and cold, with sweating of the face. The bowels were moved shortly after admission; the motions were black, loose, and foetid, but without any recognisable blood. Since then she had passed three motions; the first chiefly composed of blood and several white flakes, the last fæces streaked with blood. She vomited less, but was still very thirsty. The abdomen was now painful and tender, chiefly over the hypogastric region, and she expressed herself as wishing to pass urine frequently, but could not. The tongue was unchanged, the mouth felt dry, and there was a burning sensation in the throat. The pupils were slightly more dilated. Two ounces of urine were drawn off by the catheter. On the following day she was noted to have remained awake until 7 A.M., when she obtained a little sleep. The tongue was now clean; the pulse at the wrist was 100, very compressible, and the heart-sounds weak. There was some roughness with the second sound at the base. Rhonchus and sibilus were heard over the lungs. The motions passed during the night were bloody, gelatinous, and contained much white pasty-looking matter. She complained still of the lumbar pain, and there was tenderness in the neighbourhood of the umbilicus. The vomiting had considerably abated, and the vomited matters now consisted of bloody fluid with mucus, mucilage and coagula of milk. The urine drawn off was slightly acid, highly albuminous, containing an abundance of epithelium, a few oxalate of lime crystals, and one or two epithelial or granular casts. Two leeches were applied around the umbilicus; they acted freely, and the pain in the abdomen became relieved. On the third day she felt much better. The pupils were still much contracted; she had headache, but the vomiting had much decreased; the vomited matters contained no blood. The tongue was furred in the centre. There was less pain and tenderness of the abdomen, and she passed an abundance of urine containing granular casts; pulse 88. On the fourth day she had tenderness on pressure between the larynx and trachea; and she passed two rather loose, but otherwise natural, motions. She continued the enemata. On the fifth, sixth, seventh, and eighth days her symptoms almost all diminished in intensity; the pain in the throat and abdomen had almost all gone; but she now passed a large quantity of pus in the urine.

From this time she progressed; the pus continued present in the urine for several weeks, but ultimately left. The albuminuria and casts continued present up to the time of her discharge. In other respects she left in apparently good health, with the exception of slight dyspeptic symptoms.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, SATURDAY, JAN. 18.

Large Tumour from Head of Fibula following a Blow: Removal.—Mr. Callender remarked that as this patient, a boy, did not understand the English language, he would explain his case while he was taking chloroform. He was quite well six months ago, but then received a blow on the outer side of the right leg. He noticed a swelling at the site of the blow; it gradually increased until it was now larger than a man's head, and involved apparently the whole of the knee-joint. On its outer side were two sprouting excrescences, where the skin had given way. The whole tumour was covered with enlarged dark coloured veins. The tumour seemed principally to spring from the head of the fibula, not to involve the femur. The lad's mother died of consumption, and he himself was in a very low state of health—very unfit for the operation. On Friday his temperature was 104 deg., and on the morning before the operation it was 103 deg. The disease, however, was extending so rapidly, and his health was becoming so deteriorated, that it was absolutely necessary to operate at once. Mr. Callender removed the limb at the middle of the thigh by anterior and posterior skin-flaps and a circular muscular cut. Torsion was sufficient to con-

trol the bleeding from all the arteries, save the femoral, which at the point of incision gave off a number of branches: these were all included in one ligature. Mr. Syme promised to inject the limb with the tumour, and to make a section of it for the museum of the hospital.

Necrosis of the Femur: Removal of a Portion.—Mr. Savory removed a portion of a man's right femur at the lower end. He had been operated on before, and a number of sinuses were now about the joint, obviously in consequence of dead bone. Looking to the length of time during which the mischief had been going on, Mr. Savory had no doubt that some portion of the necrosed bone would come away loose. After he had chiselled and gouged away some new bone three-quarters of an inch in thickness, he removed some pieces of necrosed bone, quite enough to account for all the symptoms. The man had a damaged knee, and the leg was somewhat turned out; but if the sinuses will only heal, his leg may be made serviceable enough for walking.

ST. MARY'S HOSPITAL.

SEVERE SALIVATION AND GASTRIC IRRITATION FOLLOWING A SINGLE DOSE OF FIVE GRAINS OF CALOMEL.

(Under the care of Dr. CHEADLE.)

MRS. H., aged 56, came to the hospital as an out-patient, suffering from epilepsy, and was ordered a mixture of five grains of the iodide with twenty-five grains of the bromide of potassium three times a day. This was continued for a fortnight; and she was then ordered, in addition, a single dose of five grains of calomel as a purge. This she took on going to bed about 9 o'clock in the evening of October 22nd, after her ordinary supper of bread and cheese and half a pint of beer, having taken the mixture three times during the day—the last dose about 7 o'clock. About ten minutes after swallowing the powder, she felt intense burning in the throat and chest, so that she was obliged to get up out of bed and walk about for a long time. About two or three o'clock in the morning, vomiting and purging came on, lasting most of the night; and the latter continued for three days, with occasional retching. The mouth and gums were very sore, and the throat so swollen and sore that she could only swallow very small quantities of fluid. She had great pain in the chest, and everything she swallowed caused burning pain as it passed down the gullet. When seen by Dr. Chedale on the 25th, she was lying in bed, too weak to get up; the tongue was greatly swollen, covered with white fur; the gums were also extremely swollen; the saliva was running from the mouth; the breath was intensely foetid; *i.e.*, all the signs of severe mercurial salivation. The epigastrium was very tender on pressure; the pulse feeble; and there was evidently considerable prostration.

Under chlorate of potash and bark, a marked improvement took place. At first, it was supposed that there might have been some error in dispensing; but the matter was clearly traced out, and it was discovered to be impossible that corrosive sublimate, which is not kept in the form of powder, could have become mixed in any way with the calomel.

REMARKS BY DR. CHEADLE.—The case is interesting as an example of extreme results following a single moderate dose of mercury. Cases are recorded in which the same or even a smaller quantity of calomel has given rise to severe salivation; and small doses of other mercurial preparations are said to have been followed by similar effects in a few rare instances, even in individuals free from organic disease, but apparently specially susceptible to the action of the drug. Its fierce effects in some cases of renal disease are well known. In the present instance, however, there is no reason to suspect Bright's disease. The urine is, indeed, of a not very high specific gravity (1015); but there is not a trace of albumen, and no casts can be detected; nor are there any general symptoms of such an affection, unless the epileptic attacks, which came on within the last year or two, be so regarded. The woman states that she has several times taken the popular remedy of blue pill and black draught with impunity. Had the previous administration of the iodide and bromide of potassium any influence in producing the result, by converting the subchloride into a more active salt—the iodide or bromide? The green iodide has a great tendency to decompose into the red iodide and metallic mercury; and the red iodide is the most active of all mercurials. The free administration of iodide of potassium after a long course of mercury is said sometimes to set up sudden salivation; but the salts of potassium are so rapidly absorbed and eliminated, that, as the last dose had been taken at least two hours before the calomel, and a supper between, the converse of this appears much less probable.

REVIEWS AND NOTICES.

A TREATISE ON RHEUMATIC GOUT OR CHRONIC RHEUMATIC ARTHRITIS OF ALL THE JOINTS. By ROBERT ADAMS, M.D., A.M. M. Ch., M.R.L.A., Surgeon-in-Ordinary to the Queen in Ireland, etc. Second Edition. London: Churchill and Sons. Dublin: Fannin and Co. Edinburgh: MacLachlan and Stewart.

THE profession will hail with the greatest satisfaction the second edition of the well-known and eminently practical work on chronic rheumatic arthritis, or rheumatic gout, by Dr. ROBERT ADAMS, of Dublin, who, at the advanced age of, we believe, 82 years, has been induced to give us the advantage of the additional experience and his investigations into the pathology and treatment of this disease, which he first described in the year 1836.

Chronic rheumatic arthritis appears to have been first pointed out by Dr. Haygarth, of Bath, who, in the year 1805, published a work on the *Nodosity of the Joints*, an affection which he had observed amongst the patients visiting the still favourite resort of Bath for the benefit of its thermal springs. Dr. Haygarth observed that this peculiar affection of the joints differed in many respects from both rheumatism and gout; and these points of difference are especially insisted upon in his work, which is chiefly devoted to the clinical history of the disease. But he seems not to have made any *post mortem* examinations of these cases, and, therefore, did not attempt any description of the morbid changes induced in the structures of the articulations.

Cruveilhier, in his *Anatomie Pathologique* (1829 to 1835), described the anatomical changes occurring in this disease, which he denominated "usure des cartilages articulaires," and thought that further attention should be paid to it by the clinical physician. We are also indebted to other observers, especially Dr. R. W. Smith and Mr. Colles, of Dublin, and Mr. Edwin Canton, of London, for our knowledge of the clinical history and pathological changes in this disease.

It is now generally admitted that various diseases, which have been described under different titles, more especially hip-joint disease occurring frequently at advanced periods of life, and described as the *morbus coxae senilis*, and other affections often termed chronic rheumatism and rheumatic gout, as well as some cases described as fracture of the neck of the thigh-bone, and shortening of the leg from bruise of the hip, and also cases supposed to be examples of spontaneous dislocation and obscure forms of injury, all agree in presenting certain anatomical characters and morbid changes, which especially belong to the group now classed as "chronic rheumatic arthritis." To this class, therefore, all such affections and individual cases are now considered to belong.

It is of great importance to observe that the effects of this disease have frequently been mistaken for the results of accident—supposed to have been overlooked by the surgeon in attendance, and have, therefore, led to unpleasant consequences. This point is especially referred to by Dr. R. Adams and Mr. Canton.

Chronic rheumatic arthritis, when fully developed, involves, to a greater or less extent, all the structures entering into the composition of the joint; and, as the precise order in which the morbid processes occur in the general progress of the affection is obscure, it is necessary to describe separately the changes which occur in each structure.

The most important and characteristic structural changes occur in the articular cartilages and the bones. As these proceed, the adjacent periosteum, the capsular ligament, synovial membrane, synovial fringes, and other structures become the seat of various morbid processes. These changes are described in detail by Dr. Adams as affecting the ball-and-socket and the ginglymoid articulations. The fibrous structures, including the periosteum, capsular ligaments, intra-articular ligaments of the hip and knee, fibro-cartilages, capsular and intra-articular tendons, undergo various changes, some structures being destroyed by atrophy and fibrous degeneration, whilst ossification is proceeding in others. These changes are still further illustrated in the very accurate and artistic series of drawings comprised in the Atlas which accompanies the work.

Some points of more special interest in connection with the disease, as it invades different articulations, we propose to make the subject of a second notice. There can be no doubt that we are more largely indebted to Dr. Adams for our present knowledge of this disease than to any other authority, more especially as to its morbid anatomy and its effects upon the various articulations, and also in reference to the diagnosis of the effect of this disease from the results of injury.

[To be continued.]

LOCAL SECRETARIES will oblige by sending estimates of the number of new members, so that the proper number of JOURNALS may be ordered to be printed.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 25TH, 1873.

RAIN AND HEALTH.

HOWEVER great a change in the weather may take place, it will be a very long time before we see the last of the rain of 1872, for the floods which are now covering the country will for many a week bear witness to the continuous downpour with which Jupiter Pluvius has of late favoured us. Our professional brethren in the country, we hear, have to go through floods on horseback, with waves dashing against them, at the peril of their lives, whilst others are obliged to take to boat and row over dike and field as the only mode of reaching the bedsides of their patients. Such has been, and still is, the medical man's lot in many parts of England; and our sympathies heartily go with them in their watery professional rounds, during which, we doubt not, they will be enabled from their practical experience to solve some of the problems involved in the question, whether an excessive rainfall has a prejudicial or a beneficial effect upon the public health.

It is certain that statistics of mortality, alone, lend us but very little assistance; in fact, no medical statistician now regards the annual death-rate as a guide in his estimate of either the healthiness or the unhealthiness of the year. A year might have a very low average death-rate, and yet throughout have been most unhealthy: the result does not immediately follow, and thus it is, perchance, that our bills of mortality of the present year will record deaths which had their origin last year, or even before then.

Supposing that the public health is influenced by the rainfall, it would be unreasonable to suppose that we should see an immediate effect in the Registrar-General's Returns. Rain as a cause of disease and death is unlike either intense heat, intense cold, or lightning; it does not kill like a *coup de soleil*; or, like intense frost, by a sudden chill; or instantaneously like electricity. Neither, as a rule, are the diseases which are contracted during rainy seasons generally speedy in their course, except when assuming the form of active inflammatory attacks, as in pneumonia, bronchitis, and rheumatic fever. Death reaps his harvest from the rain's sowing after many months, and in some instances after many years. Mr. Symons informs us that the wettest years for the last quarter of a century have been 1848, 1852, 1860, and 1872; and the driest years, or when there has been a deficit of 20 per cent., 1858 and 1864. The death-rate for each 1,000 living in these years is thus registered: 1848, 23.0; 1852, 22.4; 1860, 22.6; and for the driest years—1858, 23.0; and 1864, 23.8. These figures are alone sufficient to show how little variation takes place in the death-rate, whether the rain be in excess or in defect. From the sharp quick death by lightning to the fatal result from heart-disease, the sequel of rheumatism, contracted during exposure to the chilling influence of wet and cold, there is every variety of effect to be met with as the result of the influence of the varied meteoric elements of what we call weather. The severe winter, killing with wonderful celerity at its first approach the old, the weak, and the young of the poor, tells its tale week after week and day after day; but at the end of the year, when deaths from all causes are summed up and proportioned, we fail to see any indication of what we know has really taken place, and which was evident enough when we watched week by week the march of death.

Even that terrible exotic epidemic, cholera, makes less mark in the annual mortuary returns than many of us imagine. If we compare the

annual average death-rate of England, which is 22.3 to every 1,000 persons living, for the last thirty-three years, from 1838 to 1870, with that of individual years, we shall find that the cholera years do not so far outstrip some other non-epidemic years as the gigantic numbers recorded during the epidemic would lead us to expect. For instance, in 1847 the death-rate was, of males, 25.4; of females, 23.8. During the cholera years 1848-49, it was 24.8 in males and 23.3 in females, actually showing a mean mortality (= 24) less than the year before the invasion of the epidemic. Again, the cholera year 1854, when the death-rate was, of males 24.4, of females 22.7 (= 23.5), has been surpassed by other years—for instance, by 1864, when the death-rate equalled 23.8. Thus it will be seen how little dependence ought to be placed on the annual returns when estimating the effect on the public health of any excess or defect either in rain, wind, temperature, thunderstorms, or any other subaërial meteor.

We have first to study the kinds of diseases that are really affected by certain conditions of atmosphere, and then follow them week after week, and month after month, and quarter after quarter, noting all the varied changes in the weather both before and after the invasion of disease: this can only be done by a system of registration, the necessity of adopting which we have repeatedly urged.

It is simply impossible to say what effect this last year's rain either has had or will have on the present or the future death-rate of our country. Who is to say when the rheumatic and pulmonary affections which were contracted in 1872 will appear in the mortuary returns? What we really want is the experience of those of our brethren who, as we have said before, have lately had to battle with the storm and the flood in following their arduous and hazardous vocations. From them we expect to receive much valuable information upon this most important subject; and as our provincial brethren are eminently practical men, not only in their profession but in all things appertaining to rural life, we shall perchance get from them some clue as to how many of these disastrous floods might in future be avoided.

Nobody seems to doubt the practicability of preventing much evil by the proper management of the rivers, and notably of the Thames, which perhaps has been studied more than any other river in the world by anglers—a class of men who are better able to judge than many others how to obviate the evils of which we now complain, and which with one voice they say can be remedied.

A very interesting question has lately been raised by Mr. Meldrum, of the Mauritius, as to the relation subsisting between the periods of maximum and minimum solar maculation and wet and dry years. On this subject we have again to refer to Mr. Symons, who, in a recent article, contained in our contemporary, *Nature*, after giving a large number of rainfall data throughout Europe, Asia, Africa, and America, from which the reader can draw his own conclusions, remarks, "that the question must not remain where it is. The evidence is, no doubt, conflicting; but I cannot think that it is chance alone that has given us."

Maximum sun's-spot years ...	1837	1848	1860	1871?
Heavy rainfall ,,	1836	1848	1860	1872
Amount of rainfall	33.49	35.98	33.34?	34
Per cent above average	19	28	18?	20
Minimum sun's-spot years ...	1833	1844	1856	1867
Small rainfall ,,	1833	1844	1858	1868
Amount of rainfall	24.52	23.72	22.79	28.8
Per cent below average	13	16	19	2

From the above, it will be seen that the maximum sun's-spot periods have an average of 11.3 years, and the minimum also one of 11.3 years. As to the heavy rainfall periods, these have all been twelve years' periods; and the small rainfall periods have an average of 11.6. The periods, however, were unequal, being 11, 14, and 10 years.

It is certainly a curious fact that, at Port Louis, during the last twenty years, there has been a rainfall periodically corresponding with the cyclone periodicity in the Indian Ocean, south of the Equator; and that this periodicity has been in close connection with the periods of maximum solar maculation.

Meteorological science is, perhaps, one of the most inexact at present, although it is one which had its origin in the observations of the ancient shepherds and sailors of the east. Perchance the connection between solar and terrestrial magnetism may yet shed some light upon it, so as to enable us not only to predict wet years but even wet days; but we hope that before that time arrives we shall have learnt not only how to prevent floods, but how to husband the purest of all waters.

THE TOPOGRAPHY OF THE ARTERIES OF THE BRAIN.

WITH the object of enabling the effects produced on the encephalon by the lesions of the blood-vessels to be better understood, Dr. Heubner of Leipzig has instituted a series of researches on the special distribution of the intracranial arteries. He describes his results in the *Centralblatt* for December 7th.

In thirty human brains, he has made about sixty injections of portions of arteries, so as to observe as accurately as possible to what portions of brain each individual arterial branch is distributed. The injections were made with Berlin blue (Brücke's), and were thrown in by means of syringes of a capacity of ten cubic centimeters, very gentle pressure with the finger being employed. In this way the extent of each injected region was accurately defined immediately after the operation. The following are the results at which Dr. Heubner has arrived.

1. The entire arterial system of the cerebrum is divisible into two regions, which may be called the basal and the cortical; and this division is of some importance. The basal region is formed of the circle of Willis and the principal trunks of the cerebral arteries as far as the giving off of branches. The cortical region begins where the principal trunks of the anterior, middle, and posterior cerebral arteries begin to divide into branches of the second order. The limit between the two regions for the anterior cerebral artery of the corpus callosum lies just beyond the anterior communicating artery; that for the middle cerebral artery, two or two and a half centimeters from its origin from the carotid; and that for the posterior cerebral, two centimeters from its origin from the basilar artery. From the basal region proceed those arteries which supply the ganglia at the base of the brain and the corresponding parts of the mesocephalon; from the cortical region, nearly the whole cortex of the brain and the corresponding medullary masses are supplied with blood.

2. The distribution of the vessels proceeding from the two regions varies essentially. In the cortical region, the smaller vessels pass off from the larger ones nearly in the direction of the blood-stream, and, subdividing still further, pursue long courses through the pia mater, before allowing the blood to pass perpendicularly from the network into the surface of the brain. Even within the pia mater, the twigs of all the three larger cerebral arteries have very numerous and intimate communications, mostly in the depths of the sulci—a fact which was ascertained by injecting fluids of different colours at various points. Thus every part of the cortical substance of the brain receives its blood-supply from any of the principal vessels of the cortical vascular region. In the basal region, rather numerous and very small vessels—from one and half to half a millimeter in diameter—pass off at an acute or right angle from the principal trunks, and sink into the brain after a very short course (half to one and a half centimeter), and are distributed to their special regions. These vessels do not anastomose, but may be regarded as true terminal arteries, in Cohnheim's sense. In the cortical region, an injection thrown in at any part will flow into very various regions; in the basal region, that portion only of the brain which corresponds to the artery operated on is injected. If the injection be pushed too strongly, the fluid does not pass on into the arteries beyond, but extravasation takes place.

3. From what has just been said, it is evident that the portions of the encephalon which are supplied from each division of the arteries of the basal region can be readily determined. From the portion of the

anterior cerebral artery which lies between the middle cerebral and the anterior communicating arteries, there constantly arises, in the neighbourhood of the latter, a small artery which supplies the head of the corpus striatum; smaller vessels also pass to the anterior wall of the infundibulum and the anterior part of the optic commissure. Near the point of junction between the anterior and middle cerebral arteries, vessels proceed from the first centimeter of the last named artery to the anterior part of the inner capsule and the first and second segments of the lenticular nucleus of the corpus striatum. From the second centimeter of the middle cerebral artery proceed vessels which supply the third segment of the lenticular nucleus and the middle part of the corpus striatum, and perhaps also the claustrum. From the anterior communicating artery, the following parts are supplied: the posterior wall of the infundibulum, the posterior part of the optic commissure, the corpora albicantia, the anterior tubercle of the optic thalamus (by vessels which nearly follow the course of the anterior pillar of the fornix), the posterior part of the optic thalamus, and the soft commissure. From the choroid artery are supplied the neighbourhood of the descending course of the lateral ventricle, the choroid plexus of the descending cornu, the posterior crus of the inner capsule, the external half of the anterior segment of the thalamus opticus. From the first two centimeters of the posterior cerebral artery, vessels go to the cerebral peduncles (crust and tegmentum), the corpora quadrigemina and adjoining parts, the choroid plexus of the posterior cornu of the third ventricle, and the posterior half of the optic thalamus. The pons Varolii and the medulla are supplied by branches which pass directly into them from the vertebral, anterior spinal, and basilar arteries.

4. It is much more difficult to determine with any accuracy what parts are supplied by special arteries of the cortical system. An approximate result may be obtained by pushing the cannula, in making the injection, as far as possible into the vessel. When this is done, the portion of cortical and medullary substance specially supplied by the artery is injected. The principal trunks leading to the circle of Willis must of course be tied, to avoid any risk of the passage of the fluid into other parts.

The branches given off immediately behind the anterior communicating artery supply the surface of the first frontal convolution and the olfactory bulbs; these are followed by branches which go to the cortex and the medulla of the first frontal convolution, and the corresponding half of the corpus callosum; and the most posterior branches supply the surfaces of the central convolutions and of the first parietal convolution, which lie towards the longitudinal axis of the brain. The middle cerebral artery divides in its course over the island of Reil into four branches, rarely into five: the first of these supplies the third frontal convolution; the second, the second frontal convolution; the third, those parts of the central and upper parietal convolutions which lie at the convexity of the brain; and the fourth supplies the second and third parietal and part of the three temporal convolutions. It is very difficult to inject the island of Reil. It is supplied by a number of small vessels from the branches of the middle cerebral artery, which pass, either directly or after a very short course, into the substance of the brain. The portion of the posterior cerebral artery belonging to the cortical region supplies the occipital and portions of the temporal convolutions.

The arteries of the cerebellum form very rich anastomosing networks in its pia mater, from which small vessels pass into the cortex of this part of the encephalon.

Dr. Heubner observes that his researches suggest important questions in regard to the doctrine of embolism and thrombosis, to diseases of the cerebral arteries, and to apoplexy; but he reserves these points for future discussion. He believes that the observations which he has made will aid in elucidating the pathology of these conditions; and that they point to an explanation of the rarity with which softening occurs in the cortical portion of the brain, while disease of the ganglia is the common result of embolism of its arteries.

THE TREATMENT OF RHEUMATISM BY PROPYLAMINE

REFERENCES have been made recently to the employment of propylamine by Dr. Awenarius of St. Petersburg in rheumatism, that physician having employed it in two hundred and fifty cases with more or less success (*Journal de Physique et de Chimie*, third series, vol. xxv). Dr. J. Gaston reported subsequently in the *Indiana Journal of Medicine* results of which he spoke with enthusiasm. This has led to trials in France. M. Dujardin-Beaumetz has commenced a series of trials, of which some account is given in the *Gazette Hebdomadaire*, January 17th, 1873, and of which further report will be made hereafter. The dose given by M. Dujardin-Beaumetz is as follows: Propylamine, 0.3 to 1.5 grammes; lime-flower water, 120 grammes; syrup of morphia, 30 grammes; and with some essence of anise. The syrup of morphia may be omitted if desired. Patients willingly take this medicine, notwithstanding its odour. The dose is at first half a gramme, which may be increased to a gramme and a half, and in certain cases to a gramme and three-quarters. This is the utmost limit of a dose. Hitherto it has not been possible to administer the medicine in capsules, propylamine dissolving the gelatinous envelope. It is probable that some means of masking its odour will be discovered. In ordinary doses, this drug does not seem to have a bad effect on the stomach. By increasing the dose to a gramme and a half or two grammes, M. Dujardin-Beaumetz has proved, by experiment on himself, that very decided symptoms of gastralgia are provoked; at the same time perspiration is increased. We have not sufficient details as to the manner in which Dr. Awenarius administered this drug. The doses were the same as those of M. Dujardin-Beaumetz; the medicine was given in an aromatic solution. The prescription of Dr. Gaston, in which sulphate of quinine and propylamine appear concurrently, is wanting a little in clearness.

M. Dujardin-Beaumetz has employed propylamine in only six cases of acute rheumatism, and in one case of chronic rheumatism. In six cases, the patient was cured the third or sixth day after the administration of the medicine. In very acute cases, where the drug was given from the commencement of the disease, the results were remarkably rapid. The first effect observed was the disappearance of pain, which occurred the same day or the next, in four-and-twenty or in forty hours at most. The redness and the swelling of the joints diminished, and at the same time the fever decreased. When the acute symptoms have thus been allayed, secondary attacks may occasionally occur; but they are generally slight and of short duration; the cardiac or pulmonary complications are not the source of any contraindications; they follow their usual course. This is also a point which has to be further examined. These experiments were made by M. Dujardin-Beaumetz at the Maison de Santé. Dr. A. Besnier very naturally received them with a certain spirit of antagonism. Six new rheumatic patients were treated in the same manner, and the results were remarkably similar to those obtained by M. Dujardin-Beaumetz.

THE HOSPITAL SUNDAY MOVEMENT.

AT the meetings lately held at the Mansion House, with the view of establishing a Hospital Sunday in London, the leading members of our profession have been conspicuous chiefly by their absence; and the movement, as far as it has yet gone, has been advanced mostly by the clergy and by some of the members of hospital committees. For this there are good reasons.

The inauguration of a Hospital Sunday, with its organised and simultaneous collections in all churches and chapels within the metropolitan area, bringing in, as it undoubtedly would, a larger sum of money than what is now collected by the same means, is likely to be fraught either with unmixed good or with much evil, according to the mode in which the fund is administered. It would, therefore, be interesting to hear what are the opinions of our professional brethren in Birmingham, Liverpool, and other towns, where the system has been for some years in operation.

The union of hospital authorities on common ground is of itself a good. Cannot it be made to serve a better purpose than the mere devising of a machinery always ready in charity when good ground is shown? That this machinery will bring more money to the treasurers of the voluntary hospitals, and that that money will be obtained with an ease and a regularity hitherto unknown, is possible. But if this money be used to extend the present system of gratuitous medical relief; if it lead to a further development of those out-patient abuses which have been so often exposed; if it enable the hospitals and dispensaries to make still further inroads into the proper domain of the general practitioners, we should be obliged to withhold our support altogether from the movement. And what guarantee is there that this will not be the result? What assurance is there that money obtained by simultaneous collections will be more wisely employed than that which has hitherto been obtained by separate and special offertories?

Those who are promoting this movement are sanguine enough to expect that it will put an end to the "charity balls", bazaars, dinners, and other questionable means which are now often employed to raise money for pious purposes; that it will check the formation of "special" hospitals; and that it will lead to the amalgamation of hospitals which are now trying to compass the same ends in the same neighbourhood, and which by this rivalry and antagonism are defeating the useful object which all have in view. If these points could all be carried out, much would certainly be gained by the Hospital Sunday. But what reason is there to anticipate that they will be? What efforts will the united Hospital Committee make for this end, and when will they make any.

It is upon such questions as these, that the experience of our Associates in those towns where a Hospital Sunday is no novelty would be of the utmost value in setting before the public the practical result of such an institution from the medical man's point of view. Has it, where it has been fairly tried, put an end to undesirable means of raising money? Has it limited the formation of special hospitals? Has it removed destructive rivalries? or has it merely made the collection of money easier, and thus tended to develop the present system, with all its drawbacks and disadvantages?

DR. C. J. B. WILLIAMS has been nominated by the Council of the Royal Medical and Chirurgical Society for the presidency.

THE death of the eminent French obstetrician and surgeon, M. Huguier, formerly surgeon of the Hôpital Beaujon, is announced this week; also that of M. Dubois d'Amiens, the perpetual Secretary of the Academy, who has for some time been disabled from his duties.

MR. DYKE, of Merthyr Tydfil, has reprinted, in a conveniently condensed form, the outline of heads of Work of a Medical Officer of Health, which he published as an address in a recent issue of the BRITISH MEDICAL JOURNAL.

MR. S. W. BROADBENT, surgeon, of South Hetton, near Newcastle, has been presented with a silver tea-urn, soup-tureen, drawing-room timepiece, and a case of a dozen fish-knives and forks, as a remembrance of his devotion and untiring energy manifested towards the inhabitants of South Hetton, Murton, and Easington, for the last twenty-three years.

HARVEIAN SOCIETY OF LONDON.

THE following is a list of the names of gentlemen elected as officers of the society for the year 1873. *President*: T. Ballard, M.D. *Vice-Presidents*: J. B. Curgenven, Esq.; W. H. Broadbent, M.D.; E. Sercombe, Esq.; T. H. Hill, Esq. *Treasurer*: H. W. Fuller, M.D. *Secretaries*: G. Eastes, M.B.; R. Farquharson, M.D. *Council*: C. Handfield Jones, M.B., F.R.S.; H. Power, Esq.; W. B. Owen, Esq.; F. B. White, Esq.; G. Benson Baker, Esq.; T. Rayner, Esq.; T. Thorman, Esq.; E. P. Young, Esq.; W. J. Bryant, Esq.; S. Gibbon, M.B.; H. Maudsley, M.D.; A. J. Balmanno Squire, M.B.

LORD LYTTON.

THE illness which terminated the life of the distinguished novelist was sudden and unexpected. He had for many years been the subject of discharge from the ear, probably attendant on disease of the bone. This had, however, at no time previously given rise to symptoms causing much anxiety. On Thursday, acute pain in the ear and head set in, and continued until Saturday, when unconsciousness supervened, and speedily ended in death.

THE MILITARY SALUTE.

A MINISTERIAL circular recently issued in France decides that the members of the army medical service owe the salute to officers who are their superiors in rank, just as the salute is due to them from those who are their inferiors in rank.

THE PATHOLOGICAL SOCIETY.

SIR WILLIAM JENNER, on taking the chair at the Pathological Society on Tuesday, offered a few remarks before commencing the business of the evening, observing that it was not the usage, as in less objectively engaged societies, to deliver a formal address. After expressing himself as deeply sensible of the honour conferred on him by his election as President, he referred to his having been among the members who had helped to establish the Society. He pointed out that the facts recorded then, and by old authorities, are as much facts to-day as when they were made. These facts received their interpretation from observers then: time has interpreted them in a different manner now, and it will no doubt again interpret them in other ways. The coarser characters only were formerly observed; but now, by the microscope, groups are formed by which the clinical physician and the pathologist have been able to assign to each its special group of symptoms. Every knowledge that is obtained of a lesion leads to an advance in the value of therapeutic agents. The study of pathology has taught us the use of therapeutic agents; and it has taught us where pathology is useless. It teaches us how important secondary changes may be in a few instances cured, or retarded, or ameliorated, or death may be delayed; for it is over the effects of disease, more than over disease itself, that therapeutics are of most use. In degenerative emphysema of the lungs, drugs have no influence; they cannot restore the lost structure: but drugs can relieve the secondary changes, which may be prevented or retarded for an indefinite period. In typhoid fever, the disease rarely proves fatal itself, but the secondary lesions cause death. Morbid anatomy has enabled the physician, by tracing primary and secondary results, to fulfil one of the great ends of medicine—to prevent disease.—The ordinary business of the evening was then proceeded with. The chief specimen of interest was one of spindle-celled sarcoma, secondarily affecting the liver, exhibited by Dr. Murchison. The patient had, nine years previously, been the subject of a similar affection of the eye, for which the eyeball had been removed; and the disease had not been observed in the liver until a month before he was seen by Dr. Murchison.

FALSE TEETH.

FALSE teeth have their disadvantages as well as their advantages. They caused the death of Cuvier and the discomfiture of Lord Brougham. Cuvier, impatient at the interruptions of that perpetual interrupter, M. Glais-Bizoin, in the National Assembly, rose so impatiently to answer him, that he jerked his teeth on to the floor of the Assembly, and, stooping not less precipitately to pick them up, fell head foremost, and struck his head against the floor so heavily as to give rise to the illness which proved fatal to him. M. Glais-Bizoin, then a very young man, promised himself to abstain from his fatal habit of incessantly interrupting; but he was incorrigible. Lord Brougham, in the course of the proceedings of a great meeting of the Social Science Association, of which he was President, was stopped in the middle of a speech by his teeth falling out. After groping on the floor, and on presently resuming his speech, he made the best of the incident by observing that "our teeth are the source of troubles from infancy to old age".

VACCINO-SYPHILIS AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

MR. JONATHAN HUTCHINSON will read a paper at the meeting of the Royal Medical and Chirurgical Society on Tuesday, on several cases of vaccino-syphilis, when a large attendance is expected.

MANCHESTER MEDICAL SOCIETY.

THE annual meeting of this Society was held on January 8th; Mr. Galt, President, in the chair. The reports of the Committee, Treasurer, and Librarians, were read, showing that the past year had been a highly successful one, the number of members being now one hundred and forty-three. Nearly nine hundred volumes were added to the library in 1872. Votes of thanks to the retiring office-bearers were carried, and the following officers and Council were elected for 1873:—*President*: D. Lloyd Roberts, M.D. *Vice-Presidents*: J. Thorburn, M.D., W. Roberts, M.D., J. Galt, Esq., E. Lund, Esq. *Honorary Secretary*: C. Currie Ritchie, M.D. *Honorary Treasurer (pro tem.)*: J. Thorburn, M.D. *Honorary Librarians*: C. J. Cullingworth, Esq., C. E. Glascott, M.D. *Council*: J. D. Bird, M.B., L. Borchardt, M.D., S. M. Bradley, Esq., D. J. Leech, M.B., D. Little, M.D., A. Ransome, M.D., J. Roberts, M.D., G. W. Smith, Esq., A. W. Stocks, Esq., A. Wähltuch, M.D., W. Whitehead, Esq., T. Windsor, Esq.

REFUSAL TO VACCINATE.

AT Selby Petty Sessions lately, William Clarkson was fined, with costs £6, for refusing to have his three children vaccinated, and for neglecting to produce them before the bench. Mr. Clarkson's solicitor said that his client had already paid more than £30 in fines and costs for conscientiously refusing to conform to the law.

BARON LIEBIG ON BEEF-TEA.

THE question as to the nutritive value of extract of meat has again been discussed by Baron Liebig, in a paper in which he carefully reviews the leading objections which have been urged against it. The veteran chemist's vindication of his opinions is of considerable interest, as he there sets forth his views on this subject shortly and precisely, and endeavours to correct the misrepresentations of the doctrine which he really teaches, and which he asserts that he taught from the beginning. He wishes it to be well understood that "he never asserted that beef-tea and extract of meat contained substances necessary for the formation of albumen in the blood or muscular tissue"; and "that by the addition of extract of meat to our food, we neither economise carbon for the maintenance of the temperature nor nitrogen for the sustenance of the organs of our body; and that, therefore, it cannot be called 'food in the ordinary sense', but we thereby increase the working capabilities of the body and its capacity to resist exterior injurious influences—i.e., to maintain health under unfavourable circumstances". Those constituents of the meat which are soluble in boiling water take no part in the formation and renovation of the muscular tissues, but by their effect on the nerves they exercise a most decided influence on the muscular work, wherein meat differs from all other animal and vegetable food. He therefore places extract of meat, and with it tea and coffee, under the head of "nervous food", in contradistinction to articles of "common food", which serve for the preservation of the temperature and restoration of the machine. Beef-tea and extract of meat are of themselves incapable of supporting nutrition or maintaining life. Liebig, however, with justice, condemns the conclusions of those who, from comparative experiments on the nutritive value of fresh meat and meat-extract taken *per se*, argue that the latter is not only useless for purposes of nutrition, but positively injurious. It should be clearly understood that beef-tea and extract of meat are only to be regarded in the light of auxiliaries to food, rather than independent articles of nutriment. That they impart relish to otherwise tasteless food, and in this way favour its assimilation, is unquestionable; and that they exert some stimulating effect on the system, will also be allowed. We have already referred to the recent experiments of

Bunge and others on this subject, and we do not think that Liebig in his present communication does much to advance the scientific aspect of the question.

OLD CLOTHES.

THE danger of standing in other men's shoes, or of wearing their cast-off habilaments, is sometimes overlooked. M. Chevallier relates, in the *Journal de Chimie Médicale*, Jan. 1873, that a young man of good family died in December last, because, instead of buying new gloves, he bought a pair of cleaned gloves. Either from the cleaning having left a poisonous substance inside the gloves, or from some venomous insect lodged there, he felt present a sharp pain in an abrasion which he had on the thumb. He bore it for a while, but at the end of half an hour he was obliged to tear the gloves off. His hand was swollen, and the spot was black. Gangrene followed, and death. The story reminds one of some of the well vouched histories of the effects of the bite of the juniper-fly in China, or of cases of the charbon or malignant pustule which are due to infection. M. Chevallier mentions another case, in which a second-hand pair of pantaloons conveyed skin-disease; and recent prosecutions for selling the clothes of small-pox patients suggest still more serious possibilities.

BABY-FARMING.

A CASE of baby-farming was brought under the notice of the West Derby Board of Guardians, at their meeting on the 15th instant. It appeared that a woman, named Sutter, had been entrusted with the child of a domestic servant, receiving 3s. a week from the mother for its maintenance. A police-constable recently found the infant at Sutter's house, and he took it to the workhouse. It was there examined, and the doctor certified that the child was emaciated "from neglect of nursing, etc." Although five months old it weighed only 6½ lbs. On being questioned by the guardians, the woman Sutter stated that "when she went out to work she left the infant in charge of a child nine years of age." The consideration of the case was adjourned.

LONDON INTERNATIONAL EXHIBITION, 1873.

THE third meeting of the committee on surgical instruments and appliances was held on the 20th instant, at the offices, Gore Lodge; Mr. Cæsar H. Hawkins, F.R.S., in the chair. The committee considered the resolutions which were passed at a meeting of London surgical instrument manufacturers, held on the 10th instant, and which were printed in the JOURNAL last week. It was recommended that a reply should be sent, explaining that English and foreign exhibitors would, as was always intended, be on precisely the same footing; that it is not proposed to separate an exhibitor's instruments into sections or subdivisions; and that, while it is inadvisable to dispense generally with the principle of acceptance on the approval of a committee, an assurance of admission might be given by the committee to manufacturers of very high repute, who should notify their desire to exhibit. The committee was informed that Signor A. Castellani, of Rome, had commenced to make exact reproductions of the surgical instruments found at Pompeii; and that the Japanese Minister, Terashima Munerero, himself a physician, had promised to obtain a collection of surgical instruments from Japan. Letters were read from Sir Alexander Armstrong, K.C.B., Sir John Rose Cormack, M.D., of Paris, the Royal College of Surgeons, Royal College of Physicians, University College, and the University of Edinburgh. The committee then adjourned till Monday, February 17.

INFLUENCE OF LIGHT ON COMPLEXION.

THE action of light on the human skin is of course manifest. It browns and tans the integuments, by calling out the production of the colouring matters which they contain. In Europe, three varieties of colour in the skin are distinctly marked: olive-brown with black hair, beard, and eyes; chestnut, with tawny beard and bluish eyes; blond, with fair light beard and sky-blue eyes. White skins show more readily alterations occasioned by light and heat; but, though less

striking, facts of variation in colour are observable in others. The *Journal of Popular Science* observes that the Scytho-Arabic race has but half its representatives in Europe and Central Asia, while the remainder passes down to the Indian Ocean, continuing to show the gradual rising heat of climate by deepening brown complexions. The Himalayan Hindoos are almost white; those of the Deccan, of Coromandel, Malabar, and Ceylon, are darker than some Negro tribes. The Arabs, olive and almost fair in Armenia and Syria, are deep brown in Yemen and Muscat. The Egyptians, as we go from the mouths of the Nile upstream towards its source, present an ascending chromatic scale from white to black; and the same is true of the Tuariks on the southern side of Mount Atlas, who are only light olive, while their brethren in the interior of Africa are black. The ancient monuments of Egypt show us a fact equally significant. The men are always depicted of a reddish-brown; they lived in the open air; while the women, kept shut up, have a pale-yellow complexion. Barrow asserts that the Mantchoo Tartars have grown whiter during their abode in China. Rémusat, Pallas, and Gutzlaff, speak of the Chinese women as remarkable for an European fairness. The Jewesses of Cairo or Syria, always hidden under veils or in their houses, have a pallid, dead colour. In the yellow races of the Sumatra Sound and the Maldives, the women, always covered up, are pale like wax. We know, too, that the Esquimaux bleach during their long winter. These phenomena, no doubt, are the results of several influences acting at once, and light does not play the sole part in them. Heat and other conditions of the medium probably have a share in these operations of colour. Still, the peculiar and powerful effect of luminous radiation as a part of them is beyond dispute.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.

THE annual meeting of this Society was held in St. Martin's Place on the 21st instant. The retiring President, Sir John Lubbock, Bart., M.P., delivered an able and most interesting address, congratulating the Fellows on their activity and energy during the past year, and on the increasing prosperity of the Institute. The following officers were elected for the ensuing year:—*President*: G. Busk, Esq., F.R.S. *Vice-Presidents*: John Beddoe, M.D., J. B. Davis, M.D., F.R.S., John Evans, Esq., F.R.S., Colonel A. Lane Fox, F.S.A., Professor Huxley, F.R.S., Sir John Lubbock, Bart., F.R.S. *Director*: E. W. Brabrook, Esq., F.S.A. *Treasurer*: J. W. Flower, Esq., F.G.S. *Council*: H. G. Bohn, Esq., F.R.G.S., Captain R. F. Burton; A. Campbell, M.D., Hyde Clarke, Esq., W. B. Dawkins, Esq., F.R.S., P. M. Duncan, M.D., F.R.S., R. Dunn, Esq., D. Forbes, Esq., F.R.S., A. W. Franks, Esq., F. Galton, Esq., F.R.S., C. R. Markham, Esq., C.B., Captain Sherard Osborn, C.B., R.N., Captain Bedford Pim, R.N., F. G. H. Price, Esq., F.G.S., J. E. Price, Esq., F.S.A., F. W. Rudler, Esq., F.G.S., C. R. Des Ruffières, Esq., F.R.S.L., W. Spottiswoode, Esq., V.P.R.S., E. B. Tylor, Esq., F.R.S., A. R. Wallace, Esq., F.L.S.

HOSPITAL SUNDAY.

ON the 16th instant, a conference was held, under the presidency of the Lord Mayor, at the Mansion House, to inaugurate the movement for establishing a metropolitan Hospital Sunday, similar to those in Birmingham, Liverpool, and other places. The Lord Mayor, in an opening address, described the objects and effects of the institution. The Rev. Canon Miller proposed, "That the success attending Hospital Sunday collections in many of the largest provincial towns induces the belief that this movement will be equally successful in London; it is, therefore, most desirable that simultaneous annual collections should be made in all places of worship in the metropolis on behalf of the medical charities." This was seconded by the Rev. Dr. Kennedy, and carried unanimously. Sir Anthony Rothschild moved, "That a representative Council be elected by public meeting annually, consisting of not less than twenty-five clerical and twenty-five lay members, to make arrangements for the Hospital Sunday collections." He said that the Jews would be willing to respond to this appeal for

charitable aid. The motion was seconded by the Rev. Dr. Rigg, and carried unanimously. The Rev. Bishop Claughton moved, "That the Council have power to appoint an annual committee of distribution, consisting of members unconnected with hospitals, whose decision shall be final." This was seconded by Archbishop Manning, and unanimously carried. It was next resolved to appoint the Lord Mayor for the time being President and Treasurer, and that the annual meeting be convened by him. The Rev. J. Thain Davidson moved, "That the system of distribution be based upon the last three years' expenditure of each institution, after deducting the income derived from endowments, realised property, and legacies exceeding £100." He urged the propriety of sufficiently extending the area from which the collection was to be made, so as to take in the wealthy congregations in the suburbs of the metropolis. Mr. Jabez Hogg seconded the resolution, which was agreed to. The last resolution, proposed by the Rev. T. J. Kitto, was, "That no institution be admitted to participate in the distribution of the fund, if the committee of distribution find the cost of its management exceed a reasonable percentage of the whole current expenditure." This resolution, like the others, was carried unanimously. A vote of thanks to the Lord Mayor brought the meeting to a close.

THE MORBID ANATOMY OF BRIGHT'S DISEASE.

IT will be remembered that, after the reading of Dr. George Johnson's paper on Bright's disease recently at the Royal Medical and Chirurgical Society, a resolution was moved by Dr. Sibson, seconded by Dr. Quain, and carried—"That it be recommended to the Council of the Society to appoint a committee to inquire into the condition of the walls of the heart and arteries in relation to the state of the kidneys in Bright's disease." The Council, on the 14th instant, resolved—"That a committee of five be nominated to investigate the subjects referred to the Council, with especial reference to the specimens submitted to the Society by Sir William Gull, Dr. Sutton, and Dr. G. Johnson." The following Fellows were nominated:—Dr. Burdon Sanderson, Dr. Payne, Dr. Gee, Dr. Cayley, and Dr. Green; but we hear that it is probable that several will be unable to act.

THE CHOICE OF ANÆSTHETICS.

ON this subject, on which we have recently collected, and are still collecting, the experience of operators, Dr. Peaslee, in his valuable work on *Ovarian Surgery*, recently reviewed in our columns, is very emphatic. As his experience and authority are great, his statement is worth quoting.

"It is (he says, p. 384) in respect to its tendency to produce emesis, that chloroform is decidedly objectionable as an anæsthetic in ovariectomy. Though it has been generally used in Great Britain, Dr. Clay doubts—since serious sickness is produced by chloroform both during and after his operations—if it have on the whole contributed to its success. Of Dr. Keith's reports of his earlier cases, almost all speak of the duration, after the operation, of the chloroform-sickness. He has used ether since his fifty-second case, and doubts if, on the whole, chloroform is a boon to mankind. Mr. Spencer Wells has of late commonly used the bichloride of methyl as an anæsthetic. It contains one equivalent less of chlorine than does chloroform, and is given in the form of spray. Dr. W. L. Atlee uses one part of chloroform (liquid measure) to two of ether. Koeberle uses chloroform. Generally in this country the pure ether is used, and, I think, answers all the requirements as well as any other anæsthetic, if properly administered, while it is also quite as free from objection as any other. I have never seen it produce vomiting during the operation, excepting in cases where it was administered within two or three hours after taking food, as never should be done; and then with the effect only of promptly evacuating the stomach. I have never seen vomiting produced by it after the operation. I, however, record my protest against keeping a patient continually, during the operation, from the use of any anæsthetic at the point of narcosis, indicated by stertorous breathing and lividity of the lips and face. It is simply anæsthesia and not asphyxia that is required; and I have seen more than one fatal result of ovariectomy in very debilitated subjects, which might fairly be attributed to the reckless use of the anæsthetic. As soon as stertorous respiration is produced the anæsthetic should be withdrawn, and afterwards reapplied

so as to keep just short of this symptom. Complete anæsthesia is in itself a sufficient approach to death even in case of a patient not much debilitated, and it is simply unpardonable uselessly to superadd to it another still more dangerous condition. A case is reported by Dr. Black, in which chloroform softened and disorganised the bronchial mucous membrane, and produced death in three days and seventeen hours. And Mr. Holt records an instance in which it produced a fatal collapse, from which the patient did not rally at all."

HOSPITAL OUT-PATIENT REFORM ASSOCIATION.

A CIRCULAR has been issued by Dr. J. Ford Anderson and Mr. H. Nelson Hardy, the honorary secretaries, inviting those members of the profession who feel the evils of the present out-patient system of medical relief, to join the newly-formed "Hospital Out-patient Reform Association." We heartily sympathise with the movement.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE College lectures will be commenced by Mr. Erasmus Wilson, who will deliver the first of a course of six lectures on Dermatology, on the 31st instant. Mr. Flower will begin his course of eighteen lectures on "The Osteology and Dentition of Extinct Mammalia," on Monday, the 17th of February. These lectures will be delivered on Mondays, Wednesdays, and Fridays, at four o'clock. The courses of six lectures by Mr. Holmes, and of three lectures by Dr. Humphry, will be given in June. The subject of Mr. Holmes's lectures is "The Surgical Treatment of Aneurism in its various forms," in continuation of his course of last year. Dr. Humphry will lecture on the "Varieties in the Muscles of Man." The dates and hours of these lectures will be intimated.

ETHER-INHALERS.

To secure the general adoption of ether as an anæsthetic in this country, it is manifest that simplicity and cheapness in its administration are necessary. We receive numerous communications from all parts of the country, asking for information as to the most useful form of inhaler, the best ether manufactured, the most complete directions to follow in its administration, and a multitude of other questions. We refer our correspondents to the numerous valuable and practical papers which have appeared on the subject in our pages during the past three months from Mr. Warrington Haward, Dr. Thomas Jones, Dr. Morgan, Dr. Joy Jeffries, and others, and to the editorial articles and hospital reports, which afford further information on the subject. The details of administration, the precautions to be observed in avoiding danger to the patient, and other particulars, are given fully in one or other of these communications. The greatest difficulty which appears to beset ether anæsthesia is in the matter of the inhaler. We hear, for instance, of ten and twelve ounces being employed occasionally in a short operation, sometimes without complete anæsthesia resulting. Now, this is not the fault of the anæsthetic, but of the administrator. It has not been given properly; too much air has been admitted, owing either to the fault of the means employed to produce insensibility, or to fear on the part of the administrator. Novices expect to find themselves at once experts in ether anæsthesia; and when they meet with disappointment they speak disparagingly of ether, while the fault lies in their not having attended to a few simple instructions. At the same time, it is most desirable that the application of ether as an anæsthetic should be made more easy to the general body of practitioners than it now is. The system adopted and recommended by Dr. Joy Jeffries is open to many objections: it is, no doubt, effective, but it is wasteful, and it occasionally fills the room to a disagreeable extent with ether-vapour. The apparatus of Dr. Morgan is, we believe, very effective, but expensive; and other inhalers of a complicated kind are similarly unsuited to the occasional wants of the general practitioner. The practitioner frequently is not in a position to purchase, and will not go to the expense of, an elaborate apparatus. Comparatively little ether need escape if ordinary care be exercised in its administration, even in the case of a simple inhaler. The cone of felt recommended by Mr. Haward is very serviceable; it permits the escape of more ether than is often desirable

in a small room, but it is cheap and simple. With it we would be almost satisfied; but still it is capable of improvement, and the objections to its employment may surely, by a simple and cheap contrivance, be removed, or at least materially diminished. We recommend the matter to the notice of surgical instrument-makers and ingenious members of the profession.

DISPENSING CHARGES.

It is not surprising that persons who have no technical knowledge of the subject should fall into absurd errors in discussing such a question as the charges of druggists for dispensing medicines; but it is unfortunate that those who have better information, and should be able to frame a more trustworthy judgment, should follow them in their errors. A writer in a daily paper has discovered that he can get a prescription dispensed far more cheaply in Mile End than in Mayfair; and a medical paper follows the popular lead in exclaiming that this is very sad and a proof of extortion. In the first place, the same may be said of herrings or potatoes, or of boots or trousers. The expenditure of a West-end druggist to meet the requirements of a more wealthy and fastidious *clientèle*, is on a very different scale from that of the small druggist of the back streets. Even on the ground of ordinary trade-differences of price depending on the differences between the East and West, the poor and rich, a considerable difference in price is to be expected for articles much more delicately chosen, more carefully prepared and issued. But the fact which medical writers may be expected to bear in mind is, that there is the best reason for desiring to remove the position of a pharmacist from that of a person bound to merely trade considerations. Patients and physicians have a common interest in encouraging the higher education of pharmacists—in offering the rewards of higher remuneration and higher social standing for better education, professional trustworthiness, the cultivation of nice skill, and a professional standard of decorum. These are things which are to be encouraged by being paid for. The skill of the chemist, and his professional self-respect and knowledge, are appreciable elements in his value and in the value of his drugs. The extra sixpence or so on the bottle of medicine or the box of pills represents not only the return for the larger capital needed for a high-class business, but the tax which we are willing, within reasonable limits, to pay for greater neatness and elegance, promptitude, security, freshness of drugs, a large and well drilled staff, and a known reputation, won slowly, and scrupulously preserved. We are willing to pay for these immaterial elements in our dispensing, even more than for the material. It is absurd and mischievous for medical writers to ignore these considerations. A dead level of low prices is incompatible with the constant progress of pharmaceutical education and practice, which it is an important object to promote.

SCOTLAND.

THE Annual Report of the Glasgow Royal Asylum for the year 1872 exhibits the continued prosperity and usefulness of the institution.

THE Duke of Buccleuch has subscribed £2,000 to the fund for erecting new buildings in connection with the Edinburgh University.

THE scrutiny of the votes, at the recent meeting for the election of managers of the Edinburgh Royal Infirmary, has shown that the list proposed by the opponents of the lady medical students was carried by a majority of twelve.

GREENOCK INFIRMARY.

THE annual meeting of the subscribers to Greenock Infirmary was held on the 16th instant. A fact well worthy of note is, that the income of the institution was last year considerably beneath the expenditure. The ordinary income shows a decrease, as compared with the previous year, of £717 3s. 6d. It is rather astonishing that in a town which, for its size, is, perhaps, the wealthiest in Scotland, such a state of matters should exist.

DURING the past year, only 287 cases of fever were treated in the Greenock Infirmary, against 794 in the preceding year—a marvellously clean bill of health for Greenock.

GLASGOW BLIND ASYLUM.

AT the annual meeting of this institution, held on the 20th instant, the report was submitted. It is interesting to observe that the sales of work done by the blind during 1872 amounted to the large sum of £12,900, which is an increase of over £2000 upon the previous year.

GLASGOW ROYAL LUNATIC ASYLUM.

THE annual meeting of this institution was held on the 16th instant, and the yearly report submitted. The report is a very satisfactory one, and shows that the number of patients under treatment during 1872 was greater than on any previous year in the history of the asylum, the number being 943. In 1872 there were 77 males and 76 females dismissed cured; 67 males and 50 females relieved; and 80 died. On account of the crowded state of the asylum, 77 private patients were refused admission.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

THE annual meeting was held on the 17th instant, when a satisfactory annual report was presented. During the year, there had been 427 children treated in the hospital; at the dispensary, 3,072; while 672 had been visited at their own homes; making in all 4,171. There had thus been, since the hospital was instituted, 59,969 cases to which its operations have been extended. The funds of the hospital continued in a very satisfactory condition. The total amount of the year's income was £1,872:12:10; against this, the expenditure for the year amounted to £1,748:3:9.

LISTER'S ANTISEPTIC DRESSINGS.

PROFESSOR LISTER'S dressings appear to form a very heavy item of expenditure in the accounts of the Edinburgh Royal Infirmary for the past year. Carbolic acid plaster alone cost the Infirmary £660:15:1 during 1872, irrespective of the various other articles of dressing insisted upon in this method of treating wounds. Our contemporary the *Scotsman*, in a somewhat ill-natured article, ventures to question the advantages of the system adopted in the Infirmary, and hints at the curtailment of the expenditure in this direction. The employment or non-employment of the antiseptic dressings at St. Thomas's or Guy's Hospital in London has nothing to do with the question, as the absence of this method of dressing wounds in the wards of these institutions would on inquiry very likely be explained by ignorance of its advantages when properly employed. At the same time, many of the surgeons of the Middlesex, University College, and other metropolitan hospitals, have not failed, by very general adoption of Mr. Lister's dressings, to express practically their opinion of their value. Heavy as the expenditure no doubt is, any limitation of a very extended trial of the value of antiseptic dressings would be most undesirable. It would be interesting at the same time to know from Mr. Lister how far the method of treating wounds, now largely carried out in the Royal Infirmary, has affected the mortality up to the present time.

THE NEW ROYAL INFIRMARY, EDINBURGH.

A VERY remarkable document has been prepared, appealing to the contributors of the Royal Infirmary to aid the authors, mostly clerical gentlemen, to carry a resolution at the adjourned meeting disapproving of the Annual Report so far as relates to the buildings. The object which these gentlemen have specially in view is to prevent the erection of the large block about to be built along the Meadow Walk—a favourite and pleasant resort of the public. No doubt much may be said in favour of many of the objections advanced by the document; and the review of the grave mismanagement of the new Infirmary undertaking which it contains is not untrue. But it is rather too much to use as objections to the proposed building such phrases as "it is associated with the ideas of disease and death, and it is pain-

fully suggestive of infection." Moreover, the gentlemen who have thought fit to express notions of this kind in their anxiety for the poor, add that "educated persons may think lightly of the risk of infection, but unhappily there is no evil more dreaded by the poor and the ignorant." Now this is contrary to the fact; for nothing is more noticeable, as has been recently pointed out by Dr. Gairdner of Glasgow, and as is known to most medical men, than the persistency amongst the poor in remaining, against all advice, in infected habitations. The Managers have happily secured an unequalled site for the new Infirmary; but it is to be hoped that the interests of the public may not be entirely overlooked.

DR. GAIRDNER ON OWNERS OF FEVER-BREEDING PROPERTY.

THE labours of Dr. Gairdner in sanitary matters while Medical Officer of Health for Glasgow are well known. His exertions in this direction were productive of very great improvements in the sanitation of that epidemic-breeding city; and we are glad to observe, by an admirable communication in the *Glasgow Herald* of the 15th instant, that he continues to offer the results of his experience in checking the ravages of epidemic disease in the crowded dens of the city. Cases are quoted by him in our contemporary, which show that overcrowding was permitted to occur again and again, with disastrous results. Fines of one to five shillings were imposed on the occupier, who paid the penalty in another shape—viz., of typhus fever. He, however, truly observes that occupiers of the class alluded to will often set at nought both the natural and the statutory law, rather than change their style of living. He believes, therefore, that the owner, and not the occupier, should be summoned to answer for the offence. Such a course, he points out by detailed quotations from the Public Health Act, is quite open to the Board of Police; and, where two convictions have taken place for overcrowding within three months, the premises may be ordered to be closed for such time as the sheriff or magistrate or justice may deem necessary. He concludes by expressing a hope that the public will in future prevent persons who make money out of such fever-breeding property from being considered exempt, from the obligations placed upon them by salutary laws.

THE LORD RECTORSHIP OF ST. ANDREW'S UNIVERSITY.

LORD NEAVES will be formally installed as Lord Rector of this University on Thursday, February 13th, when he will deliver his inaugural address. Lord Neaves intends, we believe, to offer four prizes annually during his term of office, to be competed for by the students attending the University, in place of one large prize annually, as was the custom of previous Rectors.

GLASGOW UNIVERSITY LYING-IN HOSPITAL.

IN was unanimously agreed at the annual meeting of contributors to the Glasgow University Lying-in Hospital, held on Saturday last, "that the Glasgow University Lying-in Hospital be amalgamated with the Glasgow Lying-in Hospital upon the terms arranged between the directors of the two hospitals, and that the constitution and rules of the amalgamated hospital adjusted by them be agreed to and adopted;" and "that any five of the directors be authorised and instructed to sign, on behalf of the University Lying-in Hospital, the said constitution and rules, and all other documents necessary for giving effect to the amalgamation, and also to wind up and settle the affairs of the hospital."

IRELAND.

AT the last meeting of the Surgical Society of Ireland, Mr. Macnamara stated that, in a recent case of lithotomy, the patient had been anæsthetised by ether by Mr. Morgan so successfully "as almost to convert him to the use of that anæsthetic agent in preference to chloroform."

THE CASE OF THE LATE EMPEROR NAPOLEON III.

It is the intention of the private attendants of the late Emperor Napoleon III to communicate to the medical profession at an early opportunity the details of his recent illness and its treatment, in a form which will convey all necessary information. The propriety of withholding comments in the meantime is obvious.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

Fever at Moseley.—Disposal of Sewage.—Hospital Saturday.—Queen's College.—Christmas at the Hospitals.—The Hospital for Women.

THE JOURNAL has already given some account of the epidemic of enteric fever at Moseley and Balsall Heath. The local sanitary authority took early measures for dealing with it, by the issue of placards and instructions, and the temporary appointment of an inspector and a medical officer. To the latter post Mr. Hollinshead, of Selly Oak, was elected. The first published report, on January 1st, detailed thirty-six existing cases, and six recent deaths, in eighteen houses; and it assigned as causes—the absence of proper drainage, the existence of pervious dumb wells, the drinking of polluted well-water, and the escape of sewer-gas into dwelling-houses. Dr. Ballard, the special Government commissioner, had interviews last week with the local boards of health; and, whilst he allowed full weight to the above-mentioned evils, he attributed the actual introduction of the fever into Moseley, to the use of specifically polluted milk from Balsall Heath. In this latter place there have been about as many cases of fever as in Moseley, and yet, as Mr. Scofield, an able professional member of the local board, observes, not nearly so many as in former years. Dr. Ballard's evidence in support of his assertion is, in brief, that out of forty-eight infected families twenty-nine were supplied by one man; ten by a second; four by a third; that the wells on the premises of these three men were liable to be polluted, and that this well-water, though used only for rinsing their cans, without proving, supposing, or even implying any conscious adulteration, was the agent, even in the minute quantity that remained after rinsing, of spreading the fever.

It is always difficult to trace the first case in an epidemic, but there is some reason to think that it was that of a young lady who had been taken ill in Rome, about a fortnight before her return to Moseley. In this case, the well-water, which was immediately analysed, was found to contain a large proportion of organic matter. This case was not alluded to by Dr. Ballard.

Dr. Ballard's recommendations were:—efficient drainage, a public supply of wholesome water, chaining the pumps on the premises of dairymen, regular disposal of night soil by the Rochdale or other system, and the appointment of a health-officer for Balsall Heath. A vote of thanks was offered to him, and his recommendations, as to the public supply of water, were ordered to be carried into effect at once.

The epidemic is, we believe, declining. Mr. Hollinshead has kindly informed us that “he has only proof of three other cases since his official report; there has been no fresh death since then, and most of the cases then referred to are going on favourably.”

From this subject, transition is natural to the *questio vexata* of disposal of sewage, which has exercised our Town Council for two successive meetings, and now stands again adjourned. The points under debate are, first, the adoption of a system of interception, which implies dry closets and regular collection of excreta; and, secondly, the providing of additional tank room for better subsidence. These points involve outlay and altered management; and their settlement is delayed by demands for estimates, and for the consideration of General Scott's process. The matter is now in the hands of an able and energetic committee, and next week the council is to meet daily until it is settled. To those who have seen, and still see, whole courts of houses poisoned by a foul open privy, and human beings living, or rather dying, in rooms built over middens, and separated only by half-rotten planks, it seems high time, indeed, that the matter were settled.

The Hospital Saturday movement has advanced a step. At recent meetings, a committee and officers have been nominated; the mayor, as president, and Mr. J. S. Wright, a well-known manufacturer, as chairman. Our profession is fairly represented, and the honorary secretary is Mr. Gamgee, than whom no one is better qualified to organise similar plans. The first collection is to be made on the 15th

of March; and the question, as to how and when the receipts are to be divided, has already arisen.

The Queen's College has reopened, after a brief Christmas vacation. There has been a fair supply of subjects this winter, and work has been active. The intention of the College of Surgeons to publish lists of “passed” and “plucked” certainly acts as a stimulus. Dr. Norris has made arrangements for classes in practical physiology. The museum is being thoroughly renovated by the new curator, who has adopted a very good plan of preparation, viz., with a cemented glass top to the jars, and glass rods within, so that no threads come through the covers, and the vessels are quite air-tight.

The hospitals have vied with each other in making Christmas merry for all connected with them; providing for the patients decorations and amusements; for the children, Christmas trees; for the servants (at the General and Queen's Hospitals), a ball and a supper, to which the lay committees and the tradesmen have been liberal contributors.

Much good work is being done at the Women's Hospital. Two cases of extra-uterine foetation have been recently operated upon successfully; one by Mr. Tait, the other by Mr. Ross Jordan. In the wards, we saw three cases of uterine fibroids, one in process of enucleation after incision; another, suppurating (Mr. Ross Jordan); a third, growing smaller under injection of iodine into its substance (Mr. Bracey). The out-patient department has been so much appreciated, that the officers were often occupied from two to six, or even eight, o'clock; and it became necessary to devise some plan to lessen their work. The one decided upon, was to require a shilling fee from each applicant on her first visit—a plan for a “free” hospital which may be variously viewed, but which has certainly answered its purpose very well. Each patient is seen separately, and the arrangements are of a very complete description, though the waiting-room and dispensary are too small. The committee hope to secure an adjoining house next month. The medical lady-resident, Dr. Louisa Atkins, is highly appreciated, as well as respected, by the patients; and, if the appointment of a lady to such a post be regarded as an experiment, every one will be ready to admit that in the present instance, at least, it proves a complete success. The dispensing is now also in the hands of a competent lady (Miss Harding).

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

The Hospital for Sick Children.—Sewage.—The Adulteration Act.—Casarean Section.

THE first portion of the new Hospital for Sick Children at Rendlebury has recently been completed, and was formally opened on the 9th inst. The building has been erected at a total cost of £27,000, and a further sum of £10,000 is required to complete the plans. The hospital is constructed on the pavilion principle, with this distinctive peculiarity, that the pavilions are only one storey high, and will enable the institution to be worked with a saving of both labour and time. Each pavilion is constructed to hold twenty-six patients, an allowance of 1,600 feet of cubic air being made for each bed. When completed, the hospital will accommodate one hundred and seventy patients, but at present only three of the pavilions have been completed, which consequently contain but seventy-eight beds. Even when all the beds are ready, it will not afford an extravagant amount of accommodation for the sick children of Manchester who need hospital aid, as will be readily seen from a statement made by the Bishop of Manchester on the occasion of the opening ceremony. “When one is informed,” he said, “that out of the total number of deaths in Manchester in the four years 1868, 1869, 1870, and 1871, of 48,805, the number of deaths of children under five years of age was 20,035, the need of such a hospital could not be questioned. When one realised the fact that 20,000 children under five had died in five years, it would seem as though an institution with only one hundred and seventy beds was but as a drop in the ocean.”

At the last meeting of the Manchester and Salford Sanitary Association held on the 10th instant, an interesting report was read by the Honorary Secretary, Dr. J. Leech, on the best mode of dealing with human excreta in Manchester. The report recommended the institution of tubs as receptacles for the excreta throughout the city. The plan has been partially adopted in Salford, the corporation having introduced into the yards of some of the smaller houses nine hundred tubs, which are removed at regular and short intervals; it was further stated that each tub, when full, is worth about two shillings and fourpence. This method of applying the dry earth system—for the tubs are partially filled with the ashes of the domestic hearth, which

fall into them along an inclined plane—has been fully tried at Rochdale, with the very best results, in the matter both of economy and of health.

At the same sanitary meeting it was decided to forward a report to Government on the subject of the Adulteration of Food, etc., Act, for the purpose of pointing out the absurd circumstance that, as the Act at present stands, no one can be prosecuted for adulterating anything unless *malice prepense* can be proved on the part of the adulterator. It therefore follows that the adulteration of such articles as butter with lard and less pleasant compounds, and the adulteration of milk with the produce of the pump, are feats which are practised, and will continue to be practised, with perfect impunity. In Manchester a public analyst has been appointed, but the Salford authorities have decided not to appoint one on account of the dead letter character of the Act.

A case of Cæsarean section was performed at St. Mary's Hospital last week. The child is living, but the mother died on the third day from exhaustion. It is noteworthy that the uterus did not contract when cut open until galvanism was applied, to which stimulus, however, it immediately responded.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH.

An ordinary meeting of this Branch will be held at 32A, George Street, Hanover Square, on Friday, January 31st, at 8 P.M.; when Dr. J. MILNER FOTHERGILL will read a paper on "Strain in its Relation to the Circulatory Organs."

A. P. STEWART, M.D. } *Honorary Secretaries.*
ALEXANDER HENRY, M.D. }

London, January 15th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE next meeting will be held in the Midland Institute, Birmingham, on Friday, January 31st, at Three o'clock.

VINCENT JACKSON, Wolverhampton, } *Honorary*
ROBERT JOLLY, Birmingham, } *Secretaries.*

Birmingham, January 20th, 1873.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next meeting of this Branch will be held at the Castle Hotel, Brecon, on Friday, January 31st, at 12 o'clock.

Dinner at 2.30 P.M.

The titles of papers to be read, and the names of those who intend joining the dinner, should be sent to one of the Honorary Secretaries at once.

ANDREW DAVIES, Swansea, } *Honorary Secretaries.*
ALFRED SHEEN, M.D., Cardiff, }

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting was held in the Music Hall Buildings, Aberdeen, on Wednesday, January 8th, 1873. There were present sixteen members and two guests; Dr. JACKSON, Aberdeen, in the Chair. The minutes of last meeting were read and approved.

New Members.—The following gentlemen were ballotted for and admitted—viz., William Campbell, M.B., Dundee Royal Infirmary; W. Thomson Crabbe, F.R.C.S.E., Aberdeen; David Kerr, M.D., Aberdeen; Edward Mair, M.B., Uduy; Samuel Davidson, M.D., Aberdeen; James Stephen, M.B., Peterhead; John Urquhart, M.D., Aberdeen; Robert W. Reid, M.B., Aberdeen; James M'Hardy, L.F.P. & S., Banchory; and Charles Smith, M.R.C.S.E., Kinnairdy. The proposals of four other new members were tabled, viz.: Drs. Frazer, Cruden; Cran, Kildrummy; Collins, Bervie; and Lyon, Peterculter.

Withdrawing Members.—Drs. James M. Grant, Murray, and James Inglis were announced as having withdrawn from the Branch, the last gentleman on account of his health; the total membership then remaining seventy-seven.

Corresponding Members.—Dr. Mackae, Penicuik, and Dr. Clement Godson, London, were appointed corresponding members.

Exhibition of Specimens, etc.—Dr. Best showed a cancer of the upper jaw; and Dr. John M'Crombie, Brompton Hospital, showed an

apparatus of his own invention for the self-administration of anæsthetic liquids.

Defects of the Palate.—Mr. WILLIAMSON read a paper on defects of hard and soft palates, and demonstrated, by casts and obturators, the bloodless means of remedying them.

Atresia Vaginæ.—Dr. BEST read a paper on the subject, and a case of retained menses from his own practice successfully treated.

Spontaneous Cure of Ovarian Dropsy.—Dr. DUNCAN (Crimond) read two cases occurring in his own experience, the first case being an ovarian tumour causing peritonitis after parturition, bursting into the large intestine, and gradually disappearing; the second, a case of abscess in the broad ligament, thrombosis of the iliac veins, evacuation of matter *per rectum*, and cure.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEETING.

A MEETING was held on Thursday, December 19th, at the Greyhound Hotel, Croydon. Dr. CARPENTER, President of the South-Eastern Branch, took the Chair at 4 P.M.; and eighteen members were present.

Papers, etc.—1. Dr. AVELING read a paper on the Differential Diagnosis of Retroflexion of the Uterus, and subsequently exhibited a variety of uterine sound.

2. Dr. BRISTOWE read a paper on some class of cases in which the Voice serves as an aid to Diagnosis.

3. Mr. ROPER exhibited, with the aid of the magic lantern, photographs of a girl in whom he had performed several Plastic Operations on the Face for Deformities, the result of an accident.

4. Mr. SIDNEY TURNER exhibited a Malformed Heart from a child who had been the subject of morbus ceruleus.

5. Dr. ADAMS gave a brief account of recent Operations by himself and his colleagues at the Croydon General Hospital.

6. Mr. W. MORRANT BAKER exhibited two specimens: the one enormous Gall-stones; the other a fibro-cellular Tumour.

7. Dr. STRONG gave the history of a recent case of Sudden Death, with an account of the *post mortem* appearances.

The Dinner took place at 6 P.M., and was attended by those present at the meeting.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE third meeting of this session was held on Friday, December 27th, 1872; Present: FURNEAUX JORDAN, Esq., in the Chair, and twenty-six members and visitors.

New Members.—Six members of the Branch were admitted members of the Section.

Laws.—A code of laws for the guidance of the meetings of the Section was unanimously agreed upon.

Communications.—1. *Excision of Hip-joint.*—Mr. GILBERT SMITH exhibited a boy aged 14, admitted into the Queen's Hospital under the care of Mr. Jordan, with hip-joint disease of six months' standing. Upon admission, there was suppuration around the joint. A fortnight after admission, the actual cautery was applied and the abscess opened. Six months after admission, the hip-joint was excised. In six months afterwards, the boy was able to walk; and now, after two and a half years, he can walk three or four miles with ease.

2. *Paralysis of the External Rectus.*—Mr. ARTHUR BRACEY exhibited a patient suffering from partial paralysis of the left external rectus muscle of the eyeball; the optic disc also showed a highly congested state. The man had some years ago received a violent blow on the head, and a deep indentation now occupied the seat of injury. He had also been the subject of syphilis, for which he had been salivated.—The members considered the paralysis to be due to some syphilitic deposit within the head.

3. *Sarcoma of the Kidney.*—Mr. ALFRED BAKER showed a large sarcoma of the left kidney which had been removed from the body of a single woman, aged 26, who had died in the General Hospital. Eleven months before her death, the patient had accidentally discovered a fulness on the left side of the abdomen and loin, but it was painless. She suffered soon after from frequent vomiting. The urine was healthy and secreted in fair quantity. The tumour steadily increased in size up to the time of death, extending from the last rib downwards to within a short distance of the anterior superior spine of the ilium, and from the outer boundary of the left loin to within an inch of the umbilicus; surface smooth, and of ovoid shape; consistence firm, and somewhat elastic. It could be pushed upwards under the ribs, backwards so as to distend the loin, and a little inwards, but it could not be depressed. Its position

is uninfluenced by diaphragmatic movements. At the necropsy, the left kidney was seen to be converted into a morbid mass, forming a tumour which weighed, when removed, four pounds and nine ounces. Under the microscope, its structure was found to be benign.

4. *Melanotic Tumour of Groin*.—Mr. ALFRED BAKER showed a melanotic tumour of the groin and buttock which had been successfully removed from a married woman, aged 42.

5. *Cancer of Liver*.—Dr. FOSTER exhibited a liver, the seat of cancer.

6. *Encysted Empyema*.—Dr. RUSSELL brought the temperature chart, and narrated the history of a case of prolonged encysted empyema which had been cured by tapping and the subsequent use of a drainage-tube.

7. *Fatty Degeneration of Placenta*.—Dr. MALINS exhibited a foetus as an illustration of abortion induced by fatty degeneration of the placenta.

8. *Pessaries*.—Dr. MALINS exhibited Dr. Thomas's intrauterine stem pessaries, and an improvement upon them devised by himself.

9. *Strangulated Hernia*.—Mr. VINCENT JACKSON, in exhibiting a case of strangulated congenital inguinal hernia cured by operation, made some remarks upon the dietetic therapeutics of herniotomy. He recommended, after operation, that the stomach and intestines should be kept perfectly at rest; giving nothing by the mouth but a little ice or brandy and water, and supporting the patient by nutritive enemata at fixed periods. The treatment should be continued until the bowels naturally relieved themselves. If opium were required, it could be given either in the injection or as a pill.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 14TH, 1873.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

AN ANALYSIS OF SHIP AIR AND ITS EFFECTS. BY ALEXANDER RATTRAY, M.D.

[Communicated by GEORGE BUSK, F.R.S.]

THE author remarked that much, perhaps nine-tenths, of the sickness prevalent in H.M. Navy was preventable, and that many diseases resulted from impure air. Experiment shows that ship air is more vitiated than is generally supposed. No analysis had hitherto been made. Measurement showed that in H.M. frigate *Bristol*, the type of a large class, the crew had little more than from 100 to 120 cubic feet space at night and 60 at meals; the officers about 400. This contrasted with the 600 cubic feet allowed soldiers in cold and 1500 in warm climates. Dr. RATTRAY believed this to be the chief reason why ship air is more impure than that of barracks or private dwellings generally. Although large iron-clads give a greater air-space, they are more shut in, and the internal atmosphere is probably equally impure. The results of a hundred and fifty experiments, during a four months' voyage from the Cape of Good Hope to England, showed that carbonic acid, chiefly derived from the lungs, is the great impurity. This varies from 4 to 18 volumes per 1000, and even more in the deeper parts. For obvious reasons, it is most abundant where and when the men are crowded—e.g., on the berth-deck, at meal-times, and at night. It also varies with the ventilation. Ammonia from the urine; sulphuretted hydrogen and sulphide of ammonium from the bilge; volatile organic matter chiefly from the lungs, skin, and mucous membranes; watery vapour from the skin, lungs, and sodden decks; microscopic floating dust or *débris* from the ship, stores, and crew were also estimated; the quantities being found to be more abundant than is consistent with health. Ozone diminishes as the impurity increases, and is absent in the innermost parts. The mechanical and chemical pathological effects of carbonic acid, Dr. Rattray said, are immediate and remote. From nightly renewed imperfect blood-aëration follow lung-congestion and a predisposition to pulmonary and cardiac ailments, easily excited by the sudden chills of night-work and severe exercise aloft. Hence the frequency of diseases of the respiratory and circulating systems—e.g., phthisis, bronchitis, catarrh, etc. From the non-elimination, and perhaps reabsorption, of carbonic acid spring general poisoning of the blood and tissues, imperfect nutrition and function of every organ and system, whether nervous, muscular, or granular, a long list of more or less obvious, but perhaps oftener obscure ailments, and ultimately premature old age. These results are aided by the long inhalation of organic matter—sulphide of ammonium, etc., and perhaps by the deficiency of ozone. In conclusion, Dr. Rattray insisted on the necessity of giving ships the best ventilating apparatus; of always keeping this efficient and at work;

and of not trusting solely to fixed systems, but aiding these, when possible, by others; as the air which all, and especially fighting men breathe, cannot be too pure.

The PRESIDENT asked whether any comparison had been made as to the sanitary state between the ships of the royal navy and the mercantile marine. He believed that in the latter the defects were greater.—Mr. R. B. CARTER described an American apparatus for ventilating ships which he had seen in operation on board H.M.S. *Vigilant*, in Plymouth Sound. It consisted of vertical tubes connected transversely below the deck, and containing water, so that by the rolling of the ship a vacuum was produced and air was pumped out. The bilge was in this way purified in two hours. In harbour, the apparatus was put in operation by the men running from one side of the ship to the other. The Admiralty had ordered the apparatus to be fitted to three or four other ships; it was used in the whole United States navy and in many of their merchant vessels.—Dr. ALTHAUS hoped that the medical officers of the navy would more frequently bring contributions before the Society. According to Vierordt, the amount of carbonic acid in crowded rooms and theatres was about 6 feet only in 10,000; and the dangerous effects of foul air did not arise so much from carbonic acid as from other compounds, especially sulphide of ammonium. The amount of oxygen absorbed during sleep varied very much from that taken in during the day. Pettenkofer found that two-thirds of the oxygen absorbed during the day were inhaled during the eight hours of sleep. Hence the popular instinct in favour of large bedrooms was in agreement with scientific observation. No means of improving the condition of ships, Dr. Althaus said, had been suggested in the paper. He would recommend the use of lime-water to absorb carbonic acid.—Dr. SYMES THOMPSON did not think that sailors were so liable to disease as would appear from Dr. Rattray's paper. Cases of chest-disease were not numerous among sailors in London. There were at present two sailors in the Consumption Hospital at Brompton. Sailors generally suffered from emphysema rather than from tubercular disease. Of those who were entered as sailors in the hospital returns, many were stewards and other men employed below. Hence it would seem that exposure on the deck lessened the liability to disease by allowing fresh air. The danger of imperfect ventilation was increased in vessels of the turret and ram class, as the only method of ventilation was by pumping in air by means of an apparatus which might at any time be disabled.—Mr. CHARLES HAWKINS remarked that there was a fallacy as to the liability of certain occupations to produce disease. The trade of tailors, for instance, was regarded as unhealthy; but this, in reality, arose from the fact that all the men of weak health became tailors. No man with a feeble frame ever became a butcher.—Dr. BARCLAY said that the amount of cubic space allowed was of less importance than the constant renewal of the air.—Dr. RATTRAY said that the air in merchant vessels was more impure than in the men of war. He believed that the simplest plan of ventilation was by means of a stove below, so that the heated air might be caused to ascend; and the bilge might be emptied by a hand-pump opening outwards.

PATHOLOGICAL SOCIETY OF LONDON.

JOHN HILTON, Esq., F.R.S., President, in the Chair.

TUESDAY, JANUARY 7th, 1873.

The Annual Report of the Council was read and adopted. It showed an increase of twenty-seven members, there being now five hundred on the roll of the society. There was a balance of £160 at the banker's. The sale of the Transactions had brought in £44. The following alterations in the rules of the Society were adopted: That the trustees shall be, *ex officio*, members of the Council. That the words "Exclusive of the Trustees," be inserted in Bye-law xxii. "One third of the members of the Council—exclusive of the Trustees—shall be annually replaced by an equal number of members chosen from the Society at large." The list of office bearers recommended by the Council, which has already appeared in the JOURNAL, was passed.

Four Aortic Valves.—Dr. PEACOCK exhibited a heart which presented the rare condition of four aortic valves or the attempt to produce four, three of which were blended into one large valve. The patient from whose body the specimen had been taken, had suffered from repeated attacks of acute rheumatism, and died of cardiac disease, affecting both aortic and mitral valves, and embolism of the brain.

Plugging of the Portal and Splenic Veins.—Dr. PEACOCK showed a liver with plugged portal and splenic veins, taken from the body of a temperate man, who had died with ascites and cirrhosis of the liver. He had been ill for several weeks before, and had suffered from sickness, diarrhoea, and ascites. He was tapped twice. The liver appeared cirrhotic, and the plug in the veins was of a very firm and hard

consistence.—Dr. MOXON asked if the condition of the liver was one of cirrhosis or atrophy. He referred to the details of several cases of chronic atrophy which he had seen, and in which there was ascites, but, so far as he could find, no mechanical obstruction in the liver; while, in cirrhosis, there was an actual obstruction from pressure on the vessels. He asked also what was the size of the spleen.—Dr. PEACOCK, in reply, stated that Dr. Payne had not completed his examination of the liver, but that the symptoms, during life, were those of cirrhosis. The patient had hæmatemesis. The spleen was large and hard, and weighed above thirty-four ounces.

Supernumerary Pulmonary Valve.—Dr. C. CARTER showed a heart with a fourth rudimentary pulmonary valve, taken from the body of a child. It was situated below the level of attachment of two of the valves, and had a distinct corpus Arantii. It caused no symptoms during life.

The Spinal Cord after Amputation at the Thigh.—Dr. THOMPSON DICKSON showed microscopical specimens and drawings, representing the changes which had taken place in the spinal cord after amputation of the thigh.—Dr. DICKINSON referred shortly to the published result of his researches on this subject, and pointed out wherein they differed from those described by Dr. Dickson.—Referred to a committee.

Peritoneum from the Pelvic Region.—Mr. GAY exhibited a piece of peritoneum from the pelvic region of a woman, with some pendulous fat and a pouch. The history of the case, and the necropsy, pointed, he thought, to the conclusion that there had been a femoral hernia which had receded, and that a pendulous piece of fat had been forced, by vomiting, into the sac. The woman died of peritonitis, caused by giving way of the gut behind obstructed colon. In reply to Mr. Hulke, he said that the specimen exhibited rather a pouch than a sac, and that no hernial contents were found in it.—Mr. HULKE remarked that he thought the case might have been one of reduction *en bloc*. Text-books stated that this occurred only in inguinal hernia; but, within the last year and a half, he had seen four cases in femoral hernia.

Stricture of the Colon.—Dr. DOWSE showed a specimen of complete cancerous stricture of the descending colon, removed from the body of a woman. He opened the colon as a last resource, but the woman postponed her consent to an operation until the intestine had sloughed and ruptured, and she died six hours afterwards.

Recurrent Sarcoma of the Leg.—Mr. SPENCER WATSON exhibited a leg removed by Dr. J. Swift Walker, of Hanley. Many fruitless efforts had been made to save the limb by extirpating tumours, of the spindle-celled sarcomatous variety, which had been from time to time exhibited at the society's meetings. The last operation was performed three weeks before amputation; and, since then, three fungoid masses, with hemispherical projecting surfaces, had presented themselves, each being of the size of a walnut. The calf of the leg was occupied by similar growths; and this, together with the amount of tissue and important structures involved, made it hopeless to attempt to save the limb.

Resolutions, conveying the thanks of the Society to Mr. HILTON and Mr. HULKE, the retiring President and Secretary, and to the other officials of the Society during the past year, were passed and responded to.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 10TH, 1873.

SIR WILLIAM GULL, Bart., M.D., President, in the Chair.

THIS was the annual meeting of the Society, for the election of the officers and other members of the Council. The annual report of the Council was read and adopted. It showed a healthy condition of the Society. There were 222 members; the income was upwards of £281, while the expenditure was £215 19s. There were now thirty-two non-resident members. The balloting list of the members recommended by the Council to fill the vacant offices was adopted. The following new rules and alterations in the existing rules were proposed by the Council.

After Rule X—"A member who has retired from the Society, and wishes to rejoin it, must be proposed and balloted for in accordance with Rules V, VI, and VII."

In place of Rule XII—"Every ordinary member, when elected, shall pay in advance an admission fee of two guineas, and shall not be required to pay any further subscription for the session during which he has been elected."

In place of Rule XIII—"Every resident ordinary member shall pay, in advance, in the month of October in each year, an annual subscription of one guinea, but members elected at any meeting subsequent to the first meeting in April of any year, shall be exempt from paying any subscription for the next following session."

After Rule XVI—"The President, at the termination of his year of office, shall not be eligible for re-election in the succeeding year."

In place of additional Rule III—"Non-resident members, elected prior to January 10th 1873, shall be entitled to purchase the *Transactions* of the Society at prime cost."

To omit Rule XXXIX, which is as follows—"The *Transactions* shall be purchasable by members of the Society at prime cost."

These new rules and alterations were adopted, with the exception of the addition to Rule XVI, which was negatived by a large majority; and the omission of Rule XXXIX.

It was also proposed that the Rules, as modified at the annual meeting, be collected, renumbered, and published in the next volume of the *Transactions*.

Mr. DE MORGAN, in graceful terms, proposed, and Mr. BARWELL seconded, a vote of thanks to the President, the Medical Secretary, Dr. Buzzard, and the other retiring officers. Sir. W. GULL and Dr. BUZZARD responded.

Cleansing of Wounds.—Mr. CALLENDER brought before the notice of the Society the arrangement adopted in his wards at St. Bartholomew's for the use of camel-hair brushes for the cleansing of wounds. He pointed out the importance of gentleness in dressing, and stated that, by using the brushes, the cleansing of a wound was no longer in any instance a painful process. The chief object, however, of the plan recommended, was to do away with the employment of sponges and other materials commonly used for cleaning wounds, which some surgeons believe to be a frequent cause of the passage of infectious material from one patient to another. During nearly two years, of one hundred and forty-eight patients operated on, excluding hernia operations, in the wards, only four had died.

Cysts in the Cerebellum.—Dr. LOCKHART CLARKE described the case of a naval officer, aged 47 at the time of his death, who received a severe blow at the back of his head thirty years before. In the early part of 1869, he was in the *Tagus* with his ship, and suffered severely from intermittent fever, attended by great headache and occasional delirium. Some months afterwards he returned to England, suffering from frequent attacks of most intense pain at the back of his head. These attacks recurred every morning, and lasted about an hour. They were usually succeeded, first by rigors and then by heat of skin, but not by sweating. His general health was much impaired, and the digestive organs much deranged. After a few months' improvement under treatment, the headaches returned with great violence, and gradual impairment of vision until he became totally blind. The pain extended down the spine; his gait was unsteady; and there was dysphagia, and sometimes vomiting. On June 3, 1872, he expired quietly, his intellect remaining perfectly clear until the last moments. At the necropsy, there was found to be general venous congestion of the brain, the substance of which was firm. The lateral ventricles contained about six ounces of fluid. On the posterior inferior aspect of the left lobe of the cerebellum a clot of blood about the size of a florin was found resting; and beneath this, embedded near the surface of the cerebellum, were two cysts filled with glairy fluid—one about the size of a walnut, the other about the size of an almond. The patient's mother died after a succession of paralytic seizures during several years. The necropsy showed atheromatous arteries of the brain; patches of softening cysts in the white substance of each lobe of the cerebellum; and atrophy of the substance and nerve-cells of one of the salivary bodies of the medulla oblongata. One of this gentleman's sisters is now under Dr. Clarke's care for paralysis agitans, with a curious complication, viz., persistent contraction of the left wrist, extension of the first phalanges, and contraction of the remaining phalanges, forming a complete *main en griffe*, without any atrophy of the interossei or other muscles of the arm. As was the case with her mother's, her diathesis is gouty.

The discussion on Dr. Clarke's paper was adjourned until the next ordinary meeting.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 2ND, 1872.

THOMAS BRYANT, Esq., President, in the Chair.

Intrathoracic Suppuration.—Dr. SANSOM exhibited a child, aged 13 months, who had been under his care at the North Eastern Hospital for children since April 29th, 1871. There had been signs of pleurisy existing with symptoms of phthisis; absorption of pleuritic effusion, leaving density of the upper lobe of the right lung; and softening of pulmonary structure with subsequent suppuration, the abscess bursting externally. The child progressed towards recovery until May 21st, 1872, when a like suppuration took place over the lowest lobe. After evacuation of the pus the child rapidly gained strength, and was now in a fair condition.

Tumour of Orbit.—The PRESIDENT brought forward a man, aged 24, suffering from a tumour of the orbit. It had been growing for five years. He thought it was an ivory exostosis. The sight was good, although the eye was much displaced.

Pneumothorax and Empyema.—Dr. SYMES THOMPSON described the case of a woman, aged 23, who was admitted into the Brompton Hospital for Consumption, on January 30, 1872. She had been ill two years; and had had bronchitis, pneumonia, and pleurisy, three or four times. Hæmoptysis had occurred several times during the twelve months preceding admission. On April 6th she was seized with severe pain on the left side, and dyspnoea. It was evident that pneumothorax had occurred; and, a week afterwards, on raising the patient in bed, the tympanitic percussion-sound at the base of the left chest was found to be replaced by dulness. Paracentesis was performed on May 19th, and three pints and a-half of offensive purulent fluid were drawn off, with great relief. On June 26th, diarrhoea set in; the mouth subsequently became aphthous; and the patient died on October 10th. At the necropsy, the right lung was found to have tubercle scattered through the middle lobe and the apex. The left lung occupied only one-third of that side of the chest. Its surface presented a depression, through which a probe could be passed into the interior of the lung. The heart was pale and flabby. Dr. Thompson remarked that the perforation was preceded by symptoms of spreading disease. But for the occurrence of diarrhoea, due to perforation of the bowel, recovery might have occurred.—Dr. THOROWGOOD said, with reference to Dr. Sansom's case, that mischief commenced in the lung, but whether the abscess was in the lung or on the surface was difficult to determine. If the admission of pus into the pleural cavity could be prevented by puncture such a course was advantageous.—Dr. HARE thought that Dr. Sansom's case was one of empyema secondary to lung-mischief.—Dr. C. T. WILLIAMS agreed in Dr. Hare's view of Dr. Sansom's case. In Dr. Symes Thompson's case he had quite agreed in resorting to operation. He thought that the prognosis in pneumothorax was very bad in hospital practice; in private practice it was much better.—Dr. DOUGLAS POWELL and the PRESIDENT also made remarks.

Mediastinal Tumour.—Dr. DOUGLAS POWELL described a case of mediastinal tumour occurring in a man aged 29, a patient at the Brompton Hospital. The heart was displaced to the right side; and at the lower lobe of the left lung were dulness and loss of breath-sound. At the necropsy, a large lymphomatous growth was found occupying the posterior mediastinum, invading the left lung, consolidating the whole lobe and the lower four fifths of the upper lobe, pressing aside the heart, and involving the left auricle. No other glands than those of the posterior mediastinum were involved.

MONDAY, DECEMBER 16TH, 1872.

THOMAS BRYANT, Esq., President, in the Chair.

Traumatic Pericarditis.—Dr. FARQUHARSON related a case in which the patient was accidentally stabbed while playing. The knife entered the chest close to the upper border of the sixth rib. On recovering from the shock, symptoms of pericarditis supervened, with a transient friction-sound and signs of moderate effusion. Recovery was rapid, and the patient was enabled to return home twenty-one days after he first came under notice. In the course of the case there were signs of fluid in the left pleural cavity, which Dr. Farquharson believed to be blood. It did not interfere with recovery. Rest, quiet, and avoidance of all disturbing causes were believed to be the true indications of treatment in such cases.

Cataract.—Mr. BRUDENELL CARTER showed a man who illustrated the advantage of a new operation for cataract, devised by Dr. Taylor, of Nottingham. He related details of cases upon which he had performed this operation, and showed some drawings.

Fracture of the Pelvis.—Mr. RICHARD DAVY showed the pelvis of a man, aged 43, who, having fallen ninety feet, in May, 1871, died a few hours afterwards of internal hæmorrhage. The left auricular facet of the sacrum was completely broken off, and dislocated upwards on the left ilium. The symphyseal end of the left ilium was half an inch higher than the right, but the osseous abrasion at this part was very slight. The left sacral margin and left lumbar transverse processes were roughly rasped off. The coccyx was pulverised, and the left femur simply comminuted. The right ramus of the ischium and os pubis were fractured on their pelvic aspect only.

Tumour of the Arm.—Mr. ROYES BELL showed a tumour occupying the lower and inside part of the right forearm, just above the wrist. On dissection, it appeared to spring from the ulnar artery, and to involve the lower end of the ulna. It was about the size of a Tangerine orange, and projected in front and behind the forearm. There was ulceration where a puncture had been made in its anterior aspect; behind, it was covered with skin, discoloured in places, and superficially ulcerated

here and there. The specimen had been hardened in strong spirit, so that it appeared firm; but, at the time of operation, it was clotted with blood. The patient was a woman, aged 61. She suffered with it five years. Frequent hæmorrhage had taken place from the opening caused by a puncture in front. Its origin was attributed to a blow.

MONDAY, DECEMBER 23RD, 1872.

THOMAS BRYANT, Esq., President, in the Chair.

Ossification of the Longitudinal Sinus.—Dr. J. BRUNTON showed a specimen illustrating a condition which he described as ossification of the longitudinal sinus and membranes of the brain. There was also a slight patch of softening. The patient died of fatty degeneration of the heart. She was a woman, 27 years of age.

Morbus Cæruleus.—Dr. BRUNTON also showed a lad, aged 19, who was the subject of morbus cæruleus; he had blue lips, livid skin, occasional hæmoptysis and ecchymosis. Now and then he had palpitation.—The PRESIDENT related a case which he thought illustrated the remarkable resistance of disease with which these patients are endowed. A young lady, aged 22, had severe rheumatism with heart-affection, from which she recovered perfectly.—Mr. ERASMUS WILSON said that reptiles were less obnoxious to inflammation than warmer-blooded animals, and persons with morbus cæruleus partook somewhat of the character of these creatures as regarded their hearts.

Excision of the Elbow-Joint.—Mr. HENRY SMITH showed a specimen illustrating primary excision of the elbow-joint for injury. The arteries and nerves were not involved, but the whole joint was so injured that he performed primary excision.—The PRESIDENT was glad to hear of the repetition of the operation of primary excision of the elbow-joint for injury. He had lately seen a man upon whom the operation had been performed thirty years ago by Mr. Cock, when an excellent arm was preserved.

Changes of Colour in the Hair.—Mr. E. WILSON showed two locks of hair, one white and one black. A lady, aged 37, while pregnant, had a shock, after which all her hair fell off, and she became bald for a year. Her hair then came again, but was quite white, and remained so three years. Ultimately it became dark again, and even blacker than before. The influence of the nervous system was well known. Perhaps, in this case, the change was intensified by pregnancy, in which condition the tissues were subject to important changes. It differed from cases of hereditary baldness. The eyebrows and lashes were not white. He mentioned a specimen in which the hair was brown and white in equal segments. It was inferred that the brown was grown in the day and the white in the night.

Galvanism in Infantile Paralysis.—Mr. WM. ADAMS brought forward two cases, illustrating the advantages of galvanism in infantile paralysis. Both legs should be put under water in separate vessels, and then one pole should be applied to each limb. After this, each muscle should be separately galvanised. He agreed generally with Sir Benjamin Brodie's remarks, "that if recovery did not take place within six months, the case was almost hopeless."—The PRESIDENT still was of opinion that early galvanism was injurious. He had seen bad results from that practice, and thought it should not be used under three or four months.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, DECEMBER 6TH, 1872.

RALPH GOODING, B.A., M.D., President, in the Chair.

Chronic Dysentery.—The SECRETARY read some notes on chronic dysentery, communicated by Mr. HARRY LEACH. The author dwelt upon the very meagre amount of authoritative writing that existed on the subject, and quoted the statistics of the Seaman's Hospital, to prove how many cases arrived annually in England, and to show that, as the means of locomotion increased, cases of imported disease were likely to multiply amongst us in direct proportion. The etiologies of the disease showed that nearly all the cases quoted came from India, China, and the Delta of the Danube. Much stress was laid on the pronounced pathological conditions, consisting almost exclusively of extensive ulcerations in the large intestines. After detailing the symptoms, history, progress, diagnosis and prognosis of the disease, Mr. Leach enumerated the various drugs and methods of treatment that had been prescribed in the *Dreadnought* for the last sixteen years, during which time about 700 cases had passed the hospital, with an average mortality of 10 per cent. The gist of these remarks went to prove (according to the author) that in most such cases, inasmuch as the mucous surface of the large bowel was in a great measure destroyed, as well as portions of the muscular coat, it was not surprising to find, that drugs had done little or no good; that ipecacuanha in this stage of the disease was inert; and that, in fact, rest

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or the bowel, as well as for the body, was the chief and almost the sole curative agent that could be relied on with any amount of confidence. An occasional dose of castor oil and laudanum, as recommended by Dr. Stephen Ward, was given; a very bland diet, and rest in the horizontal position, would in most cases bring the patient to a fair state of convalescence. Direct stimulants were deprecated, except in cases of extreme exhaustion.—A discussion followed, in which Drs. Clapton, Purvis, Hilton Fagge, Moon, Stephen Ward, Creed, Gooding, and Mr. Lockhart took part.

Perforating Gastric Ulcer.—An interesting specimen of perforating gastric ulcer in a woman (causing death in a few hours) was exhibited by the President.

Apoplexy.—Dr. CARR showed a case of apoplexy with clot on the pons Varolii and cerebellum, and atheroma of the basilar artery, occurring in a policeman, aged 31, who, whilst on duty, was suddenly seized with giddiness and sickness, and going home died shortly afterwards. There was an undoubted syphilitic history attached to this case.

CORRESPONDENCE.

ETHER AS AN ANÆSTHETIC IN OPHTHALMIC CASES.

SIR,—The unfavourable experience of the house-surgeon of the Royal London Ophthalmic Hospital respecting the use of ether in ophthalmic cases, exactly coincides with that of Mr. Wilson of Dublin, as detailed by him at the Surgical Society of Ireland a month ago. I think that the statements of these two gentlemen, being so completely coincident, go far to prove that ether *as administered by them* is an anæsthetic unsuitable for the performance of eye-operations. They do not, however, afford the least evidence that that anæsthetic given in a different manner produces the results which they have experienced, or is open to any objection in ophthalmic practice; and my observation of its use in a considerable number of ophthalmic operations of all degrees of gravity, enables me to say that the unpleasant symptoms to which these gentlemen have referred are in no respect the fault of the anæsthetic, but are dependent entirely on the method of administration. I have not seen ether administered by the towel and sponge, but I am not at all surprised to learn that its use in that way—mixed with a large volume of air—has given rise to violent delirium and vomiting. I am satisfied that those *désagréments* are the result of the dilution of the vapour with air, and that they will almost never occur if the ether be given by the inhaler recently invented by Dr. Morgan of Dublin. The principle of this instrument is to exclude the air as much as is possible, and to cause the patient to rebreathe the vapour until perfect anæsthesia is produced. I have, within a few months, performed forty-two operations on the eye with the aid of ether given by Dr. Morgan's inhaler. In one case only out of the whole was there vomiting during the operation, the patient having, in disobedience to orders, taken a full meal immediately previously. In no case was there sickness afterwards. In several cases there was muttering delirium, but in only one was there violent excitement, which we were unable to understand until we discovered that the elastic diaphragm of the inhaler was torn, and that a quantity of air was being inhaled with the ether. In nine-tenths of the cases the anæsthesia was rapid, calm, complete, and undisturbed, and the recovery was immediate and unchecked. As the mouthpiece of the inhaler fits closely to the face, a very small quantity of ether vapour can reach the atmosphere of the room, and the conflagration which "the house-surgeon anticipated" is impossible.

This report of the administration of ether may meet with some scepticism in consequence of its roseate colouring; but I believe that any of your readers, who will make trial of the administration with the inhaler to which I refer, and with a good specimen of the ether, will be satisfied that I am not chargeable with exaggeration. Arguments against the use of that agent are meaningless, unless it be shown that it is given in the right way. I am, etc.,

ARCHIBALD H. JACOB, M.D., F.R.C.S.

Dublin Infirmary for Diseases of the Eye and Ear.

ADMINISTRATION OF ETHER.

SIR,—In your JOURNAL, several observations on etherisation have been recorded, which have given somewhat varying results. As I find the use of ether by the inhaler to answer most satisfactorily and completely, the publication of the following rules may assist greatly any of your readers who desire to use ether as the safer agent. The inhaler gets rid of the difficulties alluded to by one of your correspondents, of possible ignition while operating by artificial light, of diffusion of the vapour through the chamber, of waste of ether, of sickness, and, but with few

exceptions, of excitement. If ether be deserving of trial at all, it should be used on the best principle.

Directions for Etherisation by the Inhaler.—See that the patient has had no food for three or four hours previously.—Except in very urgent cases, give no stimulant beforehand.—Let the head be very well raised on pillows.—The patient may lie on the side, or in any position that may be convenient, or may recline in a chair, care being taken that respiration can be carried on freely, and that there are no strings or impediments round the chest or neck.—While the patient is being arranged, the ether may have been poured into the inhaler; three ounces as an average will suffice, but less for a child; the cap is to be put on the inhaler directly; the vapour will have diffused itself within the interior during the few minutes thus occupied.—The patient should now make a full expiration, and the mouthpiece be then applied *closely and firmly* over the mouth and nose by the patient himself, or by the surgeon's assistant.—The breathing will be shallow at first, and the patient may even wish to remove the mouthpiece; this may be allowed to be done once or twice, but after that the mouthpiece is to be held firmly and closely applied.—As the breathing becomes fuller, the India-rubber diaphragm will be seen to ascend and descend vigorously; this shows that the patient is nearly under the influence, and will occur usually in three or four minutes; should the patient not show indications of yielding by that time, two or three more ounces may be poured in, and the cap replaced. In a few minutes more, the patient should be insensible, and may snore.—When this condition of perfect anæsthesia is produced, the mouthpiece may be removed from time to time according to the condition. It may be necessary to add more ether should the patient show evidence of recovery too soon, and the discretion of the administrator will regulate the amount used.—The inhaler may be enclosed with a hot towel or flannel in order to assist in the volatilisation of the ether.—Air should be excluded from the inhaler or mouthpiece.—When the operation is completed, it will be found that the patient will recover very soon from the influence.—There is no necessity usually for giving any stimulant.—There is no necessity to be timorous about submitting the patient fully to the influence of ether; very usually two or three ounces will quite suffice for the purpose.—*N.B.* Pure anhydrous ether of specific gravity 720 should be used. I am, etc., J. MORGAN, F.R.C.S.

23, St. Stephen's Green North, Dublin.

DISEASE OF THE RIGHT SIDE OF THE HEART.

SIR,—I think the lamented death of Mr. Graves, M.P., in conjunction with the accurate *post mortem* appearances detailed by Mr. Skelton, a legitimate opportunity to impress upon the minds of my professional brethren the importance of a more careful consideration of disease of the right side of the heart during life.

When I published my little book on the subject in 1866, after twelve years of careful observation, I did so under a serious mistrust of my individual opinion, and begged to gather the experience of others in the same direction.

That the faulty state of the right auricle (not fatty degeneration) may be diagnosed by the careful observer during life, I have not the slightest doubt; and the physician may thus warn his patient against the over-taxing that organ. Indeed, during the past summer I met with the case of a gentleman only forty-three years of age, who died suddenly; and the testimony given before the Coroner after *post mortem* examination was that "the cause of death arose from rupture of the right auricle into the pericardium."

I am, etc., THOS. MEE DALDY, M.D.

CHRONIC INFLAMMATION OF THE BLADDER AS A CAUSE OF CALCULUS.

SIR,—Just now, when the above-named subject is attracting much attention, I should like to draw some notice to certain observations made by Dr. Thudichum, and published at page 281 of the Tenth Report of the Medical Officer of the Privy Council. The observations refer to calculi arising in the urinary bladder in typhus.

It seems that, during the anæmic state of recovery, ammoniacal decomposition of the urine takes place, mucus is secreted, phosphates are deposited, and calculi are formed, which rapidly increase, and, if not removed, cause kidney-disease and death.

The calculi examined by Dr. Thudichum, four in number, arose in this way. They were as large as walnuts, were white and hard, and each contained a small cavity. There was little doubt that the contents of these cavities were originally mucus, upon which the outer matter had been deposited. The mucus, drying up, left the cavities.

In connexion with these observations, I observe the report by Pro-

fessor G. Sée, published in the BRITISH MEDICAL JOURNAL of this day, on the illness of the late Emperor Napoleon III. Anæmia appears to have been at one time a strongly marked feature in the case. The exhausted state of system thus caused might have been a predisposing cause of chronic cystitis; and, this condition of the urinary bladder once established, the calculus might have arisen as a consequence in the way shewn by Dr. Thudichum.

I am, etc., JOHN C. THOROWGOOD, M.D.
Welbeck Street, January 18th, 1873.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

PUBLIC HEALTH ACT: CONJOINT ACTION OF SANITARY AUTHORITIES IN SHROPSHIRE.

A MEETING of delegates of sanitary authorities in Shropshire was held at the Shirehall, Shrewsbury, on January 10th; W. Layton Lowndes, Esq., in the chair. Representatives of the following unions were present:—Bridgnorth, Atcham, Shifnal, Forden, Newport, Church Stretton, Clun, Cleobury Mortimer, Madeley, Ludlow, and Tenbury. Mr. Corbett, inspector, and Mr. Dansey, assistant-inspector, also attended the meeting.

The chairman reported that the following unions assented generally to the joint appointment of a Medical Officer of Health, namely:—Atcham, Church Stretton, Clun, Ludlow, Forden, Shifnal, Madeley, Bridgnorth, and Cleobury Mortimer; and that Newport and Tenbury would probably join.

After some discussion it was resolved:—1. That one Medical Officer of Health be appointed for all the assenting unions. 2. That the appointment be made, in the first instance, for two years. 3. That the salary be £800 per annum, to include travelling and all other expenses, and that the medical officer devote his whole time to the duties of his office. 4. That the testimonials be examined and the appointment made by three delegates from each sanitary authority. N.B. This appointment must be confirmed by each several sanitary authority. 5. That these resolutions be sent to each of the assenting Boards, and that they be requested to signify forthwith their assent or otherwise to the foregoing resolution, to W. Layton Lowndes, Esq., Linley Hall, Bridgnorth. That the Chairman, Captain Severne, and Mr. Corbett, are requested, when the replies have been received, to advertise for candidates, and to arrange the other preliminaries for the election of the Medical Officer of Health.

CHESHIRE SANITARY AUTHORITIES.

A CONFERENCE of the urban and rural sanitary authorities was invited by Mr. Corbett, Local Government Inspector, to meet at Chester, to consider the action to be taken in regard to the appointment of Medical Officers of Health. Nearly all the sanitary authorities in the county attended. After much discussion, it was thought desirable that one officer should be appointed for each union. The Macclesfield rural sanitary authority was not represented, but the clerk to that authority, who attended as the clerk to the Macclesfield Local Board, stated his impression to be, that the rural sanitary authority and the various local boards in the union would eventually combine.

At a subsequent meeting of the Macclesfield rural sanitary authority, the decision of the conference was brought under discussion. With this question of appointment of medical officer, that of the appointment of inspector of nuisances also became involved. The following resolution was passed by fifteen out of nineteen guardians present.

"That Mr. May [the clerk] be instructed to write to the Poor-Law Board, requesting them to accept the appointment of our relieving officers for nuisance-inspectors; and that we require none of their paltry allowance, and trust they will interfere less in their official capacity with the Board of Guardians."

It cannot but be a source of regret that such a resolution should have been passed by so large a majority, at a meeting specially called for the purpose of considering appointments under the Public Health Act; and it augurs badly for the success of the Act in the rural parts of the Macclesfield union. The Macclesfield authority have followed the example of Birmingham, in thus refusing to be coerced by the Local Government Board. We shall, therefore, watch with interest the action which the central authority decides to take in these cases.

Scarlatina is very prevalent in the Macclesfield district; so much so, that one of the inspectors of the medical department has been sent to

make inquiry into the causes of the epidemic. One of the district medical officers stated that there were upwards of 170 cases in one part of the district. Yet, notwithstanding this, a proposition, that means of isolation should be provided, was negatived.

OBITUARY.

ROBERT METCALFE, M.R.C.S. Eng.

MR. ROBERT METCALFE was a pupil in the Liverpool Royal Infirmary School of Medicine, and subsequently in the Middlesex Hospital. An early desire for travel took him abroad, and he passed the greater part of his life in different parts of the world. His health eventually gave way, and he died of consumption on December 9th, 1872, aged 46.

DAVID THORBURN TAYLOR, M.A., M.B., & C.M.

DR. TAYLOR was born in Leith, where he received his early education. He passed through the various classes necessary for the degrees of M.A. and M.B. and C.M. in the University of Edinburgh with great distinction; and, as resident physician in the fever and small-pox wards in the Royal Infirmary, he rendered great service during the late epidemic. Afterwards, he obtained the senior resident surgeons'hip to the hospital of his native town, the duties of which he faithfully performed; and, after having worked in hot-beds of typhus for eighteen months, he fell a victim to it himself on December 21st, in the twenty-eighth year of his age.

NATHAN SMEDLEY, L.R.C.P. Ed., L.M., ETC.

MR. SMEDLEY was a native of Bolton. At the age of eighteen he commenced his medical education at the Liverpool Royal Infirmary School of Medicine. During his career at that school, he gained an exhibition (entitling him to six months' board and residence in the Liverpool Royal Infirmary), a silver medal, and a certificate for proficiency in anatomy and physiology. He received his diploma about thirteen months ago, and at once commenced practice in his native town, and gave every promise of becoming a successful and able practitioner. About six weeks before his death, he contracted scarlet fever in the discharge of his professional duties, and although for a time he progressed towards recovery, yet he eventually succumbed on the 28th ult. from uræmia. He was most kindly and assiduously attended by Dr. Howarth, his friend and neighbour, and he was also visited by Dr. William Roberts of Manchester, and Dr. Waters of Liverpool. His death is universally regretted by all classes; for, by his kind heartedness, true gentlemanly conduct, and other good qualities, he had won the respect and esteem of all with whom he came into contact. He was twenty-three years of age, and leaves a widow and one child aged two months.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, January 16th, 1873.

Austin, Corneley, 115, Gower Street, W.C.
Hacon, Walter Edward, Mare Street, Hackney

The following gentleman also on the same day passed his primary professional examination.

Saberton, Frederick William, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Place, John Newton, Spencer Street, Canonbury
Roberts, William Henry, Major Road, Jamaica Road
Rayson, Arthur John, Yoxford, Suffolk

MEDICAL VACANCIES.

THE following vacancies are announced:—

ANDOVER UNION—Medical Officer for the Fyfield District: £65 per annum, and extra fees.

ATCHAM UNION, Salop—Medical Officer for the Battlefield District: £70 per annum.

BELPER UNION, Derbyshire—Medical Officer and Public Vaccinator for the Markeaton District: £11 per annum, and fees.

BOLTON URBAN SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

BRADFORD, Yorkshire—Medical Officer of Health.

BRIGHTON AND HOVE LYING-IN INSTITUTION—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.

CHARING CROSS HOSPITAL—Physician or Surgeon for the Treatment of Diseases of the Skin.—Assistant-Surgeon.

CHEL TENHAM GENERAL HOSPITAL AND DISPENSARY—Resident Surgeon to the Branch Dispensary: £120 per annum, furnished residence, and allowances for servants, coal, gas, etc.

DUNFANAGHY UNION, co. Donegal—Second Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Crossroads Dispensary District: £100 per annum, and fees.

EAST RETFORD UNION, Nottinghamshire—Medical Officer for the Scrooby District.

GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.

GERMAN HOSPITAL, Dalston—Honorary Assistant-Physician to attend Out-Patients.

HARTLEY WINTNEY RURAL SANITARY DISTRICT—Medical Officer of Health: £120 per annum.

INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.

INFIRMARY FOR EPILEPSY AND PARALYSIS, Portland Terrace, Regent's Park—Medical Superintendent: £50 per annum.

IVERNESS DISTRICT LUNATIC ASYLUM—Assistant Medical Officer: £70 per annum, bed, board, and washing.

ISLINGTON DISPENSARY—Resident Medical Officer: £160 per annum, apartments, and coal.

KILRUSH UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Carrigaholt Dispensary District: £100 per annum, and fees.—Ditto for the Cragaknoch Dispensary District: £100 per annum, and fees.

MANCHESTER ROYAL EYE HOSPITAL—Honorary Medical Officer.

MERTHYR TYDVIL UNION, Glamorganshire—Medical Officer for Workhouse.

NAVAL MEDICAL SERVICE—Assistant-Surgeons.

NEWPORT UNION, Monmouthshire—Medical Officer for the St. Woollos District and the Workhouse: £180 per annum.

NEWRY UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Newry and Crobane Dispensary District: £120 per annum, and fees.

NORTH UIST—Parochial Medical Officer.

NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £100 per annum, rooms, board, and washing.

PARSONSTOWN UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Frankford Dispensary District: £100 per annum, and fees.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—Medical Officer for In-Patients.

RADCLIFFE INFIRMARY, Oxford—Dispenser: £80 per annum, board, and washing.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL—Resident Medical Officer for Lock Wards: £150, raised in six months to £200 per annum, board, lodging, and washing.

SHEFFIELD GENERAL INFIRMARY—Assistant House-Surgeon: £65 per annum, board, lodging, and washing.

SHEPTON MALLET DISTRICT HOSPITAL—Medical Officer.

SHEPTON MALLET UNION—Medical Officer for District No. 1: £167 per annum.—Medical Officer for the Workhouse: £45 per annum.

STOCKTON-ON-TEES DISPENSARY—Medical Officer to visit and dispense: £120 per annum.

STOW UNION, Suffolk—Medical Officer and Public Vaccinator for District No. 3: £48 per annum, and fees.

SURREY DISPENSARY, Great Dover Street—Dispenser.

UNITED LAW CLERKS SOCIETY—Medical Officer.

UNIVERSITY OF LONDON—Assistant Registrar: £500 per annum.

WALTON-ON-THE-HILL—Medical Officer of Health: £30 per annum.

WEST RIDING LUNATIC ASYLUM—Clinical Assistant.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BALDING, Mortimer, B.A., M.B. Cantab., appointed Physician's Assistant to the Middlesex Hospital, London.

BLAND, William Charles, Esq., appointed Assistant Medical Officer to the Dorset County Asylum at Forston.

DEWAR, John, L.R.C.P.E., elected Honorary Surgeon to the Chelsea, Brompton, and Belgrave Dispensary.

***GILLARD**, Richard, Esq., appointed Surgeon to the Provident Association of Warehousemen, Travellers, and Clerks; and to the South Lambeth District of the Lambeth Union.

PALFREY, James, M.D., formerly Physician-Accoucheur to the Out-Patients, elected Physician-Accoucheur to the General Lying-in Hospital, York Road, *vice* *John Clarke, M.D., resigned.

POTTLE, Edgar George, L.R.C.P., appointed Vaccinator to the St. Luke's Division of the Holborn Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

DOLMAN.—On Thursday, January 16th, the wife of *A. H. Dolman, Esq., Surgeon, Derby, of a son.

LANCHESTER.—On January 5th, at Lansdowne Road, Croydon, the wife of *Henry T. Lanchester, M.D., of a daughter.

MARRIAGE.

VOSPER, William, Esq., of Plymouth, to Alice Mary, daughter of I. N. Jakins, Esq., Surgeon, of Osnaburgh Street, on January 9th.

DEATHS.

COTTLE, John Morford, Esq., Surgeon, at Southampton, aged 69, on Jan. 8th.

DOWSLAND, Francis M., Esq., Surgeon, at Weaverthorpe, on December 16th, 1872.

O'DWYER, John, Esq., Surgeon, at Bawtry, Yorkshire, on January 6th.

SMEDLEY, Nathan, L.R.C.P.Ed., at Bolton, aged 23, on December 28th, 1872.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. J. Thompson Dickson, "A Case of Trephining of the Skull for Epilepsy"; Dr. Habershon, "Some Cases of Disease of the Heart".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Jonathan Hutchinson, "A further Contribution on Cases of Vaccination-Syphilis"; Mr. Callender, "Removal of a Needle from the Heart: Recovery of the Patient".

EXPECTED OPERATIONS AT THE HOSPITALS.

WEST LONDON HOSPITAL, Tuesday, January 28th, 3 P.M. Lithotomy, by Mr. Bloxam; Excision of the Elbow-joint, by Mr. Butlin.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. HARRIS (Redruth).—Dr. Thomas Hawkes Tanner (of Henrietta Street) died some time since.

DR. SHETTLE's communication has been handed to the General Secretary, Mr. Fowke, for attention. We would again request correspondents to address all letters relating to the forwarding of Journals, advertisements, or other business matters, to the General Secretary and Manager, Mr. Francis Fowke, in accordance with the standing notice to that effect.

DR. CHARLES KIDD's letter is apparently written under a feeling of irritation. We can only repeat that, when he favours us with any list of references to deaths from any anæsthetic, they shall be duly published.

SKELTONIAN.—Members of the Royal College of Physicians of London and Licensitate of the King and Queen's College of Physicians in Ireland, use the title of Doctor by custom and courtesy.

ERRATUM.—In Mr. Ikin's paper in last week's JOURNAL, page 59, column 1, line 37 for "lawyers and examiners", read "lawyers and engineers"; and in column 11 line 10, for "meet", read "prevent".

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DRUITT TESTIMONIAL.

MR. HAYNES WALTON, the Treasurer, begs to acknowledge the receipt of the following subscriptions since Wednesday, December 18th :

£	s.	d.	£	s.	d.		
Mr. John H. Swift (N. Y.) .	25	0	0	Mr. J. Harris (Worthing)	2	2	0
Per Robert Dickson, M.D. :				Mr. T. Turner (Manchester)..	2	2	0
Messrs. Max Greger & Co.	21	0	0	Dr. Macdonald (St. Andrews).	2	0	0
Mrs. Dickson	5	0	0	Dr. Redfern (Belfast)	2	0	0
Dr. Dickson	5	0	0	Dr. J. A. Marston, Staff-surg.	1	1	0
Rev. R. Bruce Dickson ..	1	0	0	Dr. W. H. Corfield	1	1	0
Henry Smith, Esq., Ham-				Mr. F. J. Gant	1	1	0
moundsworth Hall	1	0	0	Dr. Rutherford	1	1	0
Mr. Bowman	10	10	0	Dr. Shann (York)	1	1	0
Messrs. S. Maw, Son, and				Dr. Swayne (Clifton)	1	1	0
Thompson	10	10	0	Dr. Thorowgood	1	1	0
Mrs. Brand	10	10	0	Per Dr. Moore :			
Sir C. Locock, Bart.	10	0	0	Mr. Tufnell (Dublin)	1	1	0
Mr. Renshaw	10	0	0	Mr. Langshaw (Lancaster)....	1	1	0
Sir Ranald Martin	5	5	0	Dr. Bathurst Woodman	1	1	0
Mr. W. Druitt	5	5	0	Mr. Wm. F. Teevan	1	1	0
Mr. E. Sercombe	5	5	0	Mr. Mylne	1	1	0
Dr. G. Budd (Barnstaple) ..	5	5	0	Mr. Henry Longley	1	1	0
Mr. T. Paget (Leicester)....	5	5	0	Mr. E. Bellamy	1	1	0
Mr. S. Swaide Browne	5	0	0	Mr. Hankin	1	1	0
Mr. Leggatt	3	3	0	Dr. Maul (Southampton)	1	1	0
Mr. W. Fuller (2nd sub.) ..	3	3	0	Mr. F. Worthington (Lowestoft)	1	1	0
Dr. Hardinge	3	3	0	Mr. Norris Davey (Romford) .	1	1	0
Dr. B. W. Richardson	3	3	0	Mr. J. E. Evans	1	1	0
Mr. Thomas Smith	3	3	0	Dr. Whitehead (Manchester)..	1	1	0
Dr. F. Weber	3	3	0	Mr. Liddle	1	1	0
Mr. Wm. Cecil	2	2	0	Dr. Iliff	1	1	0
Dr. Lonsdale (Carlisle)	2	2	0	Dr. Stevenson	1	1	0
Dr. Reynolds	2	2	0	Dr. Tripe	1	1	0
Dr. Routh	2	2	0	Mr. C. Wilcox (Wareham)....	1	1	0
Mr. G. Southam(Manchester)	2	2	0	Dr. R. Fowler	1	1	0
Dr. Wood (Gloucester)	2	2	0	Mr. Lord	1	1	0
Sir J. Rose Cormack (Paris)	2	2	0	Dr. Spencer Watson	1	1	0
Mr. A. Baker (Birmingham)	2	2	0	Dr. A. Carpenter (Croydon) ..	1	1	0
Dr. Letheby	2	2	0	Mr. J. Gay (2nd subs.)	1	1	0
Mr. Tilley	2	2	0	Dr. T. J. Walker (Peterboro') .	0	10	6
Mr. J. S. Bartrum (Bath) ..	2	2	0	Mr. C. Lingen (Hereford) . . .	0	10	0

Mr. G. Johnson, in last list, ought to have been "Dr. G. Johnson"; Mr. Thomas Mayo, is of Babbicombe, not "Winchester."

Subscriptions may be sent to the Treasurer, Mr. Haynes Walton, 1, Brook Street, Hanover Square; to the Secretary, Mr. A. Norton, 6, Wimpole Street; or be placed to the account of the "Druitt Testimonial Fund," Union Bank, Argyle Place, Regent Street, W.

Amounts received will be acknowledged in one or more of the Medical Journals.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MR. ISAAC BAKER BROWN.

SIR,—In the early part of last year, an appeal was made to the members of the medical profession on behalf of Mr. Isaac Baker Brown, who was then in great pecuniary difficulties, and suffering from an attack of apparently incurable paralysis. The profession nobly and generously responded to this appeal, and placed at my disposal the handsome sum of £404:10:6, to be expended as I thought best for Mr. Brown's benefit. I am now desirous of laying before the subscribers an account of the trusteeship with which I was honoured, and to give some particulars as to the expenditure of this money.

In the first instance, it was unavoidably necessary to release Mr. Brown from some pressing liabilities with which he was hampered. This absorbed about £50 of the fund. I afterwards allowed him two guineas per week for his maintenance. After a few weeks, it was thought desirable for him, in consequence of excessive bodily illness, to leave London for the country; and accordingly, at his own request, he resided for some time in an hydropathic establishment at Beulah Spa. This entailed an expenditure of three guineas per week. On his return to London at the end of the summer, I continued to allow him this sum, under the belief entertained by myself and other medical friends who saw and examined him, that, considering the acute character of his cerebral illness, his life could not be of long duration. Under these circumstances, I considered that I was only carrying out the wishes of the subscribers by liberally supplying him with all the substantial necessities of life, as well as a few comforts that his state of severe mental and bodily prostration rendered essentially necessary. Since Mr. Brown has been relieved from the pressure of want and all its accompanying anxieties, his bodily health has improved, although he is still paralysed, and requires the constant assistance of a nurse, being unable to stand alone, dress, or feed himself. In fact, he is nearly as helpless as a new-born child. Taking into consideration the probable duration of his life, consequent upon the improvement that has taken place in his general health, I have suggested to Mrs. Brown the necessity of curtailing the expenditure, and allowing him out of the fund two instead of three guineas per week. To this she has consented. After taking into account a few subscriptions which remained unpaid, and deducting a small sum which was expended in collecting the money, and advertising the lists of subscribers, there is now a balance in hand of £219:3:10.

Mr. and Mrs. Brown (whom I saw yesterday) are full of gratitude to those friends who so kindly came forward to their relief in the hour of their bitter distress. Personally, I desire to express my sense of the great obligation under which the subscribers have laid me, and to thank them for so liberally assisting in this work of Christian charity.

Cavendish Square, January 18th. 1873.

FORBES WINSLOW, M.D.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

"A HANDY BOOK OF MEDICAL INFORMATION AND ADVICE" is a reprint of a work published about ten years ago. It embodies in a few words and very clearly an indication of the symptoms and nature of common maladies, with judicious suggestions as to treatment and general management. It is a kind of book well fitted to be helpful to students and young practitioners, constituting, in fact, a handy book, to which they may turn, and from which they may in a few minutes learn the substances of what it would require much reading in the more extensive and formal treatises to acquire. It gives a great deal of the kind of information which students and young practitioners find it hard to acquire; and it is free from the old womanish notions which too often pervade books of this class. It is understood to be the work of a Hospital Physician.

SALUBRITY OF PLACES ON THE NORTH-WEST COAST.

SIR,—If Dr. Gibson, who has evidently paid much attention to the subject, would give more full information on it, he would confer a great favour on those who, like me, are often asked to advise invalids who cannot go far from home as to what place within easy reach is best to go. What we chiefly want to know is, in what place can a delicate person have most frequent out-door exercise without discomfort or danger. This is very imperfectly indicated by ordinary meteorological tables. The average temperature shews something, but not much, unless we know also the range of temperature. Middlesex, for example, is warmer than Lancashire on the average, but its winter is often much colder. The amount of rain that falls is a very imperfect indication of the wetness or dryness of the place, which depends more upon the frequency of rain than its quantity; and even its frequency does not shew much to whom the nature of its soil and the inclination of its surface are unknown or unconsidered. Far more rain falls at Keswick than at Manchester; it falls faster, is I think less frequent, and certainly runs off the surface far sooner. At Southport it sinks into the sand nearly as quickly as it falls, and annoys only whilst actually falling; whereas in some places near Manchester the surface-ground is never dry, the surface being nearly flat and the soil clay. The amount and force of wind is shewn in tables, but not the degree of exposure to it and of shelter from it; nor is it easy to find out the frequency of mist and cloud, all of which importantly affect the suitableness of a place as a residence for invalids especially.

The question altogether is a very complex one, but might, I think, be simplified, though not without much trouble. One of the questions to which a reply is needed is the rapidity with which heat is carried away from the body—Will it be faster than can be easily maintained by a weakly person? Observations of the thermometer alone give no answer to this question, for heat is carried away from a warm body more rapidly by cool moist air in motion than by much colder air at rest. We want a measure of the cooling power of air as it is felt, the combined effect of its temperature, moisture, and motion. Could not this be measured and recorded by observing the amount of cooling in equal times of equal quantities of water at blood-heat? I proposed this twenty years ago, but I do not know that it has been tried, though it very possibly may have been. If we knew the different rates at which heat would be carried away from the body at different places, and if we knew also the proportion of sunny and of gloomy days to be expected, we should be much better able to judge than we now are what places to recommend in different cases. We must, however, never forget that different parts of the same nominal place may have a widely different local climate. Clifton Hotwells, for example, is warm, sheltered, and relaxing; Clifton Downs dry, cold, and bracing—each place very suitable and very unsuitable for different cases; so that, when we select a place for its local climate, we must take care that we choose exactly the right place.

I am, etc.,

P. H. HOLLAND.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Jan. 18th; The Manchester Guardian, Jan. 22nd; The Aberdeen Daily Free Press, Jan. 13th and 16th; The Ulster General Advertiser, Jan. 18th; The Bath Express, Jan. 18th; The Scotsman, Jan. 21st; The Birmingham Daily Post, Jan. 20th; The Glasgow Herald, Jan. 15th; The Aberdeen Daily Press Press, Jan. 21st; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. W. S. Savory, London; Dr. George Johnson, London; Dr. J. Matthews Duncan, Edinburgh; Mr. Ikin, Leeds; Dr. Lombe Atthill, Dublin; Dr. Joseph Bell, Edinburgh; Dr. Lanchester, Croydon; Dr. Morgan, Dublin; Dr. Forbes Winslow, London; Dr. Thorowgood, London; Mr. G. Lawson, London; Our Paris Correspondent; Mr. Holmes, Leeds; Mr. Hulke, London; Dr. Hughlings Jackson, London; Dr. Felce, London; Mr. S. Chater, Boulogne; Dr. Shapter, Exeter; Our Manchester Correspondent; Mr. Jakins, London; Our Birmingham Correspondent; Mr. Clark, Dunster; Mr. Fletcher Beach, London; M.D. Edin.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Butt, Cheltenham; Mr. Liebreich, London; A Member; Our Edinburgh Correspondent; Mr. Vincent Jackson, Wolverhampton; Dr. C. Ritchie, Manchester; Dr. Archibald Jacob, Dublin; Mr. Fairlie Clarke, London; Associate, Norwich; Dr. Whitehead, Manchester; Mr. Haynes Walton, London; Dr. W. Moore, Dublin; Dr. Dobell, London; Our Glasgow Correspondent; Mr. Sharpin, Bedford; Mr. Goldsmith, Bedford; Dr. Julius Althaus, London; Mr. Nourse, Brighton; Dr. Harris, Redruth; Mr. Ribton Turner, London; Dr. Burroughs, Prees; Mr. Dolman, Derby; The Secretary of the Royal Medical and Chirurgical Society; Mr. Haviland, London; Our Dublin Correspondent; Dr. Daldy, London; Mr. Eastes, London; Mr. Coles, London; Dr. Gillespie, Accrington; Dr. Clapperton; Dr. Percy Leslie, London; Mr. Stamford, Tunbridge Wells; Mr. Bee, Bawtry; Dr. Shettle, Reading; Dr. Redwood, Rhymney; Dr. Mackey, Birmingham; A Member, Croydon; Mr. J. Smith, Jersey; Dr. Sheen, Cardiff; Mr. Welsh, Clun; Dr. Barnes, London; Mr. T. W. Bogg, Louth; Mr. W. Adams, London; Mr. Liddle, London; Mr. Preston, London; Dr. Marcet, London; Mr. Steele, St. May Church, Torquay; Dr. A. C. Johnston, Stoneyford; Dr. Creighton, London; etc.

CLINICAL LECTURES

ON THE

EXAMINATION OF PATIENTS BEFORE
OPERATING ON THEM.*Delivered at St. Bartholomew's Hospital.*

By W. S. SAVORY, F.R.S.,

Surgeon to and Lecturer on Surgery at the Hospital; etc.

II.

THE last, though most important of all inquiries, is the personal examination of the patient—the study of his general condition and the scrutiny of his principal organs by the surgeon.

Now, independently of any particular disease in any organ, persons differ very widely indeed in their capability of bearing an operation, both in the power of sustaining shock and in the power of subsequent repair. Note that the capacity for reaction must not be confounded with the power of resistance. Indeed, as the rule, they are inversely proportionate to each other. A certain degree of shock may produce very obvious disturbance of the system in the young, which, nevertheless, soon subsides. In the old, the same injury may be attended with scarcely any visible effect; yet, when an impression is made, it endures. So the influence of shock is more manifest, but more transitory in the young; less obvious, but more fatal in the old.

As life declines the vital powers diminish, and this loss becomes strikingly apparent when an injury or disease leads to an increased demand upon the resources of the system. There is less power in reserve, if it may be so expressed—less constitutional capital. In old age, the system may be equal to the task of maintenance, but it is far less capable of the extra exertion of repair. Those in advanced life are slow to rally. Reaction fails. But, independently of age, you continually hear it remarked that such or such a one is a good or bad subject for an operation, and this, not because of the presence or absence of any local or general disease commonly so-called, but because of his bodily condition, of his make or build, of his temperament or organisation. Thus an excess of fat, either locally or generally, is not a favourable circumstance. Adipose tissue is in the way of the healing of a wound, and very favourable to suppuration. Moreover, fat people usually bear the stress of constitutional disturbance worse than others. Disorders of the circulation tell more upon them, and they are especially unable to contend with any embarrassment of the respiration.

Persons, too, of what is termed gross habit of body, who are also usually too fat, but who give evidence of being out of condition by worse signs; whose tissues throughout are too succulent; whose minute vessels, on various parts of the surface, as the cheeks and elsewhere, are too distinctly mapped out; whose breath is strongly odorous, and sometimes foul; whose tongue is habitually coated—persons with signs like these are uncanny subjects for surgical measures. Their constitution is not clean. The wheels of life are clogged. Their blood and tissues are overloaded with the products of retrograde metamorphosis in stages short of that in which they should be expelled. They stand very little in the way of fever, and are wont to go out suddenly. Beware of subjecting people in this state to the shock of an operation or to much local injury; and if it must be, look out for some evidence of blood-poisoning, such as erysipelas. And it is the more incumbent on us to pay attention to this untoward condition, because we may very often do much to correct it. Associated with this state, at least in many instances, and holding to it, in great measure, the relation of cause to effect, are unhealthy habits; habits of excessive bodily indulgence; of excess of stimulants and of food too, and want of active exercise—in a word, habits which tend to overcharge the system and hinder the activity of healthy change. Now, of course, much of this may be amended, and often in a comparatively short time. The danger of suddenly interfering with confirmed habits in unstable constitutions is proverbial; and one would, if time allowed, try to bring about a better state of things more gradually, watching on the way. But even when we cannot have this advantage, it is preferable to bring about some change more suddenly than to have to deal with matters as they stand. At all events, remember that, as I have already said, we try the experiment under far more favourable conditions before an operation than after it; and remember that we can hardly carry a case through the effects of a considerable operation without subjecting our patient to a change of this kind. Far better, then, let me repeat, to see how he can bear the change without the addition

of an operation than to call on him, without any previous preparation, to contend with both. Therefore, if you can possibly manage to delay the operation for a week or two you may, in most instances, turn the time at your command to very good account. Regulate his diet, encourage exercise if he can take it; at all events, supply him freely with fresh air, and clear out the alimentary canal occasionally. If such patients do not improve somewhat under these measures, you learn to place their condition more to the account of their constitution and less to that of their habits; and if they show signs of giving way under such discipline, you have your eyes more fully opened to the prospect of an operation.

And this leads me to a further question—a question of great moment. I suppose if any one, who had not observed or reflected on the subject, were asked, which of two persons would be likely to bear a large operation better; one who submitted to it in the full tide of health and strength and active exercise, and the other after months of much suffering, close confinement to bed, and consequent exhaustion; he would reply, without hesitation, that there could be hardly a comparison, and wonder what was meant. So the difference is usually very marked, but, I venture to say, most frequently in favour of the invalid. Watch, I pray you, these matters for yourselves. It will not involve the scientific use of the imagination, but only observation of fact, and very moderate power of drawing conclusions therefrom. Compare cases, for example, of primary amputation for injury upon robust persons, with cases of amputation for long-standing disease upon persons apparently almost worn out by it. I think we have been somewhat misled in this matter by statistics. Tables of statistics of the results of primary and secondary amputation, if only studied in the form in which they are presented to us, point to the conclusion that primary amputations are more successful than secondary ones. I cannot stop now to criticise these calculations, and I hope to have another opportunity of pointing out a fallacy which I believe to underlie this great question. Let it pass now, with the remark only that I demur to any objection founded on such statistics to the view I am endeavouring to bring before you. And if the fact be as I have represented, can any explanation be offered of it? Yes; I think so. I have only just alluded to the fully recognised danger of any great and sudden change of habit in persons who have weak points about them. In old persons, for example, we are, or ought to be, especially alive to this. Why, in the treatment of fracture of the neck of the femur, does the surgeon avoid splints, if possible, and try to set the patient up as soon as he can bear to be moved? Because he knows very well that old persons soon succumb to the shock caused by sudden change in their mode of life—by the great change from their daily habits to confinement in an enforced position. Bed-sores are not the only troubles apt to wait on confinement, and with care these may be avoided or the plan of treatment modified upon the first hint of their approach; but no care or foresight can escape the graver evil. Now, if such great and sudden interruption of the habits of life be so potent for mischief in some, surely it must, in a considerable degree, press upon most; and when you add this to the shock of a large operation, you have weighted your robust patient against the feeble invalid, too heavily in proportion to whatever advantage he may have in constitutional power. Moreover, there is the further fact that, in the case of the invalid who suffers an operation for the removal of some chronic disease, his illness and weakness are maintained or aggravated by continual irritation or exhausting discharges. Now an operation, though severe in itself, gives him the great benefit of relief from this, and thus he rebounds, not unfrequently, with surprising elasticity.

You must not overlook the fact, however, that in some instances this condition of exhaustion may have been carried too far. Even if the patient have strength enough to rally from the operation itself, he may not have sufficient power left for the purpose of repair. If you watch such cases you will, from time to time, observe that, after the repair of a wound or injury, which has made great and long continued demands on a patient's strength, has been carried to a certain point, matters become very languid or stationary. From day to day or from week to week there is little, if any, advance. The granulations do not become actually unhealthy, but they grow paler, flabby, and, perhaps, with this the powers generally begin to flag. It seems as if, in the previous outlay, the patient had expended all his constitutional capital, that the power in reserve by which extraordinary demands are met and mischief repaired had been, for the present at least, used up. I need hardly stay to point out the indications in such a condition as this. You would not, if you could help it, subject any one under these circumstances to the risk of an operation. You would, of course, decline to make any farther demand on him, until, by change of air and other measures, his powers had been, in some degree, restored. In hospitals such a condition is too often seen, and as an illustration of it I may refer

to a case which is at present under observation in Kenton Ward. This man, about thirty years of age, was admitted several weeks since with extensive injury to the right leg. The integuments were stripped off the whole of the front surface from just below the knee to the ankle, laying bare the tibia for several inches. His previous history was far from satisfactory. He had drunk excessively. The flap was replaced, but the greater portion of it soon sloughed, and the whole wound became foul and, indeed, phagedænic. Then he had a severe attack of delirium tremens, which for some days threatened to prove fatal. The leg and thigh began to swell, inflammation spread throughout the limb, and large dusky patches appeared in the neighbourhood of the wound and wandered upwards. The question of amputation was raised more than once, but on each occasion it was thought best, at least, to postpone it. Then the delirium passed away and he became calmer and began to sleep naturally, but the leg for awhile afterwards continued in a shocking state; large sloughs formed and came away, and the surface of the tibia was obviously dead. At length, however, the wound began to clean and the surrounding disturbance to subside, and so, in the course of another week or two, his pulse, tongue, and aspect became natural, and the wound covered everywhere with healthy granulation. Soon a thin layer of bone exfoliated from the surface of the tibia, and granulations covered also the living bone beneath. Then for some time longer the wound continued to contract and its edges to close in; but the rate of progress gradually became slower, until it stopped altogether and matters came apparently to an absolute standstill. But he made no complaint; he fed and slept well; his pulse was quiet; his tongue clean; his aspect good; he even gained somewhat in flesh. Then portions of skin were grafted on the ulcers—very many over and over again; and some of them are living and, perhaps, very slowly enlarging. But there is so much of repair yet to be carried out; the wound is still so large and gives so little evidence of any change for the better, although the entire surface appears quite healthy, and we are continually pointing to it in illustration of the characters of healthy granulation, that the only chance for the man is to give him change of air. In this case it would seem as if whatever power in reserve he had, had been temporarily, at least, exhausted; and that, unless it can be in some measure restored, he must lose his limb or his life, or perhaps even both.

[Since this was written, the man has been removed to another ward. After remaining for awhile in the same state, the wound began gradually again to amend, and now it is closed.]

Again, I have lately seen a case in which, in consequence of the failure of the wound to heal after removal of a portion of the foot, another amputation was performed at the ankle. But the second wound also, after showing some signs of favourable action, became stationary, and then suppuration extended up the leg between the tendons and muscles. Instances of this sort might be multiplied.

It is unfortunate when patients are reduced to such an extremity as this; but it is the result, you see, of the heavy tax which has been for a long while levied upon the constitution by the local mischief and subsequent drain. And, indeed, such a result can excite no surprise. It is rather a matter of astonishment that persons who have gone through so much, can still recover so well as they usually do from a severe operation. And of this I know no better explanation than the one just offered—that, although confinement to bed or a couch is, in itself, in some respects, a source of weakness, the careful observance of good rules, the regulation of diet, and the exclusion of baneful habits is, on the other hand, a source of great gain. Then add to this that the great shock associated with certain operations is avoided, and that beyond all, in some cases, the patient has the advantage of sudden release from an exhausting disease to set in balance against the demands of an operation.

But, now, beyond these general advantages of rest and previous preparation, there are, in certain cases, others more local and definite. In some instances I think it is hardly too much to say that rest before an operation is almost as important as rest afterwards. The principle of this has been long ago and often insisted on, but the practice, I venture to say, is usually too much neglected. To take a striking illustration. Suppose you had to remove a loose cartilage from the knee-joint, do you think it would be wise to let your patient move about up to the time of the operation? You would be very properly shocked by any proposal to let the joint loose immediately afterwards. You would, of course, secure rest by a splint and insist upon absolute quietude. But would that be enough? Do you think that a joint which has been an active one up to the time when you wound it, to say nothing of the irritation to which it is subjected, is in the most favourable state to recover from the injury which you inflict? Cannot you see at once how much you would gain by placing the joint at absolute rest for some days previously to the operation? Nay, it is to be feared that the full advantage

of this is not always foreseen. But reason suggests and experience confirms the fact that a joint thus, for some time previously, secured loses much of its irritability, of its disposition to resent the injury you must inflict; that when its functions as a joint are in abeyance very gradually its behaviour as a joint is, in some measure, lost too. If there were fluid or other obvious signs of irritation in the joint, the need of previous rest would be so plainly indicated that he must be blind indeed who could not see it. But without this or any evidence of special disturbance, even arguing as if the joint were quite healthy and had nothing wrong in it, the great advantages of rest previous to the infliction of injury would be clearly seen by every well-educated surgeon.

Granted that this is a signal instance, yet the principle involved is of almost universal application. Perhaps it is not acknowledged so unreservedly, assuredly it is not carried out so fully as it ought to be. Some considerations, for the most part trivial, come in the way of it. It is often objected to as inconvenient, as causing delay. But if the surgeon get less credit for the foresight which averts danger than for the skill which meets it, he must know that his work in the former case is above his work in the latter, inasmuch as prevention is better than cure.

Under the head of temperament and organisation, I include character and disposition—the manner of man or woman your patient may be. That, apart from all influence of bodily constitution, people vary very widely in the way in which they bear injury, is a matter familiar to every one. You hear of persons of good courage, who are capital subjects for operation; and of others who have no pluck, as it is called, and so on. But such expressions of opinion are wont to come of very superficial observation. It is not accurate to affirm that courage is the best qualification, in this direction, for an operation, and fear the worst. The question is a larger one, and must be referred to the whole temperament of the individual. As a rule, women are unquestionably better subjects, in this respect, for injury or operation, than men; not because they usually have more courage, in the ordinary acceptance of the term, but because they have, in this sense, more endurance. It is the passive rather than the active quality which avails them. If they can do less, they can suffer more. And, again, see the advantage of calmness and resignation as opposed to impatience and restlessness. A man will often meet the suggestion of an operation as a soldier will volunteer for a forlorn hope, while the hint of such a thing to a woman will sometimes prostrate her. But then each has to submit to it, and when the thing is done, as time goes on, qualities of another kind come into play, in which, in her turn, the woman surpasses the man. So, again, children have an enormous advantage over both men and women. They are terrified enough at first, and afterwards at times, but depression does not abide with them. With them memory is not obstinate, or hope absent. They live only in the present, and happily escape the despondency which, in older minds, is so apt to arise out of the past or future.

Gentlemen, believe me, such considerations as these, on which a volume might be written, are not unworthy of your consideration. Attention to such signs, and an honest endeavour to interpret and understand them, will not only avail you in your actual practice as surgeons, but will also, if rightly used, help you largely to secure the confidence of your patient. Remember that, in order to attain the highest degree of success possible to your art, you have in some measure to understand him or her, as well as the nature of and treatment required for the disease about which you are consulted. And you have not months or even weeks of personal acquaintance in which to learn this lesson; but then you may observe character and temperament under circumstances powerful beyond all others to show them, and you may, if you will, turn what you learn to good purposes for your patient.

AN USEFUL HINT.—The following advertisement appears in one of our American medical contemporaries.

“Physiological and Pathological Laboratory.—The undersigned are prepared to undertake chemical and microscopical investigations for those who have not at their disposal the time or appliances necessary for the purpose. The urine and its sediments, calculi, blood, milk, morbid growths, and other products of normal and pathological processes, will be examined microscopically, and by chemical analysis, qualitative or quantitative, as may be desired. The charges will be proportioned to the amount of labour required in each case. Communications and material for examination should be sent,” etc.

The idea is, we think, a good one. Many practitioners who have not the skill, practice, or appliances for such investigation, are content to pass over dubious questions, or to leave undetermined and unwatched varying clinical conditions, from the want of an accessible authority to whom they could apply with confidence and without encroaching upon friendly good-will. Some of our younger experts might perhaps with advantage take the hint.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE II.—*Concluded.*

Varieties of Acute Bright's Disease: 1, with epithelial desquamation (desquamative nephritis); 2, without desquamation, and with or without small hyaline casts; 3, with exudation-cell casts, with or without epithelial desquamation; 4, without albuminuria. Changes in the Blood.—Etiology.—Diagnosis.—Prognosis.

I HAVE described to you the usual course of acute Bright's disease associated with a copious desquamation of renal epithelium. For this form of disease, I originally proposed the name of *acute desquamative nephritis* (*Med.-Chir. Trans.*, vol. xxx, p. 170). This acute desquamative nephritis is the most common and typical form of acute Bright's disease. But the term acute Bright's disease and acute desquamative nephritis are not strictly synonymous. There are cases of acute Bright's disease with dropsy which, in all their general features, resemble the cases which I have described as acute desquamative nephritis; but they differ in this respect, that from first to last, whether they terminate in recovery or in death, there is no evidence of that process of renal desquamation which forms the characteristic anatomical feature of the cases to which I have before referred. The urine is as scanty and as highly albuminous as in the other class of cases; but it either contains no tube-casts, or it contains, in variable numbers, the small hyaline casts (see Fig. 8), moulded within the clear canal of tubes which retain their lining of gland-cells. When the disease terminates fatally, the kidney presents to the naked eye the same appearances which characterise the acute desquamative cases; but, on microscopic examination, the sections of the convoluted tubes appear very different. The gland-cells are unusually bulky, granular, and opaque; but the central canal of the tube, instead of being filled with desquamated epithelium, is clear and open; so that, while the "cloudy swelling" of the epithelium renders the margins of the tubes darkly granular and opaque, the epithelial nuclei being indistinctly seen or even quite concealed, the central canal of the tube appears comparatively light and clear. (Fig. 12.)



Fig. 12.—Sections of Tubes having Dark Granular Epithelium, with the Central Canal clear.— $\times 200$.

In other cases of acute Bright's disease, the urine contains few or no epithelial casts; but it deposits a sediment in which are found numerous casts, mostly of the small size which indicates that they have been formed within the central canal of tubes, which are lined by gland-cells; and these small casts contain numerous round cells, which are identical in appearance with pus-cells and with white blood-cells. (See Fig. 13.) I formerly called these "pus-casts"; I now call them "exudation-cell casts". The name "pus-cast" is suggestive of suppuration and the formation of abscess; but no such destructive process is associated with the appearance of these exudation-cell casts in the urine. These casts are not unfrequently mixed with epithelial casts in cases of acute Bright's disease; but in several instances I have seen them in great numbers unassociated with epithelial casts. I have not been able to discover the exact source of the cells by a microscopic examination of the kidneys; but, since the publication of Cohnheim's researches, it has occurred to me

that these exudation-cells may probably be white blood-cells—leucocytes—which have migrated through the walls of the Malpighian capillaries, and subsequently become moulded into small cylindrical casts within the central canal of the convoluted tubes.

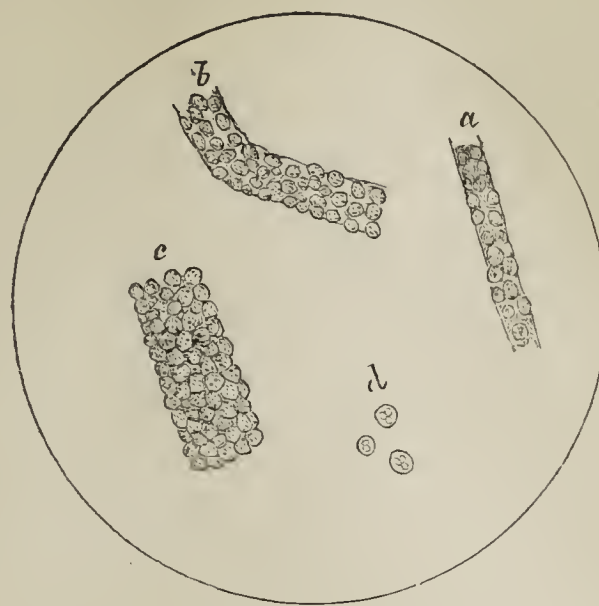


Fig. 13.—Casts entangling small round Exudation-cells, from a case of Acute Bright's Disease. *a* and *b*. Small casts. *c*. A large cast. *d*. Scattered cells.— $\times 200$.

In some cases of acute Bright's disease, the exudation-cell casts are of large size. (See *c*, Fig. 13.) This would indicate that the cast had occupied the whole diameter of the tube, and so had replaced the epithelial lining of the tube. In some cases, the exudation-cell casts are present from the commencement of the disease; in other cases, the epithelial casts, which were seen at the beginning of an acute attack, are gradually replaced by the exudation-cell casts, which in their turn become mixed with and replaced by epithelial casts during the progress of recovery and before the final disappearance of all morbid products from the urine. I am now describing phenomena which, when I had ample time and opportunity, I have again and again observed and noted, and which you may see for yourselves if you will diligently study the microscopic characters of the urine from day to day during the progress of acute Bright's disease. Moreover, I have a permanent record of the phenomena, in the form of actual specimens of the tube-casts, which retain their characteristic appearances after having been kept for years as microscopic objects.

You see, then, that while acute Bright's disease is usually associated with a more or less copious epithelial desquamation, there may be no desquamation of renal epithelium, and either no tube-casts or only small hyaline casts in the urine; while in other cases, either with or without epithelial casts, there may be casts crowded with small exudation-cells. The appearances which I have described are sharply defined in some cases, while in others they gradually merge into each other. Epithelial casts and desquamation may be abundant or entirely absent, or present in moderate amount. The casts with exudation-cells may be numerous and unassociated with epithelial casts, or the two forms of tube-casts may be combined with and replace each other in variable proportions. It is certainly interesting, and, I think, of some practical importance, to note these different appearances in the urine.

In all the cases of acute Bright's disease to which I have hitherto referred, although the microscopical appearances in the urine are various, the general symptoms and the physical and chemical characters of the secretion are alike, and in particular the presence of a large amount of albumen is a constant phenomenon. Now, I have to tell you that we sometimes, though rarely, meet with cases of acute general dropsy in which the urine, although scanty, contains not a trace of albumen. In the great majority of cases, acute Bright's disease and acute albuminuria are synonymous terms; but in these few exceptional cases the latter term is inapplicable, for the urine is not albuminous. Dr. Blackall described two cases of acute general dropsy after scarlet fever in which the urine was not coagulable either by heat or by nitric, or, as he calls it, "nitrous" acid (*op. cit.*, p. 12 to 21). Dr. Roberts gives the history of two cases after scarlet fever, both fatal—one acute, the other chronic (*On Urinary and Renal Diseases*, pp. 24 and 400). Dr. Basham has recorded the case of an adult in whom general dropsy followed exposure to wet and cold. He recovered (*Lancet*, August 1867). And I have notes of four cases that have come under my own observation. Three of these cases recovered, and the fourth was im-

proving when he was lost sight of. In two of my cases, the dropsy followed scarlet fever, and in the other two it was probably a result of exposure to cold. In two of the cases, neither albumen nor tube-casts could be discovered throughout; in one, a trace of albumen was found on one occasion; and in the fourth, after general dropsy had existed for six weeks without albumen or tube-casts, a trace of albumen and some hyaline casts appeared.

Now what is the explanation of these rare, remarkable, and exceptional cases? I have neither seen nor heard of any satisfactory explanation of them, and I am not prepared to give you one; but I venture upon one or two suggestions and queries. There is reason to believe that suppressed action of the skin is a powerful concurring cause of the dropsy which is associated with albuminuria; and this, perhaps, is the explanation of the frequent association of dropsy with the renal disease which results from scarlet fever or from exposure to cold and wet. In both these classes of cases, the functions of the skin must obviously be more or less impaired—in the one by the specific inflammation, and in the other by cold; whereas diphtheritic albuminuria, without implication of the skin in the morbid process, rarely if ever gives rise to general dropsy. Then the question arises, Is it possible that suppression of the cutaneous secretion may alone cause acute general dropsy without the implication of the kidneys? May acute general dropsy result from a metastasis of the perspiration from the skin to the areolar tissue and the serous membranes? And may the scanty secretion of urine in these exceptional cases be a result of the morbid transfer of water to the tissues where the dropsical effusion takes place, as, by a reversed action, the perspiration is checked and the skin of a diabetic patient rendered dry by the copious flux of liquid through the kidneys? I am not prepared to answer these questions. In most cases of acute dropsy without albuminuria, the urine has been scanty and high coloured. In one of Dr. Roberts's cases, the urine was scanty almost to suppression, only two drachms having been voided in twenty-four hours; "it contained casts, but not a trace of albumen." The form of tube-casts is not mentioned. The total quantity of urine voided during the last seven days of life amounted to between six and seven ounces. No autopsy was permitted. In the second case, the urine contained neither albumen nor casts; but it was scanty and high coloured; and, death having occurred after an illness of five months, "the kidneys were found to be good examples of the smooth white Bright's kidney." In this case, it would seem that, although there was no albuminuria, there was some structural change in the kidneys. Dr. Wilks has published in the sixth volume of the *Pathological Transactions* a remarkable case of general dropsy, with a peculiar form of renal disease, but without albuminuria, in a woman aged 35. The urine passed amounted to about twelve ounces in the day, of specific gravity 1012, and not albuminous. A few days before death, the urine became less in quantity, and for the last four days none was obtained. The kidneys were pale and large, their combined weight being seventeen ounces. The cortical portion was seen by the naked eye to be scattered over with small round dots like grains of sand. On a microscopic examination, these were found to be the Malpighian bodies, the capillaries of which were covered over with mulberry-like masses of oil-globules, while the tubes were healthy.

It may hereafter happen to some of you, to have the opportunity of throwing additional light upon the pathology of these rare and exceptional cases of general dropsy not dependent on heart-disease and unassociated with albuminuria.

We have seen that the chief varieties and modifications of acute Bright's disease with albuminuria are the following: 1, with epithelial desquamation (desquamative nephritis); 2, without desquamation, either with or without small hyaline casts; 3, with exudation-cell casts, either with or without epithelial casts and desquamation. Lastly, we have, as an entirely distinct class of cases, rare, exceptional, and obscure in their pathology, acute Bright's disease, or at any rate acute general and febrile dropsy, without albuminuria.

Changes in the Blood.—The effect of acute Bright's disease is not only to cause an admixture of blood-constituents with the urine, but also to bring about a large accumulation of urinary materials in the blood. While the urine is usually more or less bloody, the blood becomes in a greater or less degree urinous. Dr. Christison was the first to announce the fact that the blood in these cases contains a large amount of urea, and that urea is found in the dropsical and inflammatory effusions (*Edinburgh Medical and Surgical Journal*, October 1829). Not only is the blood altered by an accumulation of urinary materials, but also by a loss of its own normal constituents. The density of the serum is reduced from 1030 or 1031 to 1022 or even 1020. The loss of density is greatest when the urine has been most albuminous; and it is probably explained by the escape of serum through the kidneys. The hæmoglobin or colouring matter also dimi-

nishes rapidly, the normal proportion being 1,335 in 10,000. Dr. Christison found it reduced, after a few weeks' illness, as low as 955 in one case, in another to 564; and in a young man ill for three months and a half subsequent to scarlet fever, who had never been bled before, it was only 427. At the commencement of the disease, the loss of colouring matter is less rapid than the extreme pallor of the patient would seem to indicate; and it is probable that the blanched appearance of the skin is partly occasioned by the quantity of water in the subcutaneous tissue.

Etiology.—Acute Bright's disease may occur at all ages from infancy to extreme old age. The two most frequent causes of acute Bright's disease with dropsy are exposure to wet and cold and scarlet fever. Either of these causes is alone sufficient to excite the disease; but their combined action—exposure to cold during the progress of scarlet fever—is a most powerful determining cause of the malady. Diphtheria is a frequent cause of albuminuria; but, as I have before said, diphtheritic albuminuria is rarely associated with dropsy. Amongst the less frequent causes of acute albuminuria are measles, erysipelas, pyæmia, the absorption of poisonous materials from the uterus after parturition, rheumatic fever, the malarious poison, typhus and typhoid fever, cholera, and, lastly, excessive eating and drinking, more especially when combined with dyspepsia. In the majority of cases, acute albuminuria resulting from other causes than scarlet fever and exposure to cold is unassociated with dropsy, and its history belongs to that of the disease with which it is associated as a complication. We shall find hereafter that albuminuria resulting from one or other of the various causes here referred to sometimes leads to a chronic and incurable degeneration of the kidney. Excess of alcohol is a more frequent cause of chronic than of acute Bright's disease. A remarkable case of transient alcoholic albuminuria occurred when Dr. Baxter was house-physician to our hospital. A man between twenty and thirty years of age was brought in one night by the police. He was unconscious, and breathing stertorously. He was believed to be drunk, and a large quantity of vinous liquid was pumped out of his stomach. The unconsciousness remaining, uræmia was suspected, and some urine drawn off with the catheter was "loaded with albumen". He was then put into bed, cupped over the loins, and a purgative given. When Dr. Baxter visited the ward in the morning, he found the man sitting up and clamouring for his discharge. He said that he had been very drunk over-night, but now he had nothing the matter with him. He passed some urine, which was found of normal colour and specific gravity, and without a trace of albumen. He then left the hospital in triumph. The temporary albuminuria was the result of renal congestion while the excess of alcohol was being excreted by the kidneys.

Diagnosis.—In most cases of acute Bright's disease, the symptoms are so obvious that the disease can scarcely be overlooked or mistaken for any other. The only cases in which there is a possibility of acute albuminuria being unrecognised are those in which it is unassociated with dropsy. But, the existence of albuminuria being discovered, it is not always easy to determine whether this is the result of a recent acute attack, or of a chronic degeneration of the kidney. We shall be in a better position to discuss this important practical question after we have studied the various forms of chronic Bright's disease. Meanwhile, however, I may tell you that, as a rule, high coloured, smoky, and blood-tinged urine, of high specific gravity, is an indication of a recent acute attack; and equally so is a copious sediment composed of epithelial and blood-casts (Figs. 6 and 7), or of exudation-cell casts (Fig. 13), alone or mixed with epithelial casts. The appearance of oily casts and cells (Fig. 9), in combination with numerous epithelial casts, does not materially affect the diagnosis. On the other hand, urine of low specific gravity and very pale in colour, yet highly albuminous, is usually evidence of chronic disease; and this evidence is strengthened by the appearance of numerous oily casts and cells unassociated with epithelial or exudation-cell casts. Large hyaline casts (Fig. 8) in pale highly albuminous urine point to disease not only chronic, but in an advanced stage. We shall return to this subject and discuss it more fully in a future lecture.

Prognosis.—Acute Bright's disease has a tendency to terminate in complete recovery. It is essentially a curable disease, as much so as acute bronchitis or acute pneumonia. The earlier the patient comes under treatment, the better is his prospect of recovery; and, on the other hand, the longer the symptoms have continued without signs of amendment, the more grave does the prognosis become. The prognosis is, on the whole, more favourable in the young and middle-aged than in those more advanced in years; but the disease may prove mild and tractable even in very aged persons. For obvious reasons, the prospect of recovery is better in the case of those who can avoid exposure to cold and other injurious influences, than when the patients' circumstances are less favourable.

In favourable cases, a copious secretion of urine, of comparatively

low specific gravity and of paler colour, with a diminishing amount of albumen and decrease of dropsy, are amongst the earliest signs of amendment. Albuminuria is usually the last symptom to disappear. The time of its disappearance varies, in different cases of recovery, from a few days to many months. If the urine continue albuminous for more than six months, it becomes more and more doubtful whether it will ever cease to be so; but I have seen cases of complete recovery after albuminuria had continued for one, two, and even three years. So long as the urine continues albuminous, in however slight a degree, although the dropsy and all other general symptoms may have passed away, recovery must be considered incomplete. Acute Bright's disease, although, as a rule, a curable, is not unfrequently a fatal disease. There are some symptoms and complications which indicate a case of more than ordinary peril; such as a very scanty secretion of highly albuminous urine; frequent and distressing vomiting; great anasarca, with a tendency to erysipelatous inflammation of the skin; dropsical effusion within the chest, either in the pleura or the pericardium, or both, with urgent dyspnoea; inflammation of the lung, or pleura, or pericardium, or endocardium; severe and persistent headache, which is apt to be followed by convulsions and by coma, with a brown and dry tongue. All these are symptoms of grave, though not always of fatal, import. When the renal disease is acute, and therefore essentially curable, recovery sometimes occurs after the most formidable symptoms of uræmic poisoning have been present.

A consideration of the exciting causes of the renal disease forms an element in the prognostic indications. When Bright's disease results from some inherent constitutional defect, without obvious exciting cause, it is generally more intractable than when it is directly due to exposure to cold or to the influence of some specific blood-poison, as, for instance, that of scarlet fever or erysipelas. To all general rules of this kind there are exceptions, and each case requires a separate and careful study.

Let me impress upon you one point of practical importance. Before you pronounce a patient to be entirely free from his malady, be careful to test the urine, not only after rest and fasting—*i. e.*, in the morning before breakfast—but after food and exercise. Albuminous urine is usually more copiously so after food and exercise; and you will sometimes find that, while the urine before breakfast is quite free from albumen, that which is secreted after a meal is decidedly and even copiously albuminous. In some cases, exercise has even more influence than food in exciting renal congestion and albuminuria.

An attack of acute Bright's disease confers no immunity from future attacks; on the contrary, the disease may occur more than once in the same subject, a result either of inexplicable predisposition or of a liability resulting from a first attack. I think my experience warrants the statement that when acute albuminuria has resulted from some non-specific cause, such as exposure to cold and wet or excessive eating and drinking, it is more likely to recur than when it has been excited by a specific morbid poison such as that of scarlet fever, which, as a rule, does not occur a second time in the same individual; but I have known patients so unfortunate as to have two attacks of scarlet fever, and each attack complicated with albuminuria. I shall defer the important question of treatment until we have passed in review the various forms and complications of chronic Bright's disease.

NOTES TOWARDS THE HISTORY OF THE MEDICAL STAFF OF THE ENGLISH ARMY PRIOR TO THE ACCESSION OF THE TUDORS.*

By W. R. E. SMART, C.B., M.D.,
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OUR military medical history commences with the third Roman invasion, when the Emperor Claudius, A.D. 43, landed in Kent, took command of the army of Aulus Plautius, crossed the Thames, and took Camalodunum (Colchester) by siege. In the following year the Senate decreed him a triumph, and conferred on him the title of Britannicus, to be inherited by his then infant son, and gave honours to his military followers. Amongst these was Scribonianus Largus, *medicus*, who, it may be presumed, shared in those honours and privileges, and who made for himself literary renown also. He wrote a treatise *On the Composition of Medicines*, containing about three hundred formulæ, among which it has been surmised there may have been some remedies of which he gained a knowledge in the campaign in Britain. His treatise was held in high repute, and a century later Galen introduced several of his formulæ in his writings.

A sadder reminiscence rests on the name of another Roman military *medicus* who served in Britain. In the ruins of Chester-in-the-Wall (anciently Borcovicus, a first-class station) there has been found a mortuary stone, six feet high, bearing this inscription: "Sacred to the infernal Gods. To Anicius Ingenuus, *medicus* in ordinary of the first cohort of the Tungrian Legion. He lived xxv years." This Tungrian (Tongres, *hodie*) legion was recruited on the banks of the Maese in Belgic Gaul, up to Spa, then as now famous for its mineral waters. It marched north under the Emperor Severus A.D. 207, and had the guardianship of Borcovicus entrusted to its first cohort, which recorded, in a tablet that has been found, that it constructed a thousand paces of the wall.

We know that whatever the nationality of a Roman legion, its officers were Romans of family rank; and this *medicus* who died so young must have been, from his name—Anicius Ingenuus—a man of good descent. In early manhood he was *medicus* of the first cohort of a celebrated Roman legion, which, consisting of 1,100 men, was of double the strength of the other cohorts. They led the van in battle, and guarded the eagle—the standard of the legion—and of these it was said by Cicero, "His divina et presentia signa venerantur." From this incident of the regard in which the young *medicus* was held by his cohort, may be inferred the carefulness of the Romans in appointing their military *medici*, who, like our own, stood in the double capacity of physician and surgeon to their corps.

Britain was to the Romans a far more difficult possession to conquer and to hold than India has proved itself to be to us modern Britons, for throughout an occupation of three hundred years its tenure was "by the sword". Among the Roman emperors, Cæsar, Claudius, Vespasian, Adrian, Severus, Caracalla, Constantius, and Constantine the Great, owed much of their military reputation to their services in Britain, which shows the importance of that command; and Great Britain is indebted to Indian warfare for the training of many of her most famous generals. The sculptured stones that tell of the Roman occupation are highly treasured by modern Britons. Whatever may be the duration of our hold on India, it is open to doubt that, after a lapse of fifteen hundred years, there will remain such a sculptured testimony erected by the officers and men of his regiment to tell of their regrets and of the worthiness of any of the hundreds of medical officers who have fallen at their posts in the acquisition or defence of the British Indian empire as that which still remains in memory of Anicius Ingenuus, the young Roman military *medicus*. Happily, time, the destroyer of all things, has not erased the monument to him erected by the first cohort of the Tungrian legion.

Our Saxon forefathers were a very martial race, every freeman being a "weaponed man" born to bear arms, dishonoured in appearing without his sword, having the inherent right of private feud, and of maintenance in just quarrels by his kindred and neighbours; and he was bound to serve the king in defence of his kingdom for any term the occasion might require. Of their military organisation and customs, very little further than this is known.

Leechdom, or the art of healing, from the Saxon word *læce*, meaning, according to Ernest Schulze, a physician, was much esteemed in Saxon England, and it was always combined with the priestly office. *Domesday Book* does not give us the name of a single Saxon *medicus* possessing land under Edward the Confessor; but, among the tenants *in capite* under the Conqueror, there is the name of one Aluric, possessing an estate in Hampshire. The land in his possession was also before the Conquest in that of an Aluric, a common name among Saxon landowners, and we may infer that he inherited one of his numerous family estates, if he were not the individual who had been deprived of the greater part of them at the Conquest.

The respect in which the art of medicine was held is displayed in the ecclesiastical canons of the reign of Edgar (959-975 A.D.), wherein analogies are drawn between spiritual sins and bodily diseases. Penitence is likened to medical treatment under a skilful leech, and its results to the action of a "vomit" in expelling a deadly poison; and it is decreed that confession should be made under this formula: "I confess to Almighty God, and to my confessor, the *spiritual leech*, that", etc. These are appeals to the mind of a rude race, made through the known to the unknown, such as our missionaries may employ now: they show how closely medicine was affiliated to theology. One of the primitive duties of Christianity was the care of the sick, maimed, halt, and blind; and up to the twelfth century the art of curing lay in the province of the church. Its *materia medica* consisted of simples; and more cures were effected by altered regimen, by visits to holy wells, and by faith, than by medicaments, some of which were of disgusting or of revolting nature, strangely mixed up with pagan charms, magical arts, superstitious prayers, and offerings to the clergy.

Our knowledge of medical affairs among our Saxon forefathers has

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been elucidated of late through the liberality of the government in providing editions of the literature of that age. Thus we are in possession of an interesting work on *Leechdoms, Wortcunning, and Starcraft of Early England*, collected and edited by the Rev. Oswald Cockayne, M.A. Cantab., which reflects a strong light on the personal habits, social and domestic customs and practices, and on the state of morality, prevailing among the Anglo-Saxons. We find that even in that age of darkness those who were the *literati* were also the *healers*, and that they pretended to an acquaintance with the writings of the Greek physicians. In their history of medicine they assigned to Apollo the art of surgery; to Æsculapius the art of curing internal disease; to Asclepias the clinical observation of maladies, and the logic or art of reasoning thereon; to Hippocrates the teaching diagnosis of diseases; after whom Plato and Aristotle rendered all consistent by the theory of four temperaments, corresponding to the four natural elements.

Of their practice, we may best judge by some of their prescriptions; thus for fever, it is recommended "to take a snail and purify him, and take the clean foam, mingle it with woman's milk, give it the man to eat, it will be well with him." No diet can excel this in its primitive simplicity. For "nyctalopia" (that is cataract): "The men who are unable to see nothing after sunrise till he again go to his setting; take a knee-cap of a buck, and roast it, and when the roast sweats, then take the sweat and smear the eyes therewith, and after let the blind eat the same roast; and then take a new asses tord, and squeeze it, then let them take the ooze and smear the eyes therewith, and it will soon be better with them." These are fair examples of the Saxon *materia medica* used by the clerical leeches, which probably embodies the foulest charlatanry that has ever defaced the practice of medicine. We would expect to find a rational empiricism or practice based on rational experience, that leads to a reliance on specifics; but of these there is only to be discovered an acquaintance with one—that of sulphur and tar for the itch: "Against *handworms*—ship tar, brimstone, pepper, white salt; or wax, brimstone, and salt; mix and smear." They knew the *acarus*.

In primitive society throughout all ages, barrenness in women and the want of virile power have been regarded as among the greatest afflictions of humanity; and the Saxon priestly leech did not deem these matters unworthy of his study, nor indeed others which are more fitly consigned to the arcana of the mere voluptuary, the whole of which were dealt with in the plainest Saxon terms, without the decent intervention of a dead language.

Where medicine was in this condition, it is certain that surgery would also be debased and in darkness. Of operative surgery beyond phlebotomy there is no trace; but of the mode of dealing with a fracture there is an instructive description in these words: "If shanks be broken, take bone-wort, pound it, pour the white of an egg out, mingle these for the shank-broken man. For a broken limb, lay this salve on the broken limb, and overlay it with elm-rind; apply a splint again; always renew these till the limb be healed. Clean some rind and take linseed, grind it for a brewit or paste with the elms drink; that shall be a good salve for a broken limb."

This portrays the employment of demulcent cataplasms, of albumen (for collodion) to close a wound of the integuments, fortified with a backing of the soft inner bark of the elm (for lint), the use of splints; and it counsels the assiduous use of the means until the fracture has united. This assures us that the art of "bone-setter" was advanced in the Saxon age; but the treatment of wounds was not equally regulated by common sense, judging by that recommended for man and his domestic animals, who were much cared for in this ancient leechcraft. Thus, "for wounds that swell", or become inflamed, "take furze and pound it, and lay it upon the swollen part, and it shall soon subside." Again: "If a horse or other beast be shot" (that is with an arrow), "take a seed of dock and scotch wax, let a mass-priest sing twelve masses over them, and add holy water, and put that on the horse or on what cattle soever it may be. Have the worts always with thee." This at least is certain, that the resinous covering would benefit the wounded animal, and the reading or singing the masses would bring their "honoraria" to the ecclesiastic leech.

We may infer from these receipts what means were employed in the treatment of arrow-wounds and of contusions received in battle. The alienation of the art of curing from the priestly office began in our Saxon era, when the fourth Lateran Council (993 A.D.) prohibited the regular clergy from doing any operations of surgery "involving the shedding of blood", and assigned manual operations to seculars and clerks.

Surgery, then, underwent some social degradation, which laid the foundations of its freedom from priestly interference, and tended eventually to its becoming a science. Medicine was not disassociated from theology before 1131 A.D., when the sixth Lateran Council forbade monks and regular canons the study of civil law and medicine. This

was in the reign of our Henry I; and it was about that time, according to Colliette, that in France practitioners were called "myres", by which appellation they were popularly known through several centuries; and the title appears in England in the reign of our glorious monarch, Edward III. Two derivations of the title myre have been advocated: Latin, *mirus*, admirable, extraordinary; and Greek, *myron*, unguentum; hence *myropæus*, an anointer; and *myropolos* an apothecary. It is possible that this new title originated with the institution of lay practitioners, after the decree of the sixth Lateran Council; and I am inclined to an opinion that they were a class that combined again the practice of medicine with that of surgery, as among the Romans.

About this epoch the revival of learning produced Latin editions of Hippocrates and Galen, whose works becoming familiarly known in the west of Europe, a demand arose for the drugs of the Levant. The student of those authors obtained the reputation of knowing the laws of Nature (*φύσις*), and of being able to assist her operations, from which they assumed the new designation, "physicians"; while the change in practice from the use of indigenous simples, which every rustic could distinguish, to that of the Eastern drugs, called for a new order in the profession, to import, store, and dispense these costly and potent agents: thus arose the apothecary, whose office was previously unknown in Western Europe, and not in England before 1300 A.D.

The technical titles employed at this dawn of the modern medical profession were those of physician, mire or myre, and apothecary—the antecedents of academical titles and distinctions of the baccalaureate and doctorate, which were first conferred in France in 1140 (Louis VII), and in England in 1207, in the reign of John. The title of "Surgeon" first appeared in English history when Edward I invaded Scotland in 1299.

In addition to these subdivisions of the medical profession, there arose another in the Middle Ages out of the numerous body of the tonsorial craft, whose vocation, being centred among the communities of the shaven priesthood, obtained from it the reversion of surgery at the end of the tenth century. The barber, being dexterous in the use of cutting instruments, naturally enough assumed the position which the priest was called on by canon law to surrender; and so long as the art of surgery was comprised in bone-setting, tooth-drawing, cupping and blood-letting, and anatomy was untaught as the basis of surgical science, his facility of manipulation and habits of rendering personal services gave the special training by which the ambitious barber might hope to obtain repute as a surgeon. The "myre", as the representative of a higher class surgeon-apothecary, did not flourish in England as he did in France, and the doctor of medicine, who had taken the place of the ancient priest-doctor, regarded the manipulations of surgery as undignified; thus the barber-surgeon rose into repute in the city of London, and municipal privileges being secured to his craft A.D. 1376, the corporate body gained importance, attracting to itself those who purposed to practise surgery alone.

Surgery formed its alliance with barberdom on account of manual accomplishments and civic wealth. The union was not a happy one, as surgery was impatient of the yoke, which, while conferring municipal substantial benefits, disparaged purely surgical acquirements. Yet a separation was not effected until the middle of the eighteenth century, after union in some form or other since the fourth Lateran Council, A.D. 993. So slowly do corporate rights give way.

This cursory recapitulation of the status of the medical profession will throw light on my subject—the history of military surgery.

Nothing whatever is known of those who, in the capacity of healers, attended on our warlike kings, or followed their armies in the field, prior to the Conquest.

From *Domesday Book*, which dates from twenty years after the battle of Hastings, it is learned that there were in the train of the Conqueror two medical attendants—Gilbert Maminot, presbyter and *medicus*, and Nigellus, *medicus*—both of whom stood among those possessing estates by gift of the Conqueror.

The first of these was a cleric of noble family, whose chief—another Gilbert—was enfeoffed in the barony of Maminot of twenty-four knights' fees, and was one of the eight trusty barons charged with the maintenance and defence of Dover Castle, the most important fortress in the land. Gilbert Maminot was the king's chaplain also, and, as an ecclesiastic, he was deterred from surgery by the fourth Lateran Council edict, and therefore it may be inferred that he did not follow his military movements in the field. It is even probable that he was more in attendance on the Conqueror's queen than on himself, for we find that Gilbert the "presbyter" was tenant *in capite ex dono reginæ* of an estate in Hidincforth Hundred in Essex, and that he does not appear to have held any lands *ex dono regis* prior to his installation as Bishop of Lisieux in Normandy, which see was conferred on him by William in 1077 A.D. In *Domesday Book* he appears tenant *in capite* as "Gisle-

bertus, episcopus Lisiacensis", for an estate in Gloucester, with which, we may infer, he was invested subsequently to his installation, while the gift of the queen was made to him previously to that, unless there were two priests, "Gislebertus" by Christian name, among the royal followers, one of whom held only clerical, and the other both clerical and medical, position in the retinue.

Nigellus* was a layman, I believe, and his name I now propose as that of the first surgeon in English military history. He stands as the Baron Larrey of his day, following the fortunes of the Conqueror of England. He appears in *Domesday Book* as tenant *in capite* of estates in Hants, Wiltshire, Hereford, and Shropshire, with which he must have been invested in reward of his services in the capacity of *medicus*, and, it may be inferred, in the special branch surgery, which it was not lawful for ecclesiastics to practise. His first two possessions in Hants and Wilts may have been given immediately after the Conquest in the first distribution of lands; but the last two must have been of later acquisition, as the subjugation of that part of England was effected at a later date, and the Conqueror could not have conveyed to his followers any lands of which he was not the actual lord by conquest, and by disposition of their Saxon owners.

It may be inferred that, as soon as William had completed the successive subjugation of the provinces, the lands were distributed among those who were present, according to the estimate of services rendered, and that these estates in Hereford and Shropshire were the reward of Nigellus on the conquest of the Welsh Marches, and that possession was given by "seizin", or on the spot. Nigellus was possessor of other estates, which, not being of regal gift, must have been by feof of the great barons, who subdivided their large grants from the king among vassals on military tenure. These estates must have been the reward of professional services to the donors; and Nigellus, not unmindful of the church, although himself a layman, endowed the church of Monteburgh with an estate of this kind, situated in Somersetshire.

From these unquestionable data, it may be inferred that the profession was well represented and well rewarded at the conquest of England; and in them we possess the historical proof of the value placed on military services by one of the greatest generals and sovereigns in universal history, whose descendants still possess, after the lapse of eight centuries, the throne he acquired, now giving laws to the widest empire the world has known.

After the completion of the great event on which all the subsequent history of England turns, "we know", as Hallam tells us in his *History of Europe during the Middle Ages*, "that the Conqueror distributed this kingdom into about sixty thousand parcels of nearly equal value, from each of which the services of a soldier were due. He may possibly have been the inventor of this politic arrangement". The service due to the king was limited to forty days in the year, after which it was continued at the expense of the crown. As military service was thus rendered feudal and but of short duration, medical services, it may be inferred, were of the same nature, and if any were required they were provided by the great barons for their feudal contingents. Doubtless the Norman kings were attended by their selected professors of the art; but as the privy expenses of the courts of these kings have not come down to us, nothing whatever is known of them. As, however, in their next appearance in our history they continued to be of continental extraction, so it may be inferred they were so in the blank interval.

[To be continued.]

THE PATHOLOGY OF SICK-HEADACHE.

By P. W. LATHAM, M.D., F.R.C.P.,

Physician to Addenbrooke's Hospital; formerly Assistant-Physician to the Westminster Hospital, etc.

DR. ANSTIE, in his paper in the *JOURNAL* of January 18th, gives no reason for his belief "that the sympathetic phenomena in migraine are mere secondary matters," but states that the views of Du Bois Reymond and Möllendorff "are rejected upon grounds which will be found stated at length in the chapters on 'Pathology' and on 'Complications' in his book on *Neuralgia*." I have carefully read over these chapters, and unfortunately fail to see the force of his reasoning; in fact, Dr. Anstie himself must have felt it inconclusive, for he says (pp. 120-121): "Nor, indeed, should I greatly care if it were finally de-

cided that migraine and clavus should be separated from the true trigeminal neuralgiæ, provided the following points were well impressed on the minds of practitioners." Now Dr. Anstie says "the essential seat of every true neuralgia is the posterior root of the spinal nerve in which the pain is felt; and that the essential condition of the tissue of that nerve-root is atrophy, which is usually non-inflammatory in origin" (p. 110). In his last paper in the *Practitioner* for January (p. 31), he defines migrainous pain as "atrophic molecular irritation in the trigeminal root;" and in his work (p. 163) he claims for his theory "that the whole argument shall be taken together, for it is a case of cumulative proof; every link must be weighed and tested before the remarkable strength of the chain can be felt." Let us test the first link in this strong chain by an examination of the prodromata. One which often presents itself is a glimmering commencing on one side or other of the field of vision, and, as I pointed out in my former paper, there is during this glimmering stage in many cases, a tingling in some portion of the body, as the face, or the side of the tongue, or the arm, etc., and the tingling is on the *same side* of the body as that on which the glimmering is first seen. When the head begins to ache, the pain is felt on the side or temple *opposite* to that on which the glimmering first appeared.

The "hackneyed" Tissot describes a very interesting case of this nature. "I was consulted by an officer in the Austrian service, aged 32, whose migraine was marked by characteristic nervous symptoms. 'From the age of nine years' (such are his own words) 'I suffered about every second month, sometimes more frequently, from migraine, though I have also been quite free from an attack for a year. It began in the eyes, and without previous warning. Everything suddenly appeared cloudy, more so, however, on one side than the other, like some one who has been steadily gazing at the sun. This lasted, perhaps, ten minutes, then an arm and a leg on the same side went to sleep. Sometimes one side would be affected, sometimes the other. There was a feeling of tingling or formication, which was also experienced in the mouth and tongue, and for the time being I had difficulty in speaking. These sensations continued from ten minutes to a quarter of an hour; then the pain in the head began, but in the temple only, where it continued very severe for seven or eight hours. After vomiting, I felt relief.'" (*Œuvres de M. Tissot*, 1790, tome 13, p. 112.)

Tissot omits to mention whether or not in this case the dimness of vision commenced on the opposite side to that in which the pain in the head was developed. In all the cases, however, which have come under my own observation, this is the fact. The pain in the head is always developed on the side opposite to that portion of the field of vision which is most obscured.

Only last Saturday (January 18th) a case came under my notice at Addenbrooke's Hospital which showed this in a very satisfactory manner. The patient had charge of a stationary steam-engine; and on the previous day, "while I was occupied," he said, "in cleaning my engine, a dimness came over my right eye, and everything to the right seemed indistinct. It was just the same as if I had been looking at the sun, except that the mistiness seemed all rolling about. If I closed my left eye I could see very little indeed; and though the mistiness and movement were visible when the left eye was open, I was then able to see things much better than when it was shut. After this had continued from ten minutes to a quarter of an hour, I felt a pain in the left temple and over the left eye, which soon became very sharp." He described further the character of the pain, nausea, etc., which usually accompany sick-headache.

If, then, we have disturbance in the field of vision, together with tingling along nerves distributed to the side of the body *opposite* to where the pain in the head is subsequently developed, how is it to be accounted for?

According to the view which I have advanced, we have at this stage excitement of the sympathetic, and contraction of the blood-vessels of the side opposite to where the tingling is felt; atrophic molecular irritation of the roots, or an anæmic condition of the vessels about them, seems so far to be a satisfactory explanation. But in the next stage, with paralysis of the sympathetic, the headache is developed, and the tingling of the nerves on one side of the body ceases, and is replaced by aching and painful impressions in the opposite side of the head. Now, according to Dr. Anstie, it is this stage—the headache or migrainous pain—which depends upon atrophic molecular irritation. If his theory be correct, and migraine be what is ordinarily called a neuralgia, we shall then be forced to believe what is, I think, unique, that in this form of *neuralgia* "atrophic molecular irritation" should first linger about one set of nerves, and then transfer its affections to the roots of corresponding nerves on the opposite side. How this may be explained, I leave Dr. Anstie to show. On the other hand, it is not difficult to understand that, if the vessels of the brain on the aching side are dilated

* The Rev. R. W. Eyton, in his *Antiquities of Shropshire* (the model of county history and topography), states, vol. x, p. 1, that Nigellus was a clerk and physician. He does not state that he was a priest in orders, and he appears to base his opinion of his being "a clerk" solely on the fact that the estates conferred on him in Shropshire had been previously in possession of Spites, an eminent Anglo-Saxon ecclesiastic, who was exiled by Edward the Confessor. He asserts that Nigellus was physician to Count Roger de Montgomery in 1086 A.D.

and so produce increased pressure on the nerves, painful sensations will be experienced along the course of the nerves; at all events, the pain, as Möllendorff shows, is lessened by compressing the carotid, and this would hardly remove atrophic molecular irritation.

Since the appearance of my paper in the *JOURNAL* of January 6th, Dr. Wilks has kindly referred me to his lecture on the subject of sick-headache which appeared in the *Medical Times and Gazette* of January 2nd, 1869. In this lecture Dr. Wilks has, without, I believe, being aware of Möllendorff's views, attributed the headache to the same conditions, and almost in the same terms, as the latter had done in 1867. "The vaso-motor nerve on one side is for the time paralysed, the vessels of the head dilate, more blood is sent to it, and thus the increased heat, throbbing, and pain which the patient has to suffer until the tone of the nerve is restored."

Dr. Wilks mentions one important point which Möllendorff has omitted; namely, that the pupil is contracted. He afterwards goes on to say, "the most important question to solve is the immediate cause of the function of the sympathetic being thus in abeyance." On this point, too, Möllendorff offers no suggestion.

I will now endeavour to show, more clearly than I have done on former occasions, that the suspension of the function of this nerve is dependent upon an antecedent excitement, which excitement takes place from defective tone and controlling power in the cerebro-spinal system. I base my proof upon the following propositions.

1. In the cerebro-spinal system are included fibres possessing an inhibitory power over the sympathetic system; or, in other words, in those organs in which it is possible to operate separately on the fibres proceeding from the sympathetic and from the cerebro-spinal system, the section or paralysis of one kind of fibres produces the same results as galvanism or excitement of the other kind of fibres. This is illustrated by the following extract. "All glands are provided with sympathetic nerves, and many, if not all, possess others derived from the cerebro-spinal nervous system. The experiments just referred to show that the quantity of a secretion is differently affected by the section or irritation of these two sets of nerves. Thus, irritation of the pneumogastric nerves increases the quantity of the gastric juice, whilst irritation of the sympathetic nerves diminishes or arrests it. Again, division of the sympathetic nerves of the submaxillary gland increases the flow of saliva, but irritation of the distal cut portion of the nerve diminishes it; on the other hand, section of the cerebral nerve diminishes, whilst a similar irritation of the undivided cerebral nerve causes an increase of, the secretion. Since, in the former case, the small arteries of the gland contract and the supply of blood is diminished, whilst in the latter those vessels dilate and more blood is distributed to the gland, the diminution or augmentation of the secretion accords in either case with differences in the quantity of blood conveyed to the gland, and the influence of the nervous system in regulating the quantity of the secretion is indirectly manifested by the dilatation or contraction of the coats of the small arteries." (Marshall's *Physiology*, vol. 2, 1867, p. 349.)

2. Violent mental emotions produce, in particular organs of some individuals, the same effect as would result from stimulation of the sympathetic, or section of the cerebro-spinal nerve. "Violent emotion may suspend the salivary secretion, as is shown by the well known test often resorted to in India for the discovery of a thief among the servants of a family—that of compelling all the parties to hold a certain quantity of rice in the mouth during a few minutes—the offender being generally distinguished by the comparative dryness of his mouthful at the end of the experiment. . . . That the secretion of gastric fluid is entirely suspended by powerful mental emotion seems almost certain, from the well known influence which this has in dissipating the appetite for food, and in suspending the digestive process when in active operation." (Carpenter's *Physiology*, edited by Power, 1869, p. 811.)

3. That remedies which produce contraction of the minute arteries, and which are considered as exciters of the sympathetic ganglia, will, when vision is affected by them, cause similar phenomena to those described by Dr. Hubert Airy (*Philosophical Transactions*, 1870) under the term *Teichopsia*.

To illustrate this proposition, I shall take the action of digitalis. Whatever may be the primary action of this drug in small doses, most observers agree that in full doses it acts as a stimulant to the cardiac and other ganglia of the sympathetic system. Traube's most recent view is that it acts on the vaso-motor centre. According with this, various observers have noticed the contraction of the minute arteries under its administration. Dr. Dickinson found digitalis useful in menorrhagia from its contractile effect on these vessels. The small vessels of the frog's foot have been observed to contract by Drs. Fothergill and Malan on the application of an infusion of digitalis. Stadion,

Sanders, and others refer to one fact which has an important bearing on my present theory—the production, namely, under the action of digitalis of a glimmering before the eyes. Now, it occurred to me that, if the glimmering which sometimes precedes sick-headache be due to contraction of the cerebral vessels resulting from excited action of the sympathetic, and if digitalis excite the sympathetic and so sometimes produce disturbance of vision, the appearances described under the two conditions ought to correspond with each other. I have been at considerable pains to find descriptions of the glimmering resulting from the administration of digitalis; and in those which I have found I have been struck by their remarkable correspondence with the descriptions of the appearances preceding sick-headache which I have recorded in my paper of March 23, 1872.

Dr. T. L. Brunton (*On Digitalis*, 1868, p. 46) says:—"The derangement of sight which I noticed was of two kinds—1st, a general mistiness of objects, such as is seen before fainting; and, 2nd, a large bright spot advancing before me, which sometimes resembled a ring showing prismatic colours faintly."

Purkinje (*Rust's Magazin*, Band xx, 1825, s. 236) describes the appearances much more fully. The phenomenon presented itself, he says, "in the middle of the field of vision, as a roundish spot, faintly luminous, appearing and disappearing, and around it and concentric with it several similar light and dark waves possessing like movements were observable."

After a larger dose of digitalis these waves appeared to spread from a faintly luminous quatrefoil or cinquefoil in the centre of vision—an appearance evidently not very unlike to Dr. Hubert Airy's serrated outline in *teichopsia*. As the glimmering declined, it was observed only on one side of the field of vision in curvilinear outline (*loc. cit.*, fig. 41).

"The appearance and disappearance of internal movement in these figures is best compared to the undulations seen in a broad vessel of water, the surface of which has been put into rapid motion at one or more points" (*loc. cit.*, p. 243).

"Besides this, on closing the eyes and gently rubbing them I could produce a tremulous phosphorence."

"This can be best represented by making similar figures on a flat surface in the dark with a solution of phosphorus in oil, and then as soon as the phosphorescence begins to disappear, reproducing it by a gentle movement in the air; in this way tremulousness and increase and diminution of the light, with its disappearance and reappearance, are produced, similar to what are observed in the subjective phenomena" (*loc. cit.*, Taf. 4, fig. 38-42).

The deductions which I draw from these propositions are the following. 1. If violent mental emotion stimulate the sympathetic, it does so by withdrawing the inhibitory influence of the cerebro-spinal system, and what violent emotion produces rapidly, long continued mental effort or fatigue will accomplish more slowly, but as surely. 2. The prodromata of sick-headache are due to excitement of the sympathetic; and this is proved to be the case, by the same phenomena appearing when vision is affected, as are produced by the action of digitalis. 3. It is a physiological axiom that excitement is followed by depression; and consequently excitement of the sympathetic is the cause of the "function of the nerve being temporarily in abeyance," and the headache associated with this condition.

It may be urged that the phenomena due to the sympathetic vary very much in the attacks of sick-headache in different individuals. This only supports my argument. The phenomena produced by digitalis in different individuals vary quite as much.

The abdominal complications likewise strongly support my view. The somewhat enlarged liver, the faint tinge of jaundice, etc., which occur sometimes in adults, are precisely those conditions which would result from section or paralysis of the splanchnic nerves.

The coldness of the hands and feet, too, whilst the head is hot and throbbing, is another corroboration. The fact was first discovered by Ludwig and Lovén, that when the action of the vaso-motor centre is suspended in the part supplied by the nerve, and in those which immediately adjoin it, so that their vessels become dilated, contraction of the vessels in other parts of the body is at the same time produced. The blood-pressure is thus increased generally, and produces in the locally dilated vessels a very rapid stream of blood. (See Dr. T. L. Brunton's Lectures, *BRITISH MEDICAL JOURNAL*, 1871, vol. i, p. 583.)

As the centre of the vaso-motor centre seems to be in the medulla oblongata, I so far agree as to the locality of the malady; but, as the phenomena of migraine can be explained by a series of changes which may be verified by physiological experiment, Dr. Anstie must bring forward stronger arguments than he has hitherto done before I can believe in (what even the microscope will not disclose) "atrophic molecular irritation of the trigeminus root" being the cause of sick-headache.

INTRAUTERINE INJECTIONS.

By J. WHITEHEAD, M.D.,

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IN the BRITISH MEDICAL JOURNAL, of January 11, Dr. Barnes has treated, with skill and judgment, a subject in pathology of considerable importance. Chronic endometritis, with uterine catarrh, is by no means of uncommon occurrence, and is a frequent cause of a distressing form of dysmenorrhœa, as well as of sterility, especially in early married life, but also at a later age.

Somewhat more than twenty-seven years ago a case occurred to me illustrative of some of the inconveniences which Dr. Barnes mentions as liable to happen in the treatment of such cases. A patient in private practice, six years married and without progeny, laboured under yellow vaginal discharges and membranous dysmenorrhœa, which I had reason to believe to be of gonorrhœal origin. After a prolonged treatment by vaginal injections and constitutional remedies with no beneficial effect, I found, on specular inquiry, an extensively denuded and granular state of the lower section of interior brought into the field of view. To this surface I applied a strong solution of nitrate of silver (one drachm of nitrate three drachms of water) on saturated lint, and maintained this *in situ* by additional dry lint pushed up through the speculum. In the space of two or three hours later I was urgently summoned to the patient, and found her labouring under most violent pains of the abdomen, which soon became tympanitic and exquisitely sensitive to touch. Opiates were freely given, and fomentations and poultices used throughout the night; at early morning the pain was mitigated and she slept. In the course of two or three days all the troubles disappeared, and she was restored to her customary health. Pregnancy took place within five or six weeks after this event, and was followed by two more pregnancies, all equally successful. I felt no doubt that the solution of nitrate of silver had been transmitted, by ciliary action, through the uterus and along the Fallopian tubes to the abdominal cavity.

Feeling encouraged by the result obtained in the preceding case, I injected shortly afterwards, in two similar cases, by means of a catheter syringe, a small quantity of the same solution within the uterus; and in both had like disturbances—being obliged to keep the patients under active treatment in my own house for two or three days with the aid of other professional counsel. Both patients, however, did well; both were cured of uterine trouble; and both bore children.

These cases, however, although satisfactory in the issue, were much too troublesome, if not dangerous. I have therefore since adopted the plan of injecting, by a graduated catheter-syringe, no more than twenty or thirty minims of a much weaker solution, viz., a grain and a-half to the ounce; and the moment this quantity has been introduced, I quickly draw back the piston of the syringe so as to bring away all the fluid that is not immediately absorbed. Under this plan I have not had an unfavourable symptom—with the exception, perhaps, of a little uterine tormina of short duration, and almost always a satisfactory result.

I have witnessed as severe peritoneal suffering from the injection of pure cold water as from the strong nitrate of silver solution; but water at a temperature of 100 deg. F. does not occasion distress beyond a sense of tormina of a few minutes duration. It is evident that fluids injected within the uterine cavity—even *without force*, and in small quantity, may mount, by ciliary action, through the Fallopian tubes into the peritoneal cavity with great quickness. The cold water injected on two occasions in very small quantity, the piston of the syringe being quickly withdrawn, could not have lost more than one or two degrees of its coldness before entering the peritoneal cavity, and its presence there was manifested in less than thirty seconds.

But of late years I have nearly abandoned injections into the uterus. I find it better and safer, and attended with much less trouble, when treating chronic endometritis, to apply remedies by means of Lallemand's porte-caustique. This instrument, although intended for the male urethra, is quite as useful for the female in cases of endometritis. The groove of the stilette, charged with an ointment of nitrate of silver of suitable strength, or with axunge, the surface of which, covered with finely powdered nitrate of silver, sulphate of zinc, perchloride of iron, or any other remedy, being drawn within the cannula, can be safely introduced through the first passages. On arrival within the uterine cavity, the stilette must be protruded and rotated by manipulation of the handle, by which means the remedy is brought freely into contact with all the surfaces of the cavity. This part of the process should be done slowly, in order to allow the charge in the groove to melt and lubricate the whole interior of the organ.

In my experience, this mode of application of remedies to the interior of the uterus has not been followed by any metritic or peritoneal disturbance whatever, and frequently has resulted favourably.

OBSTETRIC MEMORANDA.

THE USE OF ERGOT.

AT the Birmingham meeting, my attention was excited by the remarks of Dr. Evory Kennedy in reference to the uncertainty of ergot, and I notice in the JOURNAL of October 5th a statement much to the same effect by Mr. Bassett. At the commencement of my practice, in the year 1857, owing to the teaching of Dr. West, I entertained much the same opinion; but patient observation has given me a higher estimate of the value of ergot, and I believe it to be a very useful remedy in many cases of difficulty and danger; viz., 1. In those cases where uterine pains have nearly ceased, the head is low down, and simply *vis a tergo* is required; 2. Where, after the expulsion of the child, the uterus does not contract to expel the placenta; 3. In cases of abortion, where, with detachment of the decidua and death of the ovum, the uterus does not contract, and, in consequence, great hæmorrhage ensues.

Having, in these different stages, often witnessed the greatest service from the use of ergot, I am inclined to believe that the time or period of its true action has not been generally ascertained. The preparation which I am in the habit of using is a concentrated decoction prepared by Battley and Co. of London, and, when I administer it, I can calculate with great confidence that, though in a few minutes the uterus may contract, yet in twenty minutes afterwards, almost to the second, the true period of its action will be shewn, and the uterus will act strongly and forcibly.

Now, whilst thus believing in the action of ergot, I have equally as much confidence in the use of opium in its proper place. After a long exhaustive first stage, when uterine action falters, and the patient seems exhausted, I administer forty minims of Battley's liquor opii, with the result of procuring either refreshing sleep or rest, or else of so arousing the exhausted nervous system as to induce at once uterine action. 2. I give it in cases of *post partum* hæmorrhage, attended with great nervous excitement. (In ordinary *post partum* hæmorrhage, nothing excels the syringing out the uterus with a solution of perchloride of iron, according to my experience.)

I am inclined to think that the unsettled state of our opinion in reference to ergot, plugging, etc., is not creditable to us as a body, one section being ready to denounce them, another to laud them as the only correct treatment, instead of ascertaining the cases to which they are most appropriate, and using them accordingly. Ergot may act more strongly on the circular than on the longitudinal fibres of the uterus; but that it does act very strongly and to the purpose on the latter, both in abortions and labours, I unhesitatingly aver; and the question which I ask myself in a difficulty is, which is the best remedy for my patient? When in a country district I have been a long distance from home-help and forceps, I have as often blessed the value of ergot, in its regular periodical action, as I have at other times the value of opium.

In conclusion, I would suggest that either a committee be formed at the next annual meeting to investigate the value of ergot in labours, and ergot and plugging in abortions; or, failing that, that the question be thoroughly ventilated and discussed by them in the department devoted to obstetrics.

T. EYTON JONES, Wrexham.

THERAPEUTIC MEMORANDA.

GUARANA.

CASE I.—A. B., aged about 45, has in the course of business much harass, and at times unusual pressure of headwork: these times are almost always followed by a violent attack of "sick-headache." He wakes with an oppressed feeling and nausea, and dull splitting pain just behind the eyes, which gradually becomes intense and prostrates him for the whole day. In an ordinary attack he gets some relief towards night, and if he sleep, wakes up next morning free from pain, but with great depression. A long entertainment, late hours, or hot rooms, may give rise to similar attacks, but the cause is essentially one that depresses and exhausts the nervous system, not one that irritates the stomach. He has no symptoms of indigestion, and in the intervals between his headaches his general health and vital power are very good. I mention these details because what we want now is to distinguish cases in which guarana will relieve from others which it will not, and I believe the former will be found to resemble such an one as this in the prominence of "nerve-symptoms" rather than dyspeptic. The patient can remember similar attacks ever since childhood. It is two

sisters also suffer; his elder brother so severely as to be prematurely aged: he cannot remember that his parents or other relatives suffered. At the commencement of an attack more than usually severe about four months ago, he was recommended to take half a drachm of guarana-powder early in the morning, in coffee. Within an hour after the dose the pain sensibly abated, then the nausea also, and by midday he was able to do some work, and did not suffer so much after-depression as usual. He has gone through the same experience four or five times since, and has found similar results. The powder, for convenience, has been sometimes taken in water only. He thinks that it not only relieves at the time, but lessens the tendency to recurrence, as his attacks have been fewer and milder lately, other circumstances having remained as before.

CASE II.—A delicate boy, aged 12, often has headache over the forehead, accompanied with nausea. There is no other definite complaint; but in the debility of the lad and the readily disordered stomach, there are symptoms of more than the nerve-disorder illustrated in Case I. Guarana in doses of fifteen grains twice daily failed to relieve, and ammonia and nux vomica have had a good effect. It may not perhaps be so generally known that this powder is used on the Continent for the treatment of diarrhoea; and the fact of its containing an astringent and aromatic naturally united, seems to indicate its employment. I prescribed it in doses of five to ten grains for six cases of infantile diarrhoea between one and two years old. The causes were various—dentition, food, or weather—and the ordinary treatment of aperient or acid or alkaline astringents had not relieved. Five of the children took the powder fairly well, with water; two were quickly and distinctly relieved; the others got better after a time, possibly from other causes. It seems to me to offer in such cases no particular advantage over better known combinations, but it deserves further trial.

EDWARD MACKEY, M.B., Joint Professor of Materia Medica and Therapeutics in Queen's College, Birmingham.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE ADMINISTRATION OF ETHER.

[Continued from p. 83.]

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

Mr. PRIESTLEY SMITH, House-Surgeon, writes:—During the last three months ether has almost entirely taken the place of chloroform in this hospital. It has been administered in several different ways, and it has been found that, the nearer the approach to a total exclusion of atmospheric air, the more satisfactory are the results obtained.

With this object in view, the apparatus which I at present always use is a simple leather cup, five inches in depth, and shaped so as to fit pretty accurately to the face, covering the mouth and nose. In the bottom of the cup, out of reach of the patient's face, is placed a sponge. An ounce of ether, to begin with, is poured upon the sponge, and the patient is allowed to take two or three inspirations freely diluted with air, so as to avoid the alarming sensation of sudden suffocation, and the inhaler is then held firmly over the face, and surrounded with a folded towel.

In children of two or three years of age, an ounce or an ounce and a half of ether, thus administered, has generally sufficed to produce complete anaesthesia in from two to four minutes. In adults, the quantity used has varied from two to five ounces, and the time occupied from three or four to twelve or fifteen minutes.

When ether is administered by any method which allows a greater admixture of air, several inconveniences which have been complained of by writers in the JOURNAL must be expected; viz., the necessity for using a larger quantity of ether, a longer period of administration, violent excitement on the part of the patient, great difficulty in inducing perfect anaesthesia, and the annoyance of an atmosphere loaded with the vapour, the odour of which clings to the administrator and others present for six or eight hours afterwards. But when administered as described above, ether appears to possess two important advantages over chloroform.

Of these, the chief one is certainly its stimulating action on the heart. A few days ago, a timid lad of fifteen was to undergo an operation for strabismus. I attempted to anaesthetise him with chloroform, but the pulse, which was at first small and weak, instead of growing slower and

fuller as consciousness became obscured and the sense of fear was lost, as is common in such cases, grew alarmingly small and weak, and, with the consent of the operator, I withheld the chloroform, and postponed the operation. Three days later, the boy being certainly not less nervous, I gave him ether. Directly he lost consciousness of his position, the pulse became slower and fuller, and he was thoroughly anaesthetised without causing the least trouble or anxiety.

If one may judge by an experience of three months, there is also a somewhat less tendency to vomiting, and certainly vomiting, when present, is of much shorter duration than after chloroform. This latter advantage I saw amply proved in the case of a little girl who took chloroform at a first operation and ether at a subsequent one.

The periods of returning consciousness present, I think, some differences in the two cases. After chloroform there is almost always a considerable period of intense prostration; but, on awakening from ether, the patient behaves like one intoxicated by alcohol. Even after recognising his whereabouts and his attendants, he exercises no more control over his words and actions than does a drunken man. I have not at present, however, met with so much violence of behaviour as to endanger the result of the operation upon the eye.

GUY'S HOSPITAL.

OPERATIONS, JANUARY 24TH, 1873.

Stricture of Urethra: Cock's Operation.—CASE I. Mr. Durham remarked that this patient had been suffering from severe stricture for many years, so that latterly no treatment had afforded him any relief. An examination *per anum* showed that the spongy portion of the urethra had become a hard cartilaginous mass, and it was quite impossible to pass even the smallest catheter. The only thing likely to relieve the patient was making an opening into the membranous portion of the urethra in front of the prostate, introducing a catheter through it into the bladder, and letting it remain there some time. The passage of urine through this opening would give him little inconvenience, as he might be able to retain it as well as in health, and pass it when he felt inclined. Mr. Durham then inserted his left forefinger into the anus and the knife into the perinæum, running it up to the urethra just in front of the prostate. A director was then put into the wound, and a large flexible catheter pushed into the bladder and tied in. A large knife was used in making the section.

CASE II.—This case was the counterpart of the last, except that the man was older, and his perinæum and scrotum were riddled with sinuses, like the rose of a watering-pot. Three years ago, he fell from a height of ten feet across some open joists, and hurt his perinæum. An abscess formed, which communicated with the urethra when opened, and which had remained open ever since. Traumatic stricture of the urethra ensued. Mr. Durham remarked that, whatever method might be adopted for the dilatation of traumatic stricture, it was sure to return. The passage was not simply occluded, but diverted and twisted. The urine found exit only by some roundabout method, and mostly through a variety of sinuses, as in the present case, in which the whole perinæum was swollen, hard, red, and misshapen, and the urethra like a hard twisted cord. Mr. Durham passed the knife directly to the front of the prostate, and on a director pushed a large catheter into the bladder. It was observed that both testicles were on the right side, in consequence of the left side being hard and full of sinuses. Mr. Durham then laid open some of the sinuses, leaving the smaller ones to heal without interference.

Epithelioma of the Scrotum: Removal by the Battery and Wire.—This patient was a chimney-sweep, and the cancer consisted of a large angry sore on the scrotum, with a number of growing warts there and on the penis, and enlarged glands in the groin. Mr. Durham stated that, in epithelioma of the lip, enlarged glands were very uncommon; but that in chimney-sweep's cancer, the enlargement was the rule, and did not form any real objection to operative interference, generally subsiding when the sore heals. Epithelioma more readily affected the glands in the groin than any other. Mr. Durham then inserted three long needles under the sore, around which he put the wire of the galvanic *écraseur*, which speedily burnt off the mass without the loss of a drop of blood. He then cut off with the scissors the cancer-warts on the scrotum and penis, and the wounds were dressed in the ordinary way.

Epispadias: Burning of the Upper Part of the Canal.—This patient was a boy who had been operated on before in the same way. A certain amount of contraction was obtained, and he could now perfectly hold his urine, and pass it at pleasure. He suffered from complete incontinence when he came into the hospital, but now he never wets his bed or was any trouble to the nurses. There was deficiency of the

corpora cavernosa and corpus spongiosum; but the anterior wall of the bladder was perfect. The upper part of the canal was again burnt to produce greater contraction of its diameter.

LONDON HOSPITAL.

CASES OF LARYNGOTOMY.

(Under the care of Mr. MAUNDER.)

FOR the notes of these cases, we are indebted to Mr. Wallace Drew, House-Surgeon.

CASE I.—Naso-pharyngeal Polypus: Laryngotomy.—G. O., aged 14, was admitted August 30th, 1872. The patient, a pale delicate boy, complained of being unable to breathe through his nose, of difficulty in swallowing, and of frequent hæmorrhage from his mouth and nose. Upon examination, a large pear-shaped polypus was seen reaching just below the margin of the soft palate, and rendering it slightly tense. Both nostrils were more or less blocked. His voice had been thick and indistinct for two years, but his nose had only felt "blocked up" for six months. He had bled profusely, at varying intervals, for more than a year. His mother first noticed a "lump" in his throat a month ago. He had never suffered any pain.

On September 6th, Mr. Maunder, under chloroform, attempted to remove the polypus by passing loops of strong twisted wire through the nostril around the pedicle, and then using the *écraseur*; but each time the wire broke. The boy's condition then became so critical, that all further attempts were discontinued. On the following day, the tumour was found to be hanging much lower down in the pharynx (probably due, in part, to adhesions having been broken down during the previous day's attempts at removal); it was very much enlarged, and greatly distended the soft palate. His breathing became so difficult towards evening, that tracheotomy was performed, and afforded complete relief. From this time, he rapidly improved in health and strength.

On October 2nd, Mr. Maunder divided the soft palate in the median line, perforated the hard palate, and cut away with forceps sufficient to allow plenty of space. He then removed the growth by freely scraping bare all the bony surfaces from which it took origin. The tumour was fibrous, and took its main origin from the basilar process of the occipital bone.

Mr. Maunder remarked that these growths sprang from the periosteum; and that, to remove them effectually, it was necessary to scrape off this completely. He further remarked that in this case he should scarcely have been able to remove the growth, had tracheotomy not been performed previously. Ten days afterwards, the tube was removed from the trachea, and the wound soon closed. The opening in the hard and soft palate was to be left open for some time, to examine the part readily, and to destroy, if necessary, with the galvanic cautery, any fresh growth.

CASE II. Syphilitic Disease of Pharynx: Laryngotomy.—W. E., aged 30, a pale thin man, was admitted September 13th, 1872. He was breathing badly, and stated that he had for several days had severe attacks of dyspnoea. The soft palate and uvula were found to be united to the base of the tongue, completely closing up the fauces, with the exception of one small hole on the right side of the uvula, which admitted a No. 4 catheter. He said he could eat meat after masticating it well, and seemed to make light of any great difficulty in swallowing. He contracted a chancre five years ago, which was soon followed by marked secondary symptoms. The rash lasted about nine months; but the throat, in spite of treatment, gradually became worse. His health also became affected, but in this respect he had improved during the last eighteen months. The difficulty in breathing was of comparatively recent date.

On September 14th, Mr. Maunder performed laryngotomy, affording complete relief. During the succeeding fortnight, the patient's health rapidly improved; and attempts were regularly made to dilate the aperture above described by passing catheters and bougies, but the largest that could be passed was a No. 11 catheter. During the whole of this time, he ate a chop and vegetables daily without difficulty, apparently.

On October 2nd, Mr. Maunder enlarged the aperture by making an incision through it parallel with the uvula, and then forcibly dilating with his finger. The whole of the pharynx appeared to be filled up with diseased tissue.

On the 7th, a high temperature and rigors ushered in an attack of erysipelas of the face. On the 19th, this had ceased. Mr. Maunder proposed still further to dilate the aperture in the pharynx by passing bougies at intervals, and, if necessary, by making incisions at right angles to the present opening.

CASE III. Inflammation of Floor of Mouth, Tongue, Pharynx, and

Side of the Neck: Laryngotomy.—G. C., aged 21, was admitted October 12th, 1872. On admission, the left side of the neck was red, swollen, and brawny; the floor of the mouth and tongue were swollen; the fauces and pharynx red and slightly swollen. He attributed his injuries to a fight which he had on the 8th. Two days after admission, the floor of the mouth was so much swollen that it reached about the level of the teeth, and was indented by them. The tongue so filled the mouth, that the back of the mouth or fauces could not be seen. He could swallow nothing, and saliva constantly dribbled from his lips. He breathed moderately well. An incision into the swollen side of the neck gave vent to a little pus. Dressing forceps were introduced into the wound and through the deep fascia, and withdrawn open. On the following evening, his breathing became rather worse; and at 2 A.M. his condition was so urgent, that the house-surgeon performed laryngotomy. The neck was so much swollen and so brawny, that the thyroid cartilage could not be felt; and, after cutting through thickened and infiltrated tissue to the depth of more than an inch, the larynx was found to be pushed very much to the right of the median line. The operation afforded instantaneous relief. The swelling of the mouth, tongue, and neck, had so subsided in two days after this operation, that the fauces could readily be seen. He had bronchitis a few days afterwards, but no pneumonia. The tube was removed from his larynx on October 22nd. At that time he was rapidly recovering.

REVIEWS AND NOTICES.

A TREATISE ON RHEUMATIC GOUT OR CHRONIC RHEUMATIC ARTHRITIS OF ALL THE JOINTS. By ROBERT ADAMS, M.D., A.M., M.Ch., M.R.L.A., Surgeon-in-Ordinary to the Queen in Ireland, etc. Second Edition. London: Churchill and Sons. Dublin: Fannin and Co. Edinburgh: Maclachlan and Stewart.

[Concluded from page 90 of last number.]

THE second part of Dr. ROBERT ADAMS' treatise on Chronic Rheumatic Arthritis is devoted to the description of the disease as it occurs in the various articulations of the body; taking first the large articulations of the extremities, such as the hip, shoulder, elbow, knee, etc., and then the smaller articulations of the hand and foot, the lower jaw, and the sterno-clavicular articulations. A chapter is devoted to the disease as it occurs in the spinal column.

To the consideration of the anatomical characters of the disease thus described as affecting the different articulations, no fewer than two hundred and fifty pages of the work are devoted; the pathological description in each group being supplemented by carefully described cases illustrating the clinical history of the affection.

In the description of the disease as it occurs in the hip-joint, Dr. R. Adams observes, at page 47, "For many years this disease, under the designation of *morbus coxæ senilis*, has been accurately described in the clinical lectures delivered in the different hospitals in Dublin, and the importance of distinguishing it from the other affections of the articulation has been pointed out. Mr. Benjamin Bell, in his work on the bones, has, under the head of 'Interstitial Absorption of the Neck of the Thigh-bone,' alluded to it, and detailed many of its symptoms, as well as the morbid changes which the neck of the bone suffers; and in the sixth volume of the *Dublin Journal*, 1835, Professor Smith, in a paper on the 'Diagnosis of the Injuries of the Hip,' and subsequently in his 'Treatise on Fractures,' 1847, has given a very good and concise account of this remarkable affection of the joint.

"It is now a considerable time (Session, 1831) since, in my clinical lectures, delivered in Jervis Street Hospital, I gave the name of *morbus coxæ senilis* to the disease in question. Having, however, subsequently met with many instances of it, occurring so early as at the age of thirty or forty, I have since ventured to substitute for this name that of *chronic rheumatic arthritis* of the hip—that is to say, rheumatic gout of the joint—considering it identical in its nature with the disease affecting other articulations, which it is the object of this work to describe."

With regard to the changes observed in the articular extremities of the bones, when the disease is fully developed, these become enlarged to a remarkable extent, and much altered in form—so misshapen, indeed, as to lose much of their natural form and general appearance. These alterations in form affect the ball-and-socket and ginglymoid articulations in different manners.

In the globular head of the thigh-bone, and in the head of the humerus, for example, the articular extremities become enlarged by the superaddition of new bone in nodulated masses and flattened ring-like layers developed in and surrounding the edges of the articular cartilage;

extending to a variable distance inwards, over the articular surface, and projecting externally so as to form lip-like or overhanging margins, which, to a greater or less extent, conceal the neck of the bone, so as to convey the idea of apparent shortening of the neck. In the head of the thigh-bone, especially, the general effect is to give to it, more or less, a mushroom-like form, the upper surface being apparently flattened when the articular cartilage has disappeared, and the exposed bone has become eburnated or polished by the ivory-like deposit, constantly met with in this disease in situations from which the articular cartilage has been removed and the bones have been subject to friction.

If a section of bone in this condition be made, it will be found that there is a general increase of density both in its cancellous and its compact tissues. The cancellous tissue of the head of the bone is not only increased in density beneath the eburnated portion, but throughout the head and neck of the bone, so that the entire specimen would represent an increase of weight and density of bone.

As to the precise nature of the process by which the enlargement of the articular extremities of the bone is affected, the author alludes at page 213 to a description of the process given by Mr. Wm. Adams in the *Transactions of the Pathological Society*, vol. iii, 1851. It was at this date shown by Mr. W. Adams that the enlargement was not due to any inflammatory expansion of cancellous bone-tissue, as had been supposed by Rokitsansky and others, or to any outgrowth of bone, but was produced by a process of hypertrophy and ossification of the articular cartilage generally occurring near to the margins of the articular surfaces of the bones involved. The microscopical appearances are shown in a plate accompanying the paper.

Simultaneously with the enlargement of the articular extremities of the bones, changes take place in the corresponding articular cavities; and in the hip-joint the acetabulum becomes very irregular and much altered in shape, and its capacity increased for the reception of the enlarged head of the femur. The articular cartilage also disappears from the surface of the acetabulum, and the bones become eburnated and covered with porcellaneous deposit in parts exposed to pressure and friction. The enlargement of the articular cavity is partly due to irregular absorption, and partly to ossification taking place in the surrounding fibrous structures.

In another class of cases, also described by Dr. R. Adams, the head of the thigh-bone is diminished in size and the neck shortened, a process of atrophy and interstitial absorption characterising this condition. This class of cases often presents symptoms, such as shortening of the limb, with eversion, etc., which might be supposed to depend upon fracture of the neck of the thigh-bone; and in illustration of this error the well-known case of Mr. Charles Mathews, the celebrated comedian, is adduced. He was supposed by some authorities to have sustained a fracture of the neck of the thigh-bone within the capsular ligament, caused by a fall from his gig ten years previous to death, which resulted from disease of the heart. The hip-joint was removed, and exhibited at the meeting of the British Association in Dublin, in the year 1835, by Mr. Snow Harris, of Plymouth, afterwards Sir William Snow Harris, who maintained the view of fracture of the neck of the bone. But this was opposed by Dr. Robert Adams, Mr. Smith, and Mr. McDowell, and the examination of the specimen led conclusively to the opinion that the case was one of chronic rheumatic arthritis, a view in which Mr. Snow Harris himself afterwards concurred.

In the shoulder-joint, the long tendon of the biceps, as an *intra-capsular tendon*, is peculiarly apt to become disintegrated and destroyed; and, the disease being associated with muscular atrophy, the importance of these changes in connection with the cases of supposed injury and subluxation of the humerus will be at once apparent.

In the ginglymoid articulations, and more especially in the knee-joint, where this disease seems frequently to occur, the structural changes in the articular cartilages and bones, as well as in the fibrous and other tissues, are essentially similar to those occurring in the hip; the only peculiarity being that parallel grooves and sometimes deep furrows are formed in the direction of flexion and extension of the joint, the articular cartilages having disappeared, and the bone-surfaces enamelled and covered with the ivory or porcellaneous deposit in these situations corresponding to pressure and friction.

With regard to the terminations of chronic rheumatic arthritis, it has been observed that it exhibits a remarkable indisposition to terminate in suppuration, a character insisted upon by Dr. R. Adams, and also pointed out by Sir B. Brodie. But Dr. Adams states that he has seen an attack of acute arthritis supervene on the chronic affection and terminate in suppuration; an example of which ending fatally is recorded in case 19, page 391. As a general character of the affection, however, he points out the non-liability to suppuration.

Another peculiarity also, is, that the disease has no disposition to terminate in true bony ankylosis; motion, however limited, being preserved

by the process of eburnation and porcellaneous deposit on the articular surfaces already described. In the more severe forms of the disease, the motions of the joint are limited by the osseous growths thrown out from the articular margins, and by ossification of the cartilages, and also from the surrounding fibrous structures. So long as the disease is confined to a single articulation, whether the hip or the knee, the patient can move about with but little inconvenience beyond the lameness and occasional pain. But when several joints become affected, and if the hips or knees in both legs should suffer, then the patients become gradually deprived of all powers of locomotion, and sometimes remain for many years as completely bed-ridden cripples, and many distressing cases of this kind are recorded in Dr. Adams's work.

With regard to treatment, it is admitted by all authorities that it is chiefly in the early stage of this chronic and progressively increasing affection that we can hope to arrest its progress; and here the treatment of careful observers varies according to the view which they entertain of its inflammatory or non-inflammatory character.

Dr. Robert Adams is an advocate of the inflammatory nature of the affection, and in the early stage seems generally to approve of local depletion by means of a few leeches. After describing the local and constitutional forms of this affection, in the latter of which many joints are simultaneously affected, he observes, at page 315—"But, for my part, I will say that I have seen advantage result from this practice of local depletion, even in cases of patients with pallid looks and thready pulses, and in whom the local pains were not palliated until the local depletion alluded to had been resorted to." He also advocates the local application of compound tincture of iodine and the use of cotton-wool covered with oiled silk.

In the medical treatment of these cases, the author refers to the opinions expressed by Dr. Fuller and Dr. Garrod in the editions of their works which have been published since Dr. R. Adams issued the first edition of the present work, and agrees generally with many of the observations which both these authors have made as to the local and constitutional treatment. He especially adverts to Dr. Fuller's recommendation as to the value of arsenic in many of these cases, and also advises the administration of sulphur, observing at page 317—"Among the medicines which have been found useful to patients affected with chronic rheumatic arthritis sulphur should not be omitted. The form in which I have found it most useful and readily taken, is the Chelsea pensioner electuary."

Dr. R. Adams also recommends the use of warm-baths, douches, etc., and, where practicable, a residence at various foreign watering-places such as Barèges, Aix les Bains, etc.

In concluding our notice of Dr. R. Adams' valuable monograph, we cannot but again express our admiration of its intrinsic merit, and would strongly recommend it to all who desire to become acquainted with the pathology, clinical history, and treatment of chronic rheumatic arthritis.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

DINNEFORD'S HORSEHAIR FLESH-GLOVES.

NOT every one knows how to take a cold bath, although the art is supposed to be one particularly cultivated by Englishmen, and of which the enjoyment is a secret mystery which has something insular and national in its character. It is a popular theory, that the right thing to do is to jump sharply out of bed and to rapidly deluge the skin with showers of cold water, drying it with vigorous friction. This, however, is suitable only for the most hardy constitutions. The true way to take a tubbing in the morning is to rub the skin vigorously, using dry friction for at least five minutes before the bath; and not to bathe in cold water until the capillary circulation has been thoroughly stimulated. In this way it is well able to resist the shock; the lowering of the temperature, and the coldness and shivering, which sometimes follow the cold bath, are in this way avoided. For the purposes of friction prior to and after the cold bath, the Horse-hair Flesh-Gloves, Belts, Bath-Brushes, etc., manufactured by Messrs. Dinneford and Co., of 172, New Bond Street, are unsurpassed in value. They are admirably made, and are of various shapes and degrees of hardness, and are suited to skins of different degrees of delicacy.

LOCAL SECRETARIES will oblige by sending estimates of the number of new members, so that the proper number of JOURNALS may be ordered to be printed.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 1ST, 1873.

HOSPITAL SUNDAY IN LIVERPOOL.

THE third annual Hospital Sunday in Liverpool on the 12th, and Hospital Saturday on the 18th of January, have given larger results than any of their predecessors. The returns are not yet complete, but are sufficiently advanced to show that the sum realised will exceed £9,000, which is about £1,000 more than the collection last year.

A startling revelation is made in the report issued by the Hospital Sunday Committee, purporting to be a statement of the number of individuals who have received gratuitous medical relief in this town during the year 1871. The returns are furnished by an official from each medical charity, and give the standing total of 124,092 persons as recipients of medical charity in the year. This is exclusive of 1,200 cases at the Dental Hospital, which, being chiefly teeth-extractions, may fairly be eliminated; neither does it include the Cancer Hospital, from which no return was received, and which would probably have added some thousands to the list. The largest number returned from any one institution is 63,500 from the dispensaries, which consist of three distinct branch establishments; the smallest, 256, from the Hospital for Infectious Diseases. The homœopathic establishments claim no fewer than 13,374. All this eleemosynary aid is exclusive of the several thousand recipients of medical relief in the large parochial hospitals and districts of the town. That these large figures give even an approximately accurate estimate of the actual amount of gratuitous medical attendance, is simply incredible. They show that at least one person in every four of the population receives gratuitous advice in the course of the year. A general review of the returns leads to the inference that, while in some instances the number of cases has been given as nearly correct as possible, in others there has been considerable exaggeration—unintentional it may be, but still so great as to deprive the returns of any value as a reliable test of the actual amount of work done.

Liverpool, like most other large towns, is not exempt from the evils and abuses of the present system of gratuitous medical aid; but they scarcely can be believed to exist to the overwhelming extent which these figures seem to exhibit. In reply to the queries that have been asked upon this subject, it may be said that the great practical result of Hospital Sunday in Liverpool has been to afford a new source of pecuniary aid, upon which the charities can calculate with tolerable certainty, as a substitute for spasmodic efforts at uncertain intervals, generally deferred until the financial embarrassment of the institutions had become excessive. The movement thus far has not, apparently, exerted the smallest influence upon the general question of gratuitous medical relief from a medical man's point of view. There is no evidence whatever that it has had any tendency to correct the abuses of the system of which we as medical men justly complain, the evils of which fall quite as heavily on the community as upon ourselves. It cannot be said to have checked the formation of special hospitals; to have promoted the amalgamation of hospitals "which, by rivalry and antagonism, are defeating the useful object all have in view"; nor is it at all apparent that it has accomplished anything in the direction of lessening or removing any other of the manifold abuses of the system which are probably as rife here as elsewhere. On the other hand, it is scarcely possible to doubt that its inevitable tendency must be, to a greater or less extent, to increase these evils.

It must not, however, be hastily assumed that these qualifying disadvantages outweigh the direct benefit of a scheme by which a munificent

sum of money is raised for charitable purposes. We would rather suggest that the Hospital Sunday Committee, having fairly floated their great project, should seek to devise means to effect through its machinery those reforms which are urgently needed. We believe that many changes might be originated and carried out by such an organisation, which at present there seems no prospect of accomplishing through any other channel.

The profession of Liverpool have some claim in this matter upon the Committee, as well as upon the governors of medical charities, who have so largely benefited by Hospital Sunday, inasmuch as the movement in that town owes its origin to the untiring energy and indomitable perseverance of a member of the profession—our Associate Mr. Frederick Lowndes, who first suggested the project, and never ceased to agitate it until, after some years of indifference and even opposition, he at length succeeded in fixing the attention of the public on the scheme, which has confuted the fears and the doubts of its opponents, and proved a grand success.

VACCINATION-SYPHILIS.

THE paper which Mr. Hutchinson read at the meeting of the Royal Medical and Chirurgical Society on Tuesday evening, in supplement of his former communication on the conveyance of syphilis by vaccination, ought to, as it doubtless will, receive most serious attention from the profession. He has not, it is true, shown anything new so far as the possibility of transmitting syphilis by vaccination is concerned—for this had long ago been proved by cases occurring on the Continent; but to him and to Mr. Thomas Smith is due the merit of having first demonstrated the occurrence of the accident in this country. The task which Mr. Hutchinson has performed must have been a distasteful one; but no one can fail to recognise the ability and the delicacy with which he has discharged it.

The fact, that syphilis can be conveyed in vaccination, and that this accident sometimes occurs among us, is then placed beyond doubt; and how is it to be dealt with? The knowledge gained is of the highest value; but with its disclosure come also certain dangers, which the advocates of vaccination must be prepared to meet. In the first place, there is that unscrupulous class of agitators who decry vaccination, and who will doubtless on this occasion, as they did when Mr. Hutchinson read his former paper, see in the facts related by him an argument in favour of their notions. Then there are the timid persons, both in the profession and out of it, with whom the risk of conveying syphilis will go far to counterbalance the advantage of more or less immunity from small-pox which vaccination affords.

To both these classes of persons there is the answer, that infection with syphilis by vaccination is of rare occurrence, and that there is ample reason to believe that with proper care it may be prevented. Avoid vaccination from children of whose parents you know nothing, says Mr. Hutchinson; wait until the child has arrived at an age when, if syphilis be present, it will most probably have manifested itself; and avoid using lymph mixed with blood or with exudation from the walls of the vessels. Dr. Edward Ballard, too, than whom exists no higher authority on the subject of vaccination, says—Do not use any lymph from a vesicle that has been made to bleed. These precautions are surely simple enough to be followed easily; and it is interesting to note that the advice given at the meeting on Tuesday evening is almost identical with that given by Dr. Auspitz of Vienna, in a report of the Sanitary Council on vaccination, which is being published in the *Wiener Medizin. Wochenschrift*. In the number of that journal for January 25th, after remarking that the transmissibility of syphilis by vaccination can no longer be denied, he recommends the following precautions. "First examine the vaccinifer, and its parents as far as possible, as to the occurrence of syphilis. Carefully examine the whole body of the vaccinifer, and also its vaccine-vesicles. Take care that the instruments used in vaccination

are quite clean. Avoid drawing blood, and do not insert the needle (or the point to be charged) far into the vesicle. Avoid vaccinating from children under one month old, as congenital syphilis may be latent in them, and may not appear till the end of that time. . . . According to Rosen, syphilis shows itself in three-fourths of the cases before the end of the second month." Immediately afterwards, however, he gives advice strikingly in accordance with that of Mr. Hutchinson and Mr. de Méric: "When circumstances permit, it is best to wait even longer, and—as is the practice in the vaccine institute at Munich—not to vaccinate from a child under six months of age."

Up to a certain point, we may draw a parallel between chloroform and vaccination. Both are in themselves boons of the highest value to mankind; but both have been proved to be attended with certain dangers. From this point, however, the cases present a difference. In the case of chloroform, we seek to avoid the danger in the most ready way—by using other agents which shall produce the beneficial effects of the anæsthetic without its disadvantages. But in regard to vaccination we cannot do the same thing: we know no substitute. We must either vaccinate—with the possibility of introducing syphilis; or not vaccinate—with the great probability that small-pox will seize on the individual at the first opportunity. The occasional occurrence of such accidents as have been described by Mr. Hutchinson cannot be allowed to outweigh the value of vaccination; but they must make us careful—and it is a fortunate circumstance that, at the same time that the danger has been demonstrated, the means of avoiding it has been pointed out.

THE ORIGIN OF BACTERIA.

SMALL things are not to be despised; and assuredly bacteria are not likely to be, for these vibrating energetic little beings thrust themselves upon our notice at almost every turn. There is no denying the whirling destruction in which they thrive, and appear, like the Macbeth witches, to "rejoice", and there are many reasons for believing that they are the very little demons whose ravages offend our olfactory nerves in putrefying organic matters. But that is not the point of which we are thinking at present. We want to know the *pedigree* of these subtle entities. Whence come they? is now an old question, but at the same time one whose interest, so far from waning, is on the increase. We are not going to answer it; but we would draw attention to certain experiments which, so far as we can judge, must compel us to advance a step towards the answer. When Dr. Bastian, in his much talked-of book on *The Beginnings of Life*, stated that bacteria appear in hermetically sealed flasks containing turnip-infusion with a morsel of cheese, the whole of which had been raised to a temperature generally believed to be sufficient to destroy bacteria, there were, and perhaps there may still be, many unbelievers. Similar experiments have been made by others, and the results have been negative. It is a relief to find that at length some competent person has asked Dr. Bastian to demonstrate the truth of his statements. We could scarcely have desired a more efficient witness than Dr. Burdon Sanderson; and the testimony which he bears to the truth of Dr. Bastian's work is the more striking because, as he avows, he himself doubted the accuracy of Dr. Bastian's "statements of facts". An account of these experiments is given by Dr. Sanderson in *Nature* (vol. vii, No. 167).

Three series of experiments were performed. In the first series, two infusions were employed—an infusion of turnip, in making which both the rind and the central part were used; and an infusion of hay. The former was acid, and had a specific gravity of 1012; the latter was neutral, and had a specific gravity of 1005. The infusions were variously modified, by dilution, by the addition of cheese to the turnip, and by the addition of liquor potassæ in order to neutralise its acid reaction. All the fluids were placed in retorts. The open ends of the beaks were heated in the blow-pipe flame, and drawn out to capillary tubes. Each retort, with its contained infusion, was kept

boiling for five minutes over a Bunsen's burner; and then, the fluid still boiling, the capillary orifice of the retort was closed in the blow-pipe flame. The infusions were prepared and placed in the retorts on December 14th. The following are the results. *a. Neutral undiluted turnip-infusion, containing a small quantity of cheese*, examined on December 17th. "The liquid was crowded with moderately sized bacteria, which exhibited active progressive movements. There were also leptothrix filaments." At the opening of the retort, it was ascertained that its closure had been perfect, for its contained air was still rarefied. *b. Unneutralised turnip-infusion with cheese*, opened on December 17th, contained no living forms. *c. Neutral turnip-infusion without cheese*, on December 17th and 31st, had undergone no alteration. *d. Unneutralised turnip-infusion without cheese* remained unchanged. *e. Undiluted hay-infusion* was found on the 20th to be "full of minute but very active bacteria, and contained numerous colonies of spheroids undergoing transformation into bacteria. There were also leptothrix filaments." The retort in this, as in the above cases, was found to have been perfectly closed. *f. The same infusion as c.* This infusion was distinctly acid, and contained few bacteria, as compared with *c.* *g. Diluted hay-infusion* was found on the 20th to be swarming with bacteria; but, on account of a crack in the glass, Dr. Bastian regarded this experiment as futile. *h. Diluted turnip-infusion* remained unchanged.

A second series of experiments was undertaken with turnip-infusion, in order to ascertain whether the irregularities in the conduct of the turnip-infusion in the first series could in any way be accounted for by the fact that the infusion had been made partly from the rind of the vegetable. The fluid used in the second series was prepared from the central part of the turnip. (The specific gravity is not stated.) As before, the acidity of the infusion was in some cases neutralised by liquor potassæ; in others, it was not meddled with. The fluids were placed in retorts, which were heated and closed "in every respect as before". This was done on December 20th. Here are the results. *a. Unneutralised infusion with cheese.* On December 23rd, the retort was opened. "The liquid was foetid, and its reaction acid. It swarmed with bacteria." *b. The same fluid.* The retort was opened on December 31st. "The liquid was slightly foetid, and it contained characteristic bacteria, which, however, were few in number." *c. Neutral infusion without cheese.* Retort opened on December 31st. A drop of fluid contained a few bacteria, about 0.003 millimeter in length, which exhibited oscillatory movements. *d. Unneutralised infusion without cheese.* "The liquid contained a white mass, which lay at the bottom, and was so tenacious that it could be drawn out into strings with needles. This consisted entirely of bacteria and leptothrix, embedded in a hyaline matrix. There were also bacteria in the liquid." (The date on which the retort was opened is not stated.)

Dr. Sanderson desired to ascertain whether the conditions of the internal surface of the glass vessels exercised any influence on the result. He accordingly kept two glass retorts at a temperature of 250 deg. centigrade for half an hour, and closed their beaks while hot by the blow-pipe flame. Dr. Bastian charged these retorts by "breaking off their points under the surface of a neutral infusion of turnip with cheese freshly prepared for the purpose, without employing any of the rind." One retort was boiled for five, the other for ten minutes; and both were sealed as before. The specific gravity of the infusion was 1013. A third *uncalcined* retort was charged with some of the same infusion containing no cheese. This was also boiled for ten minutes, and then sealed. The results are these. The fluid in both the *calcined* retorts was found on December 31st to be "full of bacteria, whilst leptothrix existed in abundance in portions of the scum." In the *uncalcined* retort, "the rods" (bacteria?) "and filaments" (leptothrix?) were much less numerous. (The date of opening is not stated; probably it was the 31st.) In these three cases, it was ascertained that the retorts had been perfectly closed, because, at the time of opening, a rarefied atmosphere existed. In the first and second series of experiments, the retorts, after having been charged, were all kept in a water-

bath at a temperature of 30 deg. centigrade (86 deg. Fahr.) In the third series, the temperature was 32 deg. centigrade (89.6 deg. Fahr.)

In conclusion, Dr. Sanderson states that he has "established, at all events to his own satisfaction, that, by following Dr. Bastian's directions, infusions can be prepared which are not deprived by an ebullition of from five to ten minutes of the faculty of undergoing those chemical changes which are characterised by the presence of swarms of bacteria; and that the development of these organisms can proceed with the greatest activity in hermetically sealed vessels, from which almost the whole of the air has been expelled by boiling."

We cannot at present see any reason to be dissatisfied with this conclusion. We are not going to scatter our thoughts over many statements made by Dr. Bastian in his book. We merely say, here is a striking confirmation of a very important and much questioned statement which he has made regarding the appearance of bacteria in certain fluids. It seems to us that we are now simply shut up to one of two statements. Either bacteria under certain conditions are generated *de novo* in organic fluids, or the germs of bacteria are not killed by exposure for ten minutes to the temperature of boiling water. Probably some would urge the adoption of a more decided attitude than that which we assume, but we are content to pause here for a while. The question is not settled; but it has been moved on a stage, in a way which, to our thinking, is satisfactory—not because of the result, but because of the method. To the panspermists, the heterogenists will now say: You have been stoutly maintaining that the temperature of boiling water kills bacteria; and you have also said that the germs of bacteria do not travel through the air. Had these flasks been open, you probably would have abandoned the position that the bacteria germs do not travel through the air. You cannot, however, find the explanation of these results in this hypothesis. Are you now, therefore, going to say that the temperature of boiling water is probably insufficient to devitalise the parents of bacteria? or do you feel inclined to think that, after all, it may be true that bacteria can arise without the pre-existence of germs in the ordinary sense of this term? Undoubtedly, the horns of the dilemma are growing sharper; and it must be admitted that the heterogenists have apparently had their position strengthened by these experiments.

SANITARY MISRULE.

THE conflict which has taken place between the Local Government Board and the Macclesfield Rural Sanitary Authority, to which we last week called attention, has, we are happy to be able to state, been, through the tact of Dr. Thorne Thorne, brought to a satisfactory termination. The case is one in which the views which we have all along advocated have been practically demonstrated—viz., that, in matters concerning the treatment and prevention of disease, the proper persons to advise local authorities are those who possess medical knowledge. The following is an outline of the present case.

At a meeting held on December 31st, a report was read which showed that scarlatina was extremely prevalent, and that proper steps ought to be promptly taken to prevent its further spread. At this meeting Mr. Corbett attended, and advised the guardians as to the steps which should be taken. Amongst the recommendations made by him was one that a sanatorium should be provided, to which healthy persons might be moved from houses in which scarlatina was prevalent. He was, however, told, in effect, that he was unable to advise the meeting on such questions; and, although he urged the guardians to "justify the opinion which Mr. Stansfeld had formed of them on the introduction of the Bill", and threatened them with more stringent legislation, they still set him at naught. At a subsequent meeting, which we last week noticed, the Local Government Board was fairly set at defiance.

In this state of affairs, Dr. Thorne Thorne was sent down, and made an inspection of the district. On January 14th, he laid the result of his examinations before the Macclesfield Rural Sanitary Authority, and

also before some members of other local authorities who were present. He gave a lucid exposition of the causes of enteric or typhoid fever, of diarrhoea, and of scarlatina; he pointed out the evils of arrangements which allowed the liquid sewage to soak into the surrounding soil from which the water-supply was derived; and he stated that such conditions were mostly met with in the localities he had visited. Dr. Thorne also pointed out how houses, which might afford even admirable accommodation for the healthy, were often unfit for those suffering from scarlatina. He further demonstrated that, to deal effectually with scarlatina, isolation and disinfection must be rigidly carried out. The result of Dr. Thorne's arguments was that, notwithstanding the resolution which had been passed by all but four of the authority to the effect that they would not take the steps described as necessary, the following resolution was agreed to without one dissentient; viz., "That, in view of the present epidemic of scarlet fever, steps be at once taken to procure and fit up as a temporary hospital a suitable cottage for Poynton and Worth, for the reception of such cases of scarlet fever as are improperly lodged and accommodated in their own dwellings; and that a nurse be provided for such hospital." Another resolution was also passed: "That steps be further taken to secure the services of some person who shall, under medical advice, organise a proper system of disinfection both of infected dwellings and infected clothing." A third resolution was also agreed on, to the effect that the schools in the infected localities should be closed, and that every precaution should be taken by millowners and other employers of labour to prevent the attendance of persons from infected houses.

We cannot close our account of this transaction without expressing our belief, that the success was entirely owing to Dr. Thorne's tact and ability to discuss the matter in its medical aspects. The question was clearly one in which medical knowledge was required to be added to that of common sense; and it was apparently this feeling which on the former occasion led to the rejection of advice on medical matters from a gentleman not possessing medical authority. Dr. Thorne has by his success added greatly to the *prestige* of his department; and we hope that Mr. Stansfeld will now see the prudence, if not the necessity, of leaving to medical inspectors the duty of giving medical advice.

THE AMENDED VOLUNTEER MEDICAL REGULATIONS.

THE War Office has at length prepared, and will shortly issue, the amended Volunteer Medical Regulations promised by Mr. Cardwell. It will be remembered that the circular of April 1872 contained several regulations offensive to the Volunteer medical staff, which were protested against by its members both in London and in the country. On the representation of their grievances by the medical officers, Mr. Cardwell expressed his willingness to reconsider the matter. The result is, that the offending regulations are withdrawn by Mr. Cardwell. The compulsory medical examination is not insisted upon; but, to enable medical officers, if they should desire it, to obtain certificates of proficiency, and thus earn for their corps the special capitation grant of £2:10, they must pass the examination prescribed in the original scheme. Those only who are registered under the Medical Act as qualified to practise medicine and surgery, are entitled to receive the certificate after due examination. This new regulation is, we think, fair enough, and will not exclude those who may not possess a double qualification, but who may be most valuable members of the service.

The clause on compulsory medical attendance is cancelled. The circular of April 1872 demanded the compulsory services of the medical officers, and allowed twopence a week for each member of the staff and family in return for medical advice, medicine, medical appliances, and midwifery. This sum was granted, whether these persons required attendance or not. By the new regulation, the two pennies will be allowed to members of the permanent staff and their families, in aid of medical attendance. It is thus left to them to make what arrange-

ments they can with the medical officers of Volunteers or private practitioners.

The new regulations do not infringe on the voluntary character of the services of the medical officers; and they will probably, on the whole, meet with their approval. Mr. Cardwell has had the wisdom to admit the impracticability of his early scheme, and has prepared a code of regulations framed in accordance with the spirit of a volunteer medical service. We congratulate the Volunteer Medical Association in securing this result.

DR. WHITMORE has been appointed public analyst of food, drink, and drugs in the parish of St. Marylebone.

DURING the week ending January 24th, the number of deaths from small-pox in Vienna was 85, and the average daily number of patients in hospital suffering from the disease was 338.

GUY'S HOSPITAL.

DR. OWEN REES has, we understand, resigned the appointment of Physician to Guy's Hospital. He will, however, continue to fulfil his duties, at any rate, as Lecturer at the Medical School, until the end of the Session.

STREET-ACCIDENTS IN PARIS.

FORTY-FIVE thousand carriages circulate in the streets of Paris, including 1,200 omnibuses, 8,000 private carriages, 10,000 public cabs and hired carriages, and 25,000 carts for transport. These carriages, it is stated, kill yearly 135 persons, and wound 1,200.

THE CLINICAL SOCIETY.

THE members of the Clinical Society were, at the last meeting, denied the pleasure of listening to an address from Mr. Prescott Hewett, the newly elected President. The circumstance which compelled the absence of Mr. Hewett were, however, altogether unavoidable; and we are glad to know that he will deliver a presidential address at the next meeting of the Society.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN. THE usual quarterly court of the Directors of the Society was held on January 8th in the rooms of the Royal Medical and Chirurgical Society, 53, Berners Street. The chair was taken at eight o'clock by the President, Dr. Burrows. Fifty-five widows and thirty-four children applied for assistance from the funds of the Society. A sum of £1218 10s. was voted to be divided according to the wants of the respective applicants. The expenses for the quarter amounted to £57 17s. 4d. A legacy of £100, duty free, was announced as having been received from the executors of Martin Ware, Esq., late President. The death of R. Strong Eyles, Esq., one of the Treasurers, was reported by the Secretary.

THE SWEET SUBURBS.

AN important sanitary inquiry has just been concluded at South Hornsey by Mr. Harrison, one of the commissioners of the Local Government Board. It appears that, although the district of South Hornsey juts into the metropolitan area and forms an important part of London, it is in a most disgraceful sanitary state. At the inquiry, it was stated by Mr. Soutter, a surgeon in the district, that for years there had been an open drain running down the eastern side of Blackstock Road, the smell of which in the warm months was dreadful; that two cottages adjoining, or forming an old sluice-house, had privies at the bottom of their gardens opening into a common ditch, the filth being carried by the water from the fields for two hundred yards along the side of the public footpath, a hedge only separating the path from this prolonged cesspool; that large accumulations of decaying animal and vegetable matter have been allowed to remain at the backs of many of the houses in Seven Sisters Road; that this road had not been cleansed in any way for the last eight months, nor had it any drain, although it is a main thoroughfare and traversed by thousands of cattle every

month to and from the metropolitan markets; and that on its northern side, between Finsbury Park and the hedge which skirts the road, there is a long ditch which is never cleaned, and is made the receptacle of every nuisance. Mr. Luke, a practitioner in the Green Lanes, stated that opposite his house there was also a long ditch without any outlet, which gave rise to a stench in the road. He had lately had a case of typhoid fever, which he attributed to the state of the road and insufficient drainage. It was also stated that there was not an inch of drainage belonging to the South Hornsey Local Board—the houses draining very imperfectly, and by payment, into the drains of Islington on the one side and Hackney on the other; and that builders had to exhibit cesspools on their plans to meet the recognition of the Local Board of Health. We believe that the commissioner will recommend an amalgamation of the South Hornsey district with the Metropolitan Board of Works, and the abolition of the Local Board.

CHOLERA IN THE AUSTRO-HUNGARIAN PROVINCES.

DURING the week from January 5th to 12th, 32 new cases of cholera occurred in Moravia. The total number under treatment during the week was 62, of whom 31 recovered and 20 died. In Silesia, during the same period, there were 17 new cases; the total number was 45, of whom 23 recovered and 10 died. In Galicia, during the second half of December, there were 5,806 new cases; the total number of cases under treatment during that period was 7,040, and among these there were 3,746 recoveries and 2,054 deaths. In Hungary, four hundred localities in which cholera prevailed are now free from the epidemic. In Buda-Pesth, during the week from January 4th to 10th, there were only 16 new cases. The total number under treatment during the week was 77, of whom 35 recovered and 16 died. The *Wiener Medizin. Wochenschrift* reports that six cases of cholera have lately occurred in Vienna, of which three were fatal. These are the only cases that are as yet known to have occurred in the city.

THE BEDFORD GENERAL INFIRMARY.

THE last quarterly meeting of the governors of the Bedford Infirmary was the scene of a most animated discussion concerning a vote of censure which it had been proposed should be passed on the house-surgeon for neglect of duty. The facts were briefly these, as we gather them from the perusal of several long reports. A man suffering severely from stricture of the urethra was one day admitted into the Infirmary at two o'clock in the afternoon. Mr. Johnson, the house-surgeon, considered the case one of imminent danger. The man was suffering from uræmic poisoning. He found it impossible to pass the catheter, and the bladder was greatly distended. Meeting Mr. Goldsmith, the surgeon of the week, two hours afterwards, he explained to him the case, expressed his fears, and said that if the man could not obtain relief by a hot bath, he would send for him that evening to perform the operation of puncturing the bladder through the rectum. In the evening, Mr. Johnson ordered the patient a hot bath, during which slight relief was obtained by about half a pint of urine escaping. On visiting his patient the next morning, Mr. Johnson found him in a sinking state. Mr. Goldsmith and Mr. Sharpin were immediately called in, and the operation of puncturing the bladder was performed, and three pints of urine drawn off. The man, however, sank and died the same evening. On the *post mortem* examination the kidneys were found healthy, the bladder hypertrophied and congested, and the stricture very complete. On these facts the Weekly Committee passed a resolution, "That the house-surgeon committed an error in not sending earlier for the surgeon of the week." This opinion was confirmed at the quarterly meeting by Mr. Goldsmith and Mr. Sharpin, who considered the operation should have been performed the day the patient was admitted. After a long debate, in which some warm friends of Mr. Johnson spoke highly of his professional character, and his care of, and attention to, his patient, a resolution was passed by a large majority adopting the Weekly Committee report, with the exception of the passage expressing the vote of

censure. The meeting was evidently a packed meeting, and the resolution rescinded the very mild vote of the Weekly Committee. The man's chance of life was greatly injured by the postponement of the operation, and it was clearly an error on the part of the house-surgeon, and a serious one, as we think, not to have sent earlier for the surgeon of the week. The fatal error is instructive to house-surgeons in general.

THE PUBLIC HEALTH ACT: COMBINATION FOR JOINT APPOINTMENTS.

WE see with very great pleasure that the principle of combination is being largely and successfully advocated by the majority of the Local Government inspectors. We attach so much importance to it as the primary condition of success in the carrying out of the Public Health Act, that we shall be ready to excuse many shortcomings of the Local Government Board, if it will continue heartily to carry out and intelligently to administer the provisions of the Act on this principle. It is easy enough to magnify failures and to overlook success, and to insist so strenuously upon particulars sure to raise professional prejudice, as to deny just applause to honest exertion in the right direction. This we would not willingly do. In pointing out the weakness of Mr. Henley's scheme and the temporary faults of Mr. Doyle's, we have adhered to a central principle of criticism. The work of the Local Government inspectors is good in our eyes, when it tends to bring about a combination of areas under the charge of a sufficiently qualified and adequately paid medical officer, giving his whole time to the work, and with all the union medical officers in the district as deputies. It is bad when it splits up the country into a number of small areas among poorly paid officers, distracted by the cares of practice and local conflict of interests, and not specially qualified for the office. We rejoice to see that the Local Government Board and its officers incline more and more to our view, and in most of the counties of England are carrying it into practical effect. We believe as strongly as ever that it was a great mistake to employ in this work gentlemen not possessing sanitary knowledge; but we imagine that their own common sense will soon awaken them to a perception of the falseness of their position in this respect, and we can but applaud the ability and energy which, as a body, they are now displaying in forming large sanitary areas throughout the country.

THE CENSUS OF ITALY AND OF FRANCE.

COMPARING the results of the recent census in these two countries, we find that the population of the Kingdom of Italy amounts to 26,804,154. This is an increase of about 0.71 cent., compared with the census of December 31st, 1861. On December 31st, 1872, the population of France was 36,102,921. France is the only country in which the population does not increase. M. Caffé points out that a nation becomes impoverished by the sole fact of remaining stationary. Nations, like individuals, become impotent unless they advance.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE lectures on Dermatology will be delivered in the theatre of the College on Mondays, Wednesdays, and Fridays, at 4 P.M., commencing on Friday, January 31st, 1873, by Mr. Erasmus Wilson, the Professor of Dermatology. *Prospectus*:—Retrospect of previous lectures. Additions to the dermatological collection since the last session, illustrating preceding subjects:—Models of papular and pustular eczema; scabies; lichen planus; papular erythema; and urticaria. Models of syphilis of the skin or dermato-syphilis, showing primary syphilis or chancre; erythematous syphilis; papular and tubercular syphilis; pustular and ulcerative syphilis; chronic ulcerative syphilis; and deep and disorganising syphilis, or syphilitic tumour. "Tumor gummatous." Present course:—The leprosy; elephantiasis of the Greeks; and lepra of the Greeks. Elephantiasis first observed by the Greeks; description by Celsus; extensive distribution throughout the world; researches of Danielssen and Boeck. Signification of the term "lepra;" its application to elephantiasis resulting in a confusion of terms; for-

mation of a Leprosy Committee; the "elephant leg" disease of the Arabians, called Elephantiasis Arabum.—Relations of elephantiasis to the exanthemata and syphilis; fatality of elephantiasis. Illustrations of the macular, tubercular, neurotic, and mutilant forms of the disease. Erythematous or macular elephantiasis. Tubercular elephantiasis; Leontia Leontiasis, Satyriasis; Lepers the type of the Satyrs of the poets. Neurotic elephantiasis, or elephantiasis anæsthetica; red and black leprosy; neuropathic phenomena. Mutilating elephantiasis, or elephantiasis mutilans; enucleation of bones; production of deformed stumps.—Cause of elephantiasis; conditions favouring its development; modifications induced by climate; probable contagion; undoubted propagation by hereditary transmission.—Pathology, diagnosis, prognosis, and treatment of elephantiasis. Principles of treatment; the Beuperthuy method; necessity for a lepra institution in England.—Lepra of the Greeks; lepra of Willan; psoriasis of the French and German schools, and their followers. History and phenomena of lepra; varieties of manifestation; mode of growth and decline. Diagnosis; complications of lepra; eczematous and gouty lepra. Pathology, cause, prognosis, and treatment of lepra.

THE CLIMATE OF ALGIERS.

M. SÉSARY, in a careful and conscientious study of this subject (*De la Température de la Ville d'Alger au point de vue des Maladies chroniques de la Poitrine*), arrives at the following conclusions, which are important to consumptive invalids, who transport themselves thither in numbers from these shores. "This climate is fatal to the phthical from the month of May to the month of October. Not only ought phthical visitors not to sojourn here at that time, but the consumptives in the city ought to leave it. If the inhabitants of the North need to fly from their winter, the inhabitants of Algiers whom the disease torments must flee from the summer."

ACTION FOR RECOVERY OF FEES.

A CASE has lately been tried in a county court in Durham in which Mr. James O'Flanagan, a licentiate of the Royal College of Physicians of Edinburgh and of the Faculty of Physicians and Surgeons of Glasgow, sued William Shaw, a miner, for the sum of £3:13:6. The bill was made out for "advice and certificates" at various dates. In examination, the plaintiff said that medicines were included in the charges. After a long argument, in which some not very temperate language was used on all sides, the judge decided that under the Medical Act a man registered as a physician, could not charge for medicines, and that the plaintiff could not recover his charges. Two other similar cases were decided against Mr. O'Flanagan in the same way. Notice of appeal was given. We cannot avoid thinking that Mr. O'Flanagan has been hardly treated; and it is probable that, if he appeal to a superior court, the decision of the county court judge will be reversed, as not being in accordance with either the spirit or letter of the Medical Act.

THE LIVERPOOL ROYAL INFIRMARY.

OUR Liverpool correspondent writes:—The approaching annual meeting of the Royal Infirmary is looked forward to with more than ordinary interest. Another change in the tenure of office of the honorary medical staff is to be considered. Originally the appointments were for life, but this came to be thought objectionable, and a few years ago the duration of office was limited to a period of twenty-one years. This new law gave offence at the time to the late Mr. Bickersteth, who, in consequence, resigned, after having filled the post of surgeon for forty-three years. Curiously enough, his son, the present Mr. Bickersteth, having nearly completed his term of twenty-one years, is liable to be prematurely displaced by the same law. As he is still in the prime of life and the zenith of his surgical ability and skill, the trustees are naturally and wisely desirous that the Infirmary should retain his valuable services; but there is some difficulty and difference of opinion as to how this object can be attained in the method most conducive to the interests of the institution, and in accordance with the rights of others. Two proposals have been suggested—one, that the tenure of

office shall be determined by the age of the incumbent ; and on this question there is yet a further division, some declaring for sixty, others for sixty-five as the age of compulsory retirement; the other proposes to get over the difficulty indirectly by retaining the limit of twenty-one years, but making a special exemption in Mr. Bickersteth's favour to meet the particular case.

SUCCESSFUL VACCINATION.

WE publish in another column copies of circulars lately issued to vaccinators and registrars in Scotland. It will be observed that they are of a stringent character, and unpleasantly worded. The Vaccination Act provides that the remunerations to a vaccinator for each person successfully vaccinated, shall not be less than one shilling and sixpence when the operation is performed within two miles of his residence, and two shillings and sixpence when beyond that distance. It is almost unnecessary to add, that most parochial boards have considered the minimum ample remuneration. Unsuccessful vaccination, and any "laxity or carelessness of practice," are greatly to be deprecated in respect to vaccination ; but it is worth the while of the Board of Supervision to consider how far insufficient remuneration and discouragement of zeal in vaccination by boards of guardians have tended to favour such carelessness, and they might possibly follow up with advantage their present circular by another on the same subject, addressed not to the vaccinators, but to their employers.

HUNTERIAN SOCIETY.

THE annual meeting will be held on Thursday, February 6th, when the Annual Oration will be delivered by Mr. Arthur Durham. The dinner will take place on Friday, February 14th—Dr. Herbert Davies in the Chair.

SIR J. CORDY BURROWS.

A VOLUNTEER medical officer writes : "I do not think that adequate allusion has been made in the papers, in commenting on the honour recently bestowed on Surgeon Burrows, to the prominent and honourable position he has taken in the volunteer movement. During the whole time in which the volunteer force has been in existence, he has been ever in the van in his own district in assisting the movement and asserting its right to more generous recognition from Government. At Brighton he has, either in his capacity as mayor or as surgeon in charge of the medical staff, exerted himself by perfecting the arrangements for the Easter Reviews held on the Downs, and by almost unbounded hospitality has done much to make Brighton a popular field for the annual Review. It is, I believe, chiefly on these accounts that he has deserved and has received the honour which he will wear so well."

LONDON INTERNATIONAL EXHIBITION FOR 1873.

THE second meeting of Surgical and Orthopædic Instrument Manufacturers was held on Monday, January 27th, at 29, St. James's Street ; Mr. Louis Blaise in the chair. The recent resolutions of the Committee on Surgical Instruments having been read, it was unanimously resolved that the revised conditions proposed by Her Majesty's Commissioners should be accepted, and that the majority of instrument makers would exhibit. A Committee was then elected to carry out the necessary arrangements.

IRREGULAR MIDWIFERY.

ONE day last week, a girl aged about twenty, with a baby on her arm, walked into the Middlesex Hospital about 7 A.M., and asked to be admitted, saying that she had just been confined. On inquiry, it appeared that she was a servant, that she had been taken in labour during the night, and had managed to deliver herself. As soon as the child was born, she divided the cord close to the abdomen with a knife, got up, dressed herself, and walked from her place in Leather Lane, Holborn, to the hospital. She was at once admitted and put to bed ; the placenta was found to be still within the uterus, and had to be removed by hand. When seen in the afternoon, the patient

seemed none the worse for her exertions. Judging from her appearance, one would not have given her credit for being very robust or hardy. Though the cord had been shaved off close to the child's abdomen and no ligature applied, little blood had been lost, and, under the care of Dr. Hall Davis, both mother and child are doing exceedingly well.

THE HOSPITAL FOR SICK CHILDREN.

THE Committee of the Hospital for Sick Children, Great Ormond Street, have issued circulars to all the medical schools, to the effect that the practice of the hospital in both in- and out-patient departments is open to practitioners of medicine and students daily on presenting their cards. Clinical instruction in the diseases of children is constantly given by the physicians and surgeons.

ARTIFICIAL DILATATION OF ANUS AND RECTUM.

A CORRESPONDENT in Hamburgh writes to us :—On several occasions during the past year, Gustav Simon, Professor of Surgery in Heidelberg, vaunted his method of exploring the rectum and the adjacent organs by introducing the whole hand and part of the forearm the patient being deeply narcotised. In children, two fingers only can be introduced, but in adults the hand, unless its circumference exceed nine inches and three-fourths ; and this may often be done without lacerating the sphincter. If the latter be found rigid, it may be cut into, the part contiguous to the os coccygis being preferred ; the bend of the rectum is thereby rectified, and defæcation made easy. During the first few days succeeding the manipulation, considerable pain is present, which however soon disappears, and after ten or twelve days the wound is healed and the sphincter acts as before. By this procedure, the sigmoid flexure may often be reached, and in more rare instances the lower end of the left kidney ; the state of the womb, the ovaries, bladder, and intestines may be investigated ; carcinomatous masses may be removed by scooping them out of the rectum ; fistulæ, which formerly were beyond surgical interference, may be operated on ; etc. Independently of Simon, Dr. Nussbaum instituted similar proceedings at Munich, and is said to have reached so far with his fingers as to touch the processus ensiformis.

THE AMERICAN PHARMACOPŒIA.

A FIFTH decennial revision of the United States *Pharmacopœia* has been just completed. An early copy is reviewed by Dr Attfield in the *Pharmaceutical Journal*. Among the additions to the materia medica are carbolic acid, nitrate of ammonium, hypophosphites of calcium, of iron, of potassium and of sodium, Indian hemp, oxalate of cerium, chloral, iodoform and Calabar bean ; also "*Cinchona*: The bark of all species of the genus *Cinchona*, containing at least two per cent. of the proper cinchona alkaloids, which yield crystallisable salts : " this is in addition to *Cinchona flava*, *Cinchona pallida*, and *Cinchona rubra*. The five articles dismissed are neat's foot oil, star-glass, angelica, Indian turnip, and cotton-root. The new preparations include the benzoate, bromide, and iodide of ammonium, digitalin, citrate of iron and strychnia, oxalate of iron, cantharides paper and mustard paper (*chartæ*), glycerites (*glycerita*) of carbolic acid, gallic acid, tannic acid, tar, and borax, various suppositories and juices, and twenty-two new fluid extracts, in the manufacture of the majority of which glycerine is employed as well as alcohol, and the latter thus economised. The chemical nomenclature adopted is that which has been advocated in this country by Dr. Attfield, in a paper to which we have already expressed our assent.

THE GEOGRAPHY OF TRAUMATIC FEBRILE DISEASES.

AT a recent meeting of the Berlin Medical Society, Dr. Falk remarked that pyæmia and septicæmia appeared to be of more frequent occurrence in the northern than in the southern parts of Europe. These diseases, he said, were met with more rarely in other parts of the world. Certain regions appeared especially favourable to the healing of wounds ; viz., in Africa, Egypt, Tunis, Algiers, and certain parts of the west

coast and of the south; in Asia, the slopes of the Himalaya, and Bengal; in America, California, Guiana, and Brazil; in Australia, certain parts of the mainland, and some of the neighbouring islands. This favourable condition, Dr. Falk believed to depend less on race than on climatic circumstances; but what these circumstances were, it was difficult to say. Uniformity of temperature, dryness of the air, and elevation, were important elements. The sanitary reports of the British army showed that pyæmia and septicæmia were less and less frequent towards the tropics, and were entirely absent under the equator. Puerperal fever had a similar distribution; while hospital gangrene and traumatic erysipelas were met with all over the world. Traumatic tetanus appeared to occur most where pyæmia and septicæmia were rare. Dr. Zülzer thought that race was concerned in the development of traumatic tetanus, negroes being specially liable to it. Friedel, in his travels in Eastern Asia, had found that wounds had a more favourable course generally in the Chinese than in Europeans; and Pirogoff had noticed a difference in this respect in the various races inhabiting Russia. Dr. von Langenbeck said that, although pyæmia was rare in warm climates, the same could not be said of septicæmia. This disease was often included in returns under the head of hospital gangrene.

SCOTLAND.

PROFESSOR HUXLEY will, it is expected, deliver his inaugural address, as Lord Rector of the University of Aberdeen, at the commencement of next session.

THE Glasgow Convalescent Home at Lenzie is now ready for the reception of patients. It affords accommodation for sixty-two beds. Thirty-two beds are to be set apart for infirmity patients, while the remainder will be opened for other convalescents.

THE EDINBURGH ROYAL DISPENSARY.

AT the annual meeting of the subscribers to the dispensary, the chairman expressed the hope of the managers that they would soon be able to improve the dispensary by an addition to the present building, or by the erection of a new one. The annual report was satisfactory.

FEVER-BREEDING IN EDINBURGH.

IT is very gratifying to hear from the lips of the local authority of Edinburgh, that they are most anxious for the welfare of the inhabitants in the matter of providing accommodation for fever-patients. At a conference of a subcommittee of the Lord Provost's committee with representatives of the infirmity managers, the local authority, while admitting their duty to afford special fever hospital accommodation according to the Act at the public expense, said that they could not omit to represent to the infirmity authorities that it would be the interest alike of the citizens and managers to avoid the necessity of opening a new hospital and resorting to public assessment for the consequent expense, so long as fever had not become epidemic, especially as the additional accommodation required was not very extensive. They would not require more than fifty or sixty fever-beds in the Infirmary for the ordinary wants of the city. It may be very pleasing to the local authority that they have comparatively so few fever-cases in Edinburgh at present. It is difficult, however, to imagine how it can be the interest of the patients or of the managers of a general hospital to offer such facilities to a public body to convert an institution intended for other purposes into a fever-house, and thus endanger the lives of persons who enter the Edinburgh Royal Infirmary for other purposes than that of availing themselves of the various fever-poisons introduced within its walls. We presume that Dr. Littlejohn, who advises the local authority in these matters, has other reasons to advance than those offered at the meeting; but, however that may be, it is to be hoped that, even with the peculiar inducement of a convalescent home in the Canon-gate, of all places, offered to the managers of the Infirmary, these gen-

tle men will decline to take a public duty off the hands of the local authority, and refuse to put their wards or any part of the infirmary grounds to such an use as is asked of them.

VACCINATED BUT UNPROTECTED.

THE following important official notices have been recently issued to public vaccinators in Scotland from the General Registry Office of Births, etc., Edinburgh.

"Sir,—I enclose herewith a copy of a minute which has been prepared by the Board of Supervision, and transmitted by their direction to the various inspectors and vaccinators under their control throughout the country. I am extremely glad that the Board of Supervision has adopted this course, as I think it will tend to check the laxity of practice and carelessness (to use no stronger terms) which have prevailed in many districts, in regard to the manner of carrying into operation the provisions of the Vaccination Act. I can add nothing to the clear and important statements in the minute; but, in transmitting it to the Registrars, in compliance with a suggestion to that effect on the part of the Board of Supervision, I wish to take the opportunity of pressing upon you the obligation which is imposed on all who are concerned in the working of the Vaccination Act of securing a careful observance of its various provisions, in accordance with the relative regulations issued for your guidance. "I am, sir, your obedient servant,

"W. PITT DUNDAS, Registrar-General."

"*Extract Minute of the Board of Supervision as to Vaccination, 9th January, 1873.*—The Board have reason to believe that considerable carelessness and laxity of practice exists in some districts with reference to the requirements of the Vaccination Act (26 and 27 Vic., c. 108); and being apprehensive that such departure from the law, if unchecked, may so increase in frequency as to cause great detriment to the community, as well as professional disgrace to the vaccinators who may be guilty of them, they deem it right to recapitulate some of the duties incumbent not only upon all vaccinators appointed under the statute, but upon all medical men performing the operation of vaccination. In every case in which a medical practitioner, whether he be a vaccinator appointed under the Act or not, has successfully vaccinated a child, he is required by section 8 of the statute to deliver to the parent or guardian a certificate of successful vaccination. This implies that the operator shall take proper and sufficient means to satisfy himself of the success of the operation before he certifies that it has been successful; and it is obvious that no one can properly grant such a certificate, unless he has personally examined the child on the seventh or eighth day after the operation; or, if that be impracticable, on some day during the progress of the vaccine disease when the vesicles have assumed their characteristic appearance. If any one does grant such a certificate without personal evidence of the fact, he runs the risk of criminal prosecution. In like manner, certificates of postponement, as authorised by section 9, declaring that a child is not in a fit and proper state to be successfully vaccinated, can only be properly and safely granted after a careful personal examination of the child. Vaccinators are further required by section 23 to transmit to the Registrar the particulars of all certificates granted by them, and the preceding observations apply to that requirement also. Again, vaccinators are required, by No. 5 of the regulations issued by the Board on the 20th August, 1863, 'to be at all times furnished with vaccine virus;' and the Board can accept no excuse for failure to comply with this requirement, inasmuch as vaccine lymph is supplied gratuitously to all vaccinators in Scotland by the Central Vaccine Institution, upon application being made to the Superintendent of the Institution, Dr. Husband, 28, Clarence Street, Edinburgh. The benevolent intentions of the legislature will be altogether frustrated, and a very serious injury inflicted upon the population, if these several requirements are not, in all cases, carefully and conscientiously complied with. The Board will, therefore, consider it their duty in future to remove all vaccinators from office who shall fail duly to observe them, and further to report to the Lord Advocate all cases in which an offence against the law shall appear to have been committed. A recent trial of a medical officer at the Circuit Court of Inverness, has established the fact that the giving of a false vaccination certificate, knowing the same to be untrue, is a criminal offence in the law of Scotland, and the punishment of four months' imprisonment awarded on the occasion referred to, indicates the gravity with which such an offence will be viewed. For their own safety, therefore, as well as upon higher grounds, it behoves all vaccinators, and other medical practitioners, to give dutiful and careful observance to the statutory requirements. The Board direct copies of this minute to be transmitted to all vaccinators and parochial boards."

EXTRACT FROM AUXILIARY AND RESERVE FORCES CIRCULAR.

DATED, WAR OFFICE, JANUARY 1ST, 1873.

Certificate of Proficiency.—Medical Officers of Volunteers.—Clause 10.—1. Paragraph 43, Clause 9, Auxiliary and Reserve Forces Circular, 1872, referring to the compulsory examination of officers, does not apply to medical officers. The examination fixed for these officers by Section 5 of Clause 31 is not compulsory, but is prescribed in order to enable medical officers, if they should desire it, to obtain certificates of proficiency, and thus earn for their corps the special capitation allowance of £2 : 10 under Clause 29.

2. The words in parenthesis in the first paragraph of the certificate of proficiency (War Office Form, 855) given at page 96 of the Auxiliary and Reserve Forces Circular, dated May 28th, 1872, will be struck out, and the following substituted: "who is registered under the Medical Act of 1858 as qualified to practise medicine and surgery in Great Britain and Ireland."

Medical Attendance.—Clause 13.—1. An allowance of twopence per week for each person, in aid of medical attendance, will be granted on account of the permanent staff and their families. This allowance will be paid by the adjutant to the medical attendant, and charged in his accounts. The charge must be vouched by the adjutant's certificate of the actual number of persons for whom the allowance is strictly chargeable, and by the receipt of the medical attendant, whether he be the medical officer of volunteers or a private practitioner.

* * * * *

4. Clause 43 of Auxiliary and Reserve Forces Circular, 1872, is cancelled.

DEATH AFTER THE ADMINISTRATION OF NITROUS OXIDE.

THE sad event which took place at Exeter last week has produced a most painful feeling of discomfort. A long and extended series of nearly half a million of recorded cases had led the profession and the public to believe that, whatever the dangers of chloroform, nitrous oxide gas offered a means of producing anæsthesia almost absolutely free from danger; and that any accident occurring during or after its administration would be expected to arise from intercurrent causes. The circumstantial report given in the daily papers appeared to leave no doubt that this case at Exeter was an exception to be recorded against nitrous oxide. A careful perusal of the evidence tendered at the coroner's inquest does not, however, altogether bear out this supposition.

A lady thirty-eight years of age, believed by her medical attendant to be in good health, required the extraction of a large double upper tooth. She accordingly desired Mr. Browne-Mason, a dentist at Exeter, to administer nitrous oxide gas. He proceeds in his evidence to say that he gave the gas in the ordinary way. "As usual at the commencement, from the flurry of the patient, the pulse was rapid. The usual effect of the gas is to quiet it; and when Mr. Pattinson, who was present, remarked that it was not so full, I removed the inhaler, and tried to take out the tooth without it. Deceased said she could not bear it, and asked to be allowed to have the gas again. After some little delay, occasioned by her washing her mouth, I again applied the inhaler. In the first inhalation, she was not insensible at all; it only had the effect of quieting the pulse. The second time, the deceased took the gas in the usual way, no symptoms appearing to make me uneasy. She was not faint. When I considered she had as much gas as was necessary, I removed the inhaler. To remove the tooth, I had to split it and get the fangs out separately. After I had completed the operation, I first noticed the lividity of the features. At that period, lividity is unusual; for lividity is common during the administration of the gas, but disappears as the patient breathes pure air instead of gas. The features commenced to swell; the tongue protruded, and it was pulled forward in order to let all the air possible into the throat. I ran for Dr. Drake; I could not have been absent from the house three minutes, when I returned with him. Breathing and the pulse had not stopped then. Deceased died about five minutes afterwards. I am satisfied the gas was pure. I had used the very same flask for two patients before, and everything on these occasions went well. Deceased had not lunched or dined before the administration: I was particular in asking." He proceeded further to say that several minutes elapsed between the first and second inhalations; and that the patient inhaled, he thought, about six gallons.

Mr. Pattinson, her medical attendant, who was present, stated that she was apparently in good health and cheerful before the operation.

"She was seated in a chair. Mr. Browne-Mason asked me to place my hand upon her pulse, and I did so. After he had administered the gas a very short time I thought the pulse was slower, and I said so. Mr. Mason at once removed the apparatus, and proceeded to extract the tooth. It was evident that she had then scarcely been under the influence of the gas at all, because she at once evinced pain. The operation of extracting the tooth seemed to be an exceedingly painful one, for she cried out, and writhed a good deal. The tooth was not taken out, and she washed out her mouth with water, and said if anything was to be done she must have more gas. Mr. Mason then proceeded to administer more gas. It was my alarm that had prevented sufficient gas from being administered at first, and I then asked Mr. Mason to feel the pulse this time, as I knew nothing about the administration of the gas. He did so, and I held the other hand. The gas was administered for some time. The deceased pushed off the instrument with her hand, and Mr. Mason then proceeded to finish the operation. I then noticed a sudden blueness come over the features. I was not particularly alarmed at that, because I was given to understand that that was the customary thing. I can hardly describe what followed, but it was evident something unnatural was occurring with deceased. Cold water was brought, the window was thrown open, Mr. Mason ran for Dr. Drake, who arrived within a few minutes, I in the meantime doing all I could. Deceased never rallied in the least, and died very quickly. I am almost afraid to venture an opinion as to the time between the commencement of the second administration and her death, possibly it was ten minutes. She did not appear faint—it was more the appearance of paralysis or convulsion. Ammonia was applied, but it had only a very temporary effect. She had not the power of swallowing. I have no reason to believe that she was suffering from imperfect circulation of the heart. She was of a plethoric habit. Deceased was not subject to fits."

Dr. Drake, who also gave evidence, said that when he arrived he found the deceased sitting in a chair, half reclining, before an open window. "Mr. Pattinson was by her side endeavouring to restore animation. Her features were livid, swollen, and she appeared to be quite unconscious. She breathed a few times, but a short time afterwards her pulse ceased to beat. I consider the cause of death to have been paralysis of the parts which regulated her breathing, arising from the administering of nitrous oxide gas, which produced asphyxia. I have never been present at the administration of the gas. I believe she was as powerless to breathe as if she had been immersed in water. There was a disposition to corpulency, and possibly there might have been other things that might be considered an objection. But she had such a broad excellent chest, and the organs there seemed to be in such a condition, that I do not think any person would have considered her an unfit subject for the gas. Such a result may have happened to any doctor or dentist in the ordinary course of treatment. I believe it was an event which no amount of forethought could have provided against."

It is impossible not to observe that the evidence tendered at the inquest affords insufficient data for any decision whatever as to the cause of death. It is really not possible to say from what cause this patient died, and even the conjectures which may be hazarded are various and hypothetical. The account of death is compatible either with slow asphyxia from the introduction of a foreign body into the larynx, or with death from apoplexy or from any irregular and fatal action of the gas acting upon the nervous centres of the heart and the lungs. The clinical account of the case is not such as to enable the reader to define the mode of death, or the precise sequence and character of the phenomena which accompanied it. This is no doubt, to some extent, unavoidable in the reports by unskilled persons of medical evidence given before a coroner and his jury.

A much more precise account of the *ante mortem* conditions, prepared by the gentlemen concerned, for the perusal of their medical brethren, must be considered indispensable to a right appreciation of the facts. We have already communicated with them on this subject, and we trust they will, in concert, draw up such a statement for publication. The absolutely necessary details which only a necropsy can afford, are unfortunately absent. Every one will sympathise deeply with the medical men concerned in the case and with the dentist. It is not difficult to understand the reluctance which the relatives showed to a *post mortem* examination. We cannot but think, however, that the coroner, in whose hands the discretion lies, has greatly neglected his duty, and that the medical men have failed in theirs, in attempting between them the quite impossible task of explaining this sad occurrence or of affording the materials for any verdict as to its nature and causes, without an inspection of the body. They cannot know and do not know at this moment what was the cause of death; nor can any one even fairly surmise it from the evidence produced. They say that

it was due to the action of nitrous oxide gas; and in saying so, they affirm that which evidently neither of them know. On what grounds have they excluded the possibility of traumatic asphyxia, from the introduction of a foreign body into the larynx, whether it be blood or a part of the tooth, or any other foreign body which may have been in the mouth? How have they excluded the possibility of a sudden cerebral apoplexy?

The words they have used are indeed meaningless, except it be to affirm what an inquest was not necessary to show; viz., that symptoms of approaching death occurred shortly after nitrous oxide gas had been administered. The omission of a necropsy under such circumstances is an offence against justice, as the verdict is an offence against truth; and for this failure the coroner is mainly responsible. It was in every way important that all the facts should be known concerning this sad event, and that all its important lessons should be learnt. We fear now that this cannot be. The stain remains on the record of nitrous oxide gas as an anæsthetic; and it is one which teaches nothing, and which we can only regard with a sense of ignorant pain.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 28TH, 1873.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

A SECOND REPORT ON THE COMMUNICATION OF SYPHILIS IN THE PRACTICE OF VACCINATION.

BY JONATHAN HUTCHINSON, F.R.C.S.

THIS paper contained an account of two series of vaccination-syphilis (each series containing but a single case) which had come under Mr. HUTCHINSON'S notice since his last communication on the subject in 1871. These two cases (forming the author's third and fourth series) were prefaced by a few remarks referring to cases published by others on the continent and at home; the author also reasserted the great importance of making all such cases public. The latter part of the paper was occupied with general conclusions and recommendations drawn from a consideration of all the cases which had come under Mr. Hutchinson's notice.

THIRD SERIES.—Case. This patient was a respectable small tradesman, aged 46, who came under Mr. Hutchinson's care at Moorfields Ophthalmic Hospital with double iritis. Examination disclosed the presence of a copious dusky rash and symmetrical ulcers in the tonsils. The ordinary questions as to syphilis were denied, and careful inspection of the genitals gave an entirely negative result. On one arm, however, two or three scabbed ulcers were found, as large as shillings, with dusky indurated borders; and there was an indolent bubo in the corresponding armpit. He had been vaccinated three months before admission; the punctures took, and behaved as usual; but when just healed over, a month after the operation, they inflamed and broke out into sores. About a fortnight later (six weeks after vaccination) the rash appeared, and at the end of another month the iritis set in. The nature of the disease had not hitherto been diagnosed, and no specific treatment had been used; under the use of mercury both iritis and rash were cured. This man was seen by many medical men at the hospital during the two or three months of his attendance, and there could be no doubt about the nature of his malady. Although his vaccinator had not diagnosed this man's case, he had had much trouble with the arm-sores, which from his subsequent account would appear to have been at one time almost phagedenic. Besides the patient, about twelve others were vaccinated from the same baby, three of them being the patient's children, young adults; in these three no ill results had occurred; the remaining cases had not been pursued further (for prudential reasons detailed in the paper), but the vaccinator believed that none of them had any trouble, save one or two in whom a little difficulty occurred in the healing of the vaccination-spots. The vaccinator said that the baby used appeared in excellent health at the time. When seen by Mr. Hutchinson at eight months old it was fat and well grown, the only sign of inherited syphilis being the markedly sunken bridge of the nose—a symptom to which the author attached considerable importance, and from which he predicted the future occurrence of confirmatory events. The child was the third, and the only living one, two having died in infancy. In favour of this man's syphilis having been gained during vaccination, there were the occurrence of induration, etc., in the vaccination-scars at exactly the interval which was known from former cases to elapse between inoculation with syphilitic virus and formation of the chancre, the occurrence of axillary indolent bubo, the eruption and other secondary symptoms following the

arm-sores at the proper period, and, lastly, the total absence of any trace of chancre elsewhere and the extreme improbability of syphilitic inoculation of the vaccine-sores after the vaccination. Against this conclusion there were only the negative facts afforded by the apparent immunity (which might, however, yet be disproved) of the other persons vaccinated, and the slight evidence of syphilis in the vaccinifer.

FOURTH SERIES.—Case. A lady, aged about 45, came to Mr. Hutchinson as a private patient in December, 1872, for a vascular growth from the urethra. During examination the remains of a copious, dusky, evidently syphilitic rash were found. On inquiry she stated that she had been very ill after vaccination, and had had a severe rash and inflammation of one eye. Further examination showed the presence of a dusky scar at the seat of one of the vaccination-punctures, very different indeed from a normal vaccine cicatrix; synechiæ were also found in the left eye, proving past iritis. She was vaccinated in May, 1871, by four punctures, none of which took; just a month later one of them inflamed, and became a hard-edged ulcer, lasting three months. Two or three weeks later (about two months after vaccination) the rash appeared copiously, and she fell into ill-health. From the vaccination in May to the early part of September, she had no specific treatment, which probably accounted for the severity of the rash, etc. After this she took small doses of iodide of potassium and bichloride of mercury, under another practitioner, for nine months, when she ceased all treatment, and went for two months to the sea-side. At the end of this period her left eye inflamed (iritis), and the rash, which had been nearly well, relapsed. For the iritis she was treated at Moorfields Hospital by a colleague of Mr. Hutchinson, its cause and origin being suspected, but not followed out. It was several months after her admission to the hospital that she came under the author's care for a complaint having no connexion with the syphilis. She was vaccinated from a baby's arm, and at the same time her two grown-up daughters. A number of others had previously been vaccinated from the same child, but these had not been traced. The two daughters, however, appeared to have escaped all contamination. The baby was said by the vaccinator and its own mother to have looked quite well at the time. As soon as dentition began, however, it had some very troublesome sores about the anus (? condylomata), for which it was under treatment three months at a dispensary. It was the third child. All were living. The eldest, a boy about six or seven years old, showed no signs of inherited taint; the second, a girl of five, now had a large forehead, and she had exactly the same sores about the anus and at the same age as the vaccinifer; the vaccinifer itself also now had a large forehead. The author called attention to the fact that these two cases of vaccination-syphilis were not, as were the first and second series, sent to him because he was known to be interested in the subject, both of them having occurred in the ordinary course of practice. Several cases of supposed syphilis from this cause had been sent to him, but the diagnosis in these was not confirmed.

Conclusions and General Remarks.—These were summed up chiefly as answers to certain questions. The author first asked: What are we to infer from the circumstance that, when syphilis is conveyed in the practice of vaccination, it does not affect all those vaccinated from the tainted source? He answered: We must believe that the specific poison of syphilis is either not contained in the vaccine lymph at all, or is not equally diffused through it. Thus, in the first series of cases, two out of twelve vaccinated escaped syphilis; in the second series, out or about twenty-six vaccinated, more than half escaped; while in the third and fourth series only one out of at least twelve vaccinated from each vaccinifer was known to have been syphilised. It must be borne in mind, however, that the last two series had purposely not been followed up exhaustively, and that the proportion tainted with syphilis was not improbably greater than appeared at present. Again, from the evidence of these series of cases there was no doubt that one might vaccinate from a tainted vaccinifer without conveying syphilis; and, on the other hand, it was possible to convey syphilis either with or without the production of a normal vaccine vesicle. Vaccination from a child evidently syphilitic was known to have been done inadvertently several times without bad result, and probably it had often occurred without being known. These points of clinical evidence made it highly probable that the syphilitic virus was not contained in the vaccine virus, but was derived from, or associated with, some elements of the blood, and probably these need not be visibly red. This was confirmed by experimental evidence, for syphilis had been successfully produced by inoculating the blood of a patient in the secondary stage, and in the case referred to, the dates, etc., agreed closely with those observed in the author's series. Need blood be used in vaccination in order to convey syphilis? The author thought that probably it was enough if the material used had been mixed with colourless exudation from the blood, as occurred when the vaccine

vesicle was allowed to drain, in order to furnish more lymph. This was confirmed by the fact that the vaccinators in the cases in question asserted that they always scrupulously avoided making the vesicle bleed; in none of the instances was there any history that the lymph was visibly bloody; while it was well known that many men of large experience allowed the vaccine vesicle to weep. According to this supposition, as soon as the first contents of the vesicle was exhausted, the risk began. Third: If the syphilitic virus and the vaccine virus be implanted at one and the same time, what will be the course of events? If the patient be susceptible of vaccination, the vesicle goes through its usual phases and heals, and nothing more happens till the end of a month, when the scar indurates and the chancre forms. In some cases, however, the vaccination sore never heals, and in these the scab somewhat obscures the characters of the chancre.

Characters of the Vaccination Chancre.—It begins as a little red, firm, glossy tubercle, which gradually increases in size, and becomes harder. In about a fortnight it usually ulcerates, the sore giving off but very little discharge, and with a hard base and edges. If no mercury be given it may remain open several months; in one case it probably became almost phagedenic. Sometimes there is from the first a good deal of inflammatory effusion at the base of the sore, and much purulent secretion and scab on its surface; its specific characters may be thus quite hidden. These cases are generally in children.

Treatment of the Vaccination-Chancre.—Mr. Hutchinson felt no doubt that, should a vaccination-scar take on the induration characteristic of a chancre, and should the other facts of the case corroborate the suspicion, it was the surgeon's duty without delay to commence the administration of mercury. The influence of mercury in retarding and greatly diminishing the severity of the primary and secondary symptoms was most marked in all those cases which came under care at an early period (sixth week), as in the first series. Indeed, in this series the eruption was so retarded as to induce scepticism in not a few minds as to the correctness of the diagnosis; several of them, however, from five to seven months after vaccination had undoubted, though mild, secondary symptoms. In the second and remaining series of cases, however, the disease was not discovered until much later, and most of them suffered very severely from secondary symptoms, the last two cases (third and fourth series) particularly so. As regarded tertiary symptoms, it was as yet too early to say anything.

As regarded *prevention*, Mr. Hutchinson thought it of the first importance to diffuse widely amongst the profession the knowledge that vaccination-syphilis was possible. It was important next to avoid vaccinating from children whose parents were not known to the vaccinator; and, further, to decline, for the most part, using all first-born children, waiting until, by the development of one healthy child, a guarantee of freedom from taint on the part of the parents had been given. Lastly, the avoidance of blood-stained lymph and of recent exudation from the walls of the vesicle was a sufficiently obvious precaution, and needed no further mention.

Dr. GEORGE HARLEY referred to the importance of the subject, and praised the able manner in which Mr. Hutchinson had brought it forward. The facts described by him in his former paper had created much disquiet in and beyond the profession, and had been regarded by the opponents of vaccination as strengthening their views. It was the duty of the profession then to put matters in a clear light. For a great number of years there had been no proof of the conveyance of syphilis by vaccination, although this was suspected to have occurred in some cases. It was of great importance to know how long the syphilitic taint remained in the system. Eleven or twelve years ago, he was shown by Dr. Pfeuffer, of Munich, an old woman who had a large chancre on the back between the scapulæ. This had been produced as the result of the experiment of subcutaneously injecting a little of the blood of a syphilitic patient, in whom the secondary symptoms had nearly disappeared. This showed, beyond doubt, that syphilis could be conveyed by means of the blood. But the question which required solution was, how long ought we to wait, in the case of a child presenting secondary symptoms, until it would be safe to vaccinate from it? He believed with Mr. Hutchinson that, by avoiding the mixture of blood and pus, and probably also the lining of the wall of the vesicle, with the lymph, the disease would not be communicated. The first drops only that exuded should be taken.

Mr. DE MÉRIC was convinced that the conveyance of syphilis by vaccination was possible. The fact had been known for years. In the two cases now brought forward by Mr. Hutchinson, it did not appear that there was sufficient evidence as to the freedom of the vaccinated persons from syphilis before the operation. The great point, however, was to consider how to avoid the accident described. It was greatly to the credit of vaccinators in this country, and showed the care which

they exercised, that the conveyance of syphilis by vaccination, though known to have occurred in Italy and elsewhere, was for the first time described by Mr. Thomas Smith, a few months before Mr. Hutchinson's first paper was read. Mr. Hutchinson's recommendations as to the means of avoiding syphilitic infection were excellent; but the legal time for vaccinating children ought to be extended to six months, so that time might be given for the development of syphilitic symptoms. He thought that opportunities ought to be given for persons to be vaccinated from the heifer if they desired it; and that this should be provided for by aid from Government.

Mr. HENRY LEE said that Mr. Hutchinson's cases were very complete in themselves. The questions, why some persons become infected with syphilis, while others escaped, though vaccinated with the same lymph; and also why syphilis was taken at one time and not at another, were not yet completely worked out. Syphilis was not a persistent disease; it had its periods of varied intensity, and would sometimes take in one person and not in another.

Mr. HULKE asked whether the second of the patients referred to was under his care at the Ophthalmic Hospital.

Mr. HUTCHINSON replied that she was not.

Mr. HULKE had asked the question, because he had had a similar case under his care at the hospital, and had made the same diagnosis.

Dr. EDWARD BALLARD would not offer any criticism on the cases related by Mr. Hutchinson, but would make some remarks on the inoculation of blood. Mr. Hutchinson had been assured, with regard to three of the series of cases, that blood had not been drawn into the lymph. Dr. Ballard had often been told by vaccinators that they never used lymph which was mixed with blood. But he had observed that sometimes, when blood was drawn, it and the lymph that escaped were carefully wiped away, and that then the newly effused matter was used. This was quite as dangerous as using the blood.

Mr. SAVORY said that the cases brought forward by Mr. Thomas Smith and Mr. Hutchinson were in themselves sufficient to convince all unprejudiced minds of the possibility of conveying syphilis by vaccination. It was, however, not a new fact that the fluids of the body could transmit syphilis. The foetus was probably affected through the semen; and again, there were the cases in which the mother became infected through the medium of the foetus, from a man suffering from constitutional syphilis.

Dr. GEORGE HARLEY remarked that cattle-plague had been observed to be communicated through the serum.

Mr. BARWELL doubted whether syphilis could be conveyed in pure serum; he thought the presence of cells necessary.

Mr. R. B. CARTER had met with tubes of vaccine lymph containing flocculent matter. He thought that this must be derived from the lining membrane of the vesicles.

Dr. POORE was convinced that blood was more frequently mixed with vaccine lymph than was generally supposed. In Rome, he had been shown a tube of so-called lymph, that had been sent from England, which had the appearance of nearly pure blood.

Mr. G. L. COOPER had been a public vaccinator for twenty-seven years, and could not call to mind a single case of syphilis after vaccination among his patients. He avoided drawing blood in taking the lymph.

Mr. HUTCHINSON said, with respect to the duration of syphilis, that no time could be fixed on at which a person who had once had syphilis could be said to be free. In his second case, he thought the evidence clear; the patient had syphilis after vaccination, and the vaccinifer was afterwards under treatment for some time with distinct syphilitic symptoms. In this case, the vaccinifer was born eight years after marriage—an alarming fact as to the long duration of the potency of the syphilitic virus. And yet, if vaccination had been performed from the second child of the same mother in its early infancy, and syphilis had followed, it would have been very difficult to prove the connection; for, in addition to the apparent health of the child, the eldest child would have been brought forward as an evidence of freedom from disease. He agreed with Mr. de Méric as to the necessity for extending the age at which vaccination should be performed. Some children showed no trace of syphilis, and yet were capable of conveying infection; in some cases, indeed, the manifestation of syphilis did not occur before puberty. He was not quite satisfied as to the presence of syphilis in the vaccinifer in the first case; but its physiognomy was, he thought, indicative of syphilis. He considered that the law should be so altered as to allow people the choice of being vaccinated from the heifer. There was no reason for believing that either of his patients had previously been the subjects of syphilis. Mr. Cooper had said that he had never met with a case of syphilis after vaccination. But he (Mr. Hutchinson) would remark that the gentleman who had performed the vaccination in the second case, if asked the question, would have no

doubt in answer made the same statement as Mr. Cooper. When Mr. Hutchinson made inquiry of him, he had no suspicion whatever of the occurrence of syphilis in any one whom he had vaccinated. The fact mentioned by Mr. Hulke, of the occurrence of another case at the Moorfields Hospital, was interesting, and ought to be investigated.

At the conclusion of the meeting, the following apparatus were exhibited by Mr. Dobell. An economical inhaler for hospital and general use; a tongue-holder for laryngoscopy, operations on the mouth and throat, applications to the throat, etc.; and a drainage-tube of coiled wire and needle, to be used instead of acupuncture in severe anasarca.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

THIRD MEETING.—DECEMBER 18, 1872.

P. D. HANDYSIDE, M.D., President, in the Chair.

Morbid Specimens.—Mr. T. ANNANDALE showed the bones of a knee-joint which he had removed by amputation; a tibia, which exhibited some small cartilaginous-looking tumours; the parts concerned in a diseased ankle-joint, which he had removed along with the os calcis, by a transverse incision across the joint; also a piece of slate-pencil which he had removed from the external meatus of one ear.

Fibrous Polypus of Posterior Nares and Sphenoidal Cells.—Dr. P. H. WATSON showed a specimen of large fibrous polypus which he had removed from the posterior nares and sphenoidal cells of a boy, in the following manner. Making the incision for the removal of the upper jaw, he, by the saw, removed a wedged-shaped portion of the jaw, leaving the orbital floor and the roof of the mouth untouched. By this means he got free access to the polypus, and removed it entire. Dr. Watson described the operations which had been adopted for the removal of such polypi, from that of Syme, in 1832, to Nélaton's plan, by removing the hard palate and the septum narium; and that of Chassaignac, by the *écraseur*, introduced after removal of the nasal bones.—Dr. Watson also showed a Calculus removed by lithotomy, another by lithotripsy, and an urethral calculus.

Lymphoma.—Dr. ARTHUR GAMGEE read a paper entitled Cases of Lymphoma observed in the Royal Hospital for Sick Children, with commentaries clinical and pathological. He began by discussing the relation of leucocythæmia and lymphoma to each other. He traced the history of our knowledge of lymphoma, from the observations of Hodgkin, from whom it was called Hodgkin's disease, to those of Virchow, Bright, Addison, Wilks, Murchison, and Burdon-Sanderson. Hodgkin's disease is a lymphatic anæmia in its essence, an enlargement of lymphatic glands with formation of secondary deposits. Virchow was the first carefully to study this, and to work it out to a true hyperplasia of the lymphatic glands, which secondarily spread to contiguous tissues, and even infiltrated the neighbouring parts. Dr. Gamgee related at length the clinical history of cases, of one of which the following is an outline. J. R., aged 5, was taken ill apparently of a low fever, was admitted to hospital in two months, and died within four months from the beginning of her illness. She had a tumour in the anterior mediastinum, and excessively hypertrophied cervical and mediastinal glands. The presence of the mediastinal tumour produced many curious lung-symptoms, but the lungs were found absolutely healthy. The blood was deficient in red corpuscles, but there was no increase in the number of white cells. When in hospital, she was torpid and feeble; she was treated by vinum ferri, good food and stimulants, but without benefit. Before death, the enlarged glands greatly diminished in size. At the necropsy, the tumour was found to be the thymus much enlarged. It was adherent to the diaphragm, and projected more to the right than to the left side. The spleen and liver, as well as the lungs were perfectly healthy. The enlarged glands were simply hypertrophied, no abnormal deposit being present. Sections of the different tumours and glands were shown under microscopes. Dr. Gamgee pointed out the abnormally rapid progress of the case. In the absence of secondary deposits, it resembled a case of splenic leucocythæmia. This case also proved the occasional origin of lymphoid tumours in this situation in the thymus gland.—Dr. SANDERS remarked on the interest of the case, and showed how the varying lung-symptoms might depend not only on variations in the size of the tumour, but also on variations in the amount and power of the patient's inspiration.—Dr. T. A. G. BALFOUR described a case of congenital lymphoma which he had lately seen. The infant died in three and a half days; and the liver was enormously large, studded with patches of lymphoma, which resembled cancer.—Dr. CHIENE described some experiments of inoculation of pieces of lymphoma into the areolar tissue of two rabbits. Both died in ten and thirteen days respectively; and in both, enormous cakes of a tubercular-looking matter grew from the inoculated spots. The structure of these cakes resembled

lymphoid matter.—Mr. JOSEPH BELL described a case of enormously enlarged glands of the neck, in which the glandular enlargement rapidly disappeared without suppuration; the patient soon afterwards dying in another part of the country, from some obscure chest-affection, not phthisis.—Dr. STEPHENSON remarked on the case which had been under his care.—Dr. P. H. WATSON asked as to the presence of exophthalmus, the condition of the thoracic duct, and the cause of death. He also wished to know what was the real distinction between lymphomata and medullary tumours.—Dr. GAMGEE replied at considerable length.

Vote of Thanks to the President.—Dr. SANDERS moved a most cordial vote of thanks, on the part of the Society, to Dr. Handyside, the President, for his great trouble and kindness in giving the exceedingly successful *conversazione*, which he had held in the Freemasons' Hall, in the preceding week.—Dr. HANDYSIDE replied.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 14TH, 1872.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Fracture of the Base of the Skull.—Dr. E. H. BENNETT said that a man, weighing fifteen or sixteen stone, had been brought to Sir P. Dun's Hospital insensible, with partly stertorous breathing, warm surface, full and strong pulse, and his knees from time to time being jerked up rhythmically. While driving on a car, the patient had been seized with an epileptic fit, and immediately fell to the ground head foremost. His wife stated that he had been a hard drinker, and had had two epileptiform attacks the night before. He died quickly. All the thoracic and abdominal viscera were healthy, except the liver, which was large and fatty. The cerebral membranes were closely adherent to the calvarium, and, when they were forcibly detached, much grumous dark blood escaped. An extensive extravasation of blood was observed on the surface of the brain, but the mesocephalon and cerebellum were quite free from it. Four distinct centres of extravasation were noticed; one on the front of the right lobe, one on the middle lobe, one over the cribriform plate of the ethmoid bone, and one on the under surface of the left cerebral hemisphere. In all these situations the brain-substance was much torn and mixed up with blood. No rupture of the meningeal vessels could be detected. The left condyle of the occipital bone was detached; and, from both condyles, fractures ran forwards, one through the right jugular foramen and the groove for the petrosal sinus, to terminate in the sphenoidal fissure of the orbit; while the second passed through the left middle fossa of the skull and the petrous portion of the corresponding temporal bone. These lesions might be regarded as the result of direct violence, caused by the blow given to the occipital bone by the spinal column.

Extensive Disease of Genito-urinary System in the Male.—Mr. MAC SWINEY showed specimens from the body of a man, who had been admitted to hospital moribund. There was an obscure history of rheumatic fever. At the necropsy the lungs, heart, and the liver were found healthy. The bladder was overfull and yet small; the ureters, enlarged and tortuous, were distended with fluid, and so were the kidneys. The bladder was much thickened, corrugated, and of a bluish-black colour. The kidneys were much diseased, and almost every pyramidal body was the seat of an abscess. The same whey-coloured fluid, without any smell of urine, filled the whole urinary tract.

Strumous Disease of the Spinal Cord.—Dr. STOKES showed the brain, spinal cord, and spleen of a woman, aged 50, who had been taken into hospital suffering from so-called rheumatic pains of twelve-months standing. During the past six months, micturition had been frequent, and ushered in with a stinging sensation. For three weeks her head had been drawn back. On admission, this retraction was extremely marked; the spine also was bent, and there was great tenderness on pressure in its neighbourhood. Extraordinary hyperæsthesia existed; the patient kept clutching at the bed-clothes, and complained of being cold. The pulse was 100, and very weak; the heart's impulse absent, but both its sounds were audible; respirations 36, and temperature only 98.6 degs. Her pupils were normal, but there was a wild expression about the eyes. A sudden attack of muscular spasm supervened, and she rapidly sank. There was no history of fever or of delirium. At the *post mortem* examination, superficial vascularity alone was observed in the brain connection. Great disease of the dorsal spine, however, was present. More than two ounces of pus escaped from within the sheath of the cord, which latter was itself much disorganised. The *cauda equina* also was softened and disorganised. The spleen was large, hard in places, like a scirrhus tumour, and contained a great cyst lined with ossific plates, and full of a stuff resembling soft mortar. This was considered by Dr. Robert Smith to be of a strumous nature; and

there could be little doubt that this deposit was the source whence the spinal cord had become infected.

Fibrous Sarcoma of Upper Jaw.—Mr. WILLIAM STOKES exhibited a large tumour of eighteen years' growth, which he had removed with the superior maxillary bone from a man, aged 58. The tumour at first grew to the size of a pigeon's egg, and remained stationary for some years, when it again took on a more rapid course. It was uniformly soft and elastic, and quite painless. The skin was freely movable over it. An ulcer, caused by the pressure of the tumour on the integuments, had formed over its central portion, but this ulcer had none of the characters of open cancer; nor were cachexia, enlargement of glands, and the other signs of malignant disease, present. Accordingly, Mr. Stokes operated. The tumour was found to spring originally from the body of the sphenoid, and, as it grew, it passed forwards, gradually absorbing the osseous tissues in front of it. The floor of the orbit was intact. Drs. Gerald F. Yeo and Harvey had reported, on microscopical examination, that the tumour belonged to the class of fibro-sarcomata.

Disease of Pulmonary Artery, a Cause of Hypertrophy of the Right Ventricle of the Heart.—Dr. GERALD F. YEO showed the heart and lungs of a female, aged 32, who had been under observation for six years, suffering most of the time from chronic engorgement of the lungs, and a double heart lesion, following acute rheumatism. The lungs were dense and tough, and had on their surface several localised, dense, dark, prominent hæmorrhagic swellings, varying in size from a cherry to a small orange. The pulmonary arteries were dilated and inelastic, down to their finest divisions, the inner coat being marked with tough yellow patches of so-called atheromatous degeneration. Hard laminated plugs of fibrin filled the arteries leading to the infarcts. The auricles were dilated; the appendices filled with dry crumbling fibrin. There was extreme stenosis of the mitral opening, with intense induration and contraction of the mitral valve. The aortic valves were thickened and insufficient. The aorta was healthy; there was hypertrophy of the left ventricle. The right ventricle was dilated, and enormously hypertrophied; its muscular wall was hard, and in some places three-fourths of an inch thick. The semilunar valves were healthy; the tricuspid thickened. Dr. Yeo considered that the occurrence, to such an extreme degree, of two so unusual lesions, established a relation of cause and effect between the disease of the pulmonary artery and the hypertrophy of the right ventricle. Lung-engorgement did not produce this excessive hypertrophy, though it probably aided in this case. The order of pathological events might be thus briefly enumerated:—Acute rheumatism; endocarditis; mitral stenosis and aortic insufficiency; pulmonary engorgement; distention and irritation of the coats of the pulmonary artery; endarteritis chronica deformans of this vessel; hypertrophy of the right ventricle; dilatation of the auricle; thrombosis of the appendix; embola carried into the pulmonary artery; and hæmorrhagic infarctus of the lungs.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, NOVEMBER 23RD, 1872.

GEORGE H. KIDD, M.D., President, in the Chair.

Report of the Thirty-fourth Session.—Dr. ATTHILL read the Report for the past session, which was of a very satisfactory nature. On the roll of members there were 169 names, including those of thirteen honorary members. It had been resolved to publish the proceedings of the society, and accordingly this had been done, and a handsome volume, containing the proceedings for the past session, would immediately be placed in the members' hands. The report also referred to the loss sustained by the society in the death of Dr. Thomas Edward Beatty last May.—Dr. J. RINGLAND moved, and Dr. T. MORE MADDEN seconded, the adoption of the Report.

President's Address.—Dr. KIDD, the outgoing President, gave a farewell address. Having congratulated the members on the soundness and vigour of the society at the commencement of the present, the thirty-fifth annual session, and having alluded to the step that had been taken of publishing the proceedings, he passed to the more immediate topic of his address—the characters and writings of two representative men, members of the society, who had lately departed from amongst them. In Thomas Edward Beatty, one had been lost who was in himself a host, one whom all loved and delighted to honour. He was one of the earliest members of the society, and, in 1855, he was elected one of the Presidents, an office then held for life. Later, when this office was made annual, he was again elected President in the year 1862. "Silver-toned, gentle-handed, warm-hearted, clear-headed, genial, learned, scientific, staunch, hospitable 'Tom Beatty,' will no longer rule in council, cheer the sick bed, instruct with his great practical experience, or delight the social circle." It was in these words, from the pen of Sir

W. Wilde, that a morning paper had communicated the news of his death last May, and all would recognise the accuracy of the picture. From the list of honorary members the name of Sir James Simpson, the friend and fellow-worker of Beatty, was also missing. Without attempting a comparison, the two men, Beatty and Simpson, might be classed together as being almost contemporary; both possessing great intellectual power, great mechanical ingenuity, unbounded zeal, and unfailing industry. The writings of both took, for the most part, the form of detached essays, and they often wrote on parallel subjects. Beatty himself thought his papers on the Forceps, Ergot of Rye, Cancer of the Uterus, Abdominal Aneurism, and Chloroform, the most important—with these his ambition was that his name should be associated. With the last-named subject Simpson's name was still more closely connected, and the production of anæsthesia by the inhalation of chloroform was, unquestionably, his discovery. The greater liability to *post partum* hæmorrhage, after the use of chloroform in labour, was combated by the previous administration of a full dose of ergot of rye, as recommended by Beatty, who thus supplemented and enhanced the value of Simpson's discovery. In Dublin only five deaths had been attributed to chloroform in twenty-five years, hence the danger attending its employment seemed to have been exaggerated. Among Simpson's other writings, his memoir on the Use of the Uterine Sound had always appeared to the President the most valuable contribution to gynæcology of the age in which we live, holding, it might be said, the same relation to uterine disease that Laennec's treatise on Auscultation holds to thoracic disease. The use of the sound enables us to make a perfect and precise tactile examination of the fundus, body and cervix of the uterus. It facilitates the use of the speculum. It proves, in many cases, the connection, or otherwise, of hypogastric tumours with the uterus, and it gives accurate information as to the size, position, and relations of that viscus. From Simpson's pen we had also a memoir on the Diagnosis of the Diseases of Women, while Beatty's contributions to physiological and medico-legal science were well-known and valued.

Election of Officers.—At the conclusion of his address, Dr. Kidd declared the result of the ballot as follows—*President*: Evory Kennedy, M.D. *Vice-Presidents*: Lombe Atthill, M.D., Henry Sibthorpe, M.D. *Treasurer*: H. Halahan, L.K.Q.C.P. *Secretary*: J. R. Kirkpatrick, M.B. *Committee*: F. Churchill, M.D., J. Denham, M.D., A. H. Mc Clintock, M.D., G. Johnston, M.D., G. H. Kidd, M.D.

Votes of Thanks.—Dr. Kidd having vacated the Chair, it was taken by the incoming President, Dr. EVORY KENNEDY, amid applause. A vote of thanks to the ex-president was then proposed by Dr. CHURCHILL and seconded by Dr. DARBY. Dr. Kidd responded. A vote of thanks to the ex-secretary was proposed by Dr. H. KENNEDY, seconded by Dr. J. A. BYRNE, and responded to by Dr. Lombe Atthill. A vote of thanks to the visitors present was moved by Dr. DENHAM, seconded by Dr. JOHNSTON, and responded to by Dr. Frederick Kirkpatrick, President of the Royal College of Surgeons, Ireland; by Sir Robert Kane, President of Queen's College, Cork; and by Mr. Collins, Governor of the Apothecaries' Hall, Dublin. The meeting then separated.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

SIR,—Your columns have lately contained letters and communications of much interest in reference to the recent Public Health Act, and to the new appointments thereby rendered necessary. I have no wish to write as a controversialist, but it may still seem good to you to insert the opinions of one who, though sufficiently insignificant as a practitioner, can plead a personal interest of long standing in the subjects on which he ventures to address you.

To vindicate, in measure at least, my claim to a hearing, I must enter into some personal detail, and say that within the last ten years it has fallen to my lot to advise, urge, and, in some instances, literally to superintend, the carrying out of extensive sanitary works in not a few large and small private houses. By the adoption of better sewerage arrangements, by the insisting on the imperative necessity of providing ventilating shafts to carry off sewer-gases, by the prevention of their reflux into the interior of the building, and by the bringing into use improved water-supplies, I have added materially to the health and to the comfort of the residents. Not unfrequently I have shown continued ill health to be dependent on a thoughtless, but none the less actual, overcrowding, and have pointed out the necessity of improved hygienic

arrangements. The results speak for themselves. Typhoid fever, in one or two instances almost endemic, has been banished from the dwellings in question; while children and servants, both excellent indicators of good or bad sanitary conditions, now live and thrive where in past times they were constantly ill.

I bring forward the above statements, because I hold strongly that what I have been enabled to do thus far, others with far better knowledge and wider opportunities may equally well effect. I would declare also that these data illustrate one, and that by no means the least, of the highest privileges of every medical man in his own special sphere. It is incumbent on him to show himself not simply the medical attendant in sickness of a given person or family, but the health-adviser, also, of those who apply to him. Nor is any ill-timed dictation or interference on that account to be deemed a necessity; the occasions for quiet suggestion are quite sufficiently numerous, and need no special searching. Surely it is not too much to maintain that our profession stands out to greater advantage when engaged in the prevention than in the cure of disease; and the triumphs of medicine in the distant future will probably be won more in the former than in the last named field.

Before quitting this part of my subject, I would just say that I have had no special advantages for such work. I am not a skilled engineer; I have no special aptitude for mechanics, nor have I more than a very ordinary knowledge of analytical chemistry; but some twenty years of active country practice have convinced me that much real good might be done in the making better of many existing conditions of home life. In this conviction I have done what I could; and if I have lost something in a diminished requirement of my professional services, I may safely aver that I have gained very much in the gratitude and the greater personal appreciation of those whom I have tried to serve.

What has just been written about strictly private endeavours is not the less likely to be true if it be applied to work of greater scope and wider public utility; and now, for the first time, is it open to the profession, as a whole, to prove that its members are not unequal to the public duties demanded from the new medical officers of health. I do most earnestly deprecate and grieve over what I must think the false issues entered into by those who wish—under the leadership either of Dr. Rogers or of Mr. Wickham Barnes—to declare that the Poor-law medical officers ought, or ought not, to accept these new public appointments. What possible good can come to the profession or to the public, from a decided declaration either one way or the other? Why not, in the name of common sense, leave the *questio vexata* to be settled by those whom it most nearly concerns?

If it be really true that the average Poor-law medical officer be, from absolute ignorance, unfit for such an office, then he is equally unfit to hold his present appointment. If he be simply inexperienced in drawing up new returns and in the proper fulfilment of somewhat novel duties, then some little reading, time, and guidance will give him in no long time the required aptitude. But it is said that the Poor-law medical officer will be afraid of wielding his new powers; will be afraid of local influences, and afraid of offending his patients. To such statements there are certainly two decided lines of answer: the one, that work declared by law to be necessary (and such law is but the reflex of growing and deepening public opinion) must be done by some qualified person, and that Englishmen do undoubtedly learn to respect any one who fearlessly does his duty; the other, that the imputation of cowardice and the fear of man cannot be attached, even with a semblance of truth, to the medical profession. The local knowledge of persons and localities will prove no small help in the successful carrying on of the duties of an officer of health; even those who declare at one moment that the Poor-law medical officer should not hold the appointment for fear of injury to his prospects, and for fear of undue influence, do not hesitate at the next instant to maintain that he must give help and evidence of local insanitary conditions. If the latter aid is to be called for, let him at least have the option of earning the credit which will not be withheld by a reasonable public from a conscientious discharge of the duties of a higher grade.

Some men in our ranks are better fitted for public duties than their *confrères*; sanitary work will be doubtless better done by them than by the latter. Personal predilection will often decide the question; but let the man best fitted have the post, and that whether he be or be not already engaged in the Poor-law service. One argument not unworthy of notice seems to have been often lost sight of in these discussions. I mean that these public health appointments, well discharged, will prove a lever of the strongest kind to ensure much higher respect for professional work than is often given; and to secure a higher scale of remuneration than the miserable pittance now meted out by thrifty boards of guardians. Already even the tendency seems to be to offer for sanitary work a rate of salary which far exceeds the amount now paid for the daily Poor-law medical services.

It has, too, always seemed to me that the duties of officer of health will be best carried out by those who are in daily contact with the sick. The very training of daily professional life is in itself not to be despised; a close familiarity with the varied aspects of disease and their successful treatment is of no small value in the deciding of wider questions; and I believe I am right in maintaining that those whose opinion is most highly valued would much prefer for such services the active practitioner to the sanitary specialist. If very large areas are to be administered by medical men debarred from practice, there will be great risk that the holders of office will merge into inspectors of things, not persons; while moderate areas will be readily compatible with at least some, and that no trifling share of daily professional work. I have not the honour to be a Poor-law medical officer; I am not a medical officer of health, and very probably never shall be. I have no interests save those of truth to serve by this letter; but as it is purely egotistical, and as, too, my name will add no weight to the arguments which I have adduced, I beg to sign myself simply,

M.D.LOND., F.R.C.S. ENG.

ORMSKIRK UNION.

A MEETING of the sanitary authorities within the Ormskirk Union in reference to the appointment of a health officer was lately held in the Town Hall, Southport, the Mayor of Southport presiding. Mr. Corbett, the Local Government Inspector, had suggested the grouping of the twenty townships in the union on the principle of economy and efficiency. The Chairman expressed his approval of this suggestion. It was stated that a rate of a halfpenny in the pound on the rateable value of the five districts would nearly produce the sum of £700, the salary named for the medical officer, which would be raised in the following proportions:—Southport, £220; Birkdale, £45; Ormskirk, £27; Lathom, £50; and Ormskirk Rural, £356. Acting on the suggestion of Mr. Corbett, the Government would pay one-half of this sum, so that the rate of a farthing would be sufficient for the district. Mr. Parr, clerk to the union, intimated that the rural authority were in favour of combination, and that they represented a very important portion of the union. Mr. Howard, chairman of the Birkdale Local Board, explained that the board were in favour of making a separate appointment, but if it were shown that it would be cheaper to group with the other districts, the board might alter their views. The representatives of Lathom and Ormskirk were in favour of the appointment; but on behalf of Southport it was stated that the district had scarcely made up its mind to join the union. The chairman said the feeling was that the Petty Sessional division would be sufficient for Southport. Dr. Barrow approved of the division of the district into two parts, giving a salary of £400 to the medical officer, as no man could conscientiously undertake to cover the large area of the union. After some further consideration, it was agreed to submit the proposal of the Southport representatives as to the formation of the petty sessional division to Mr. Corbett, at the meeting to be convened in Liverpool, on January 18th, and to meet again on February 5th.

BERKSHIRE.

A CONFERENCE of representatives of the urban and rural sanitary authorities in Berkshire was held lately in the Grand Jury Room of the Reading Assize Courts. Mr. Benyon, M.P. for the county, occupied the chair. Mr. Henley attended from the Local Government Board. There were also present: Mr. Walter, M.P., Admiral Sir F. Grey, Sir Warwick Morshead, Sir Charles Russell, the Mayor of each town, excepting Windsor, and a representative from each union, excepting Faringdon. The object of the conference was to consider whether each sanitary authority should appoint a medical officer of health, or whether the principle of combination should be adopted. Sir Warwick Morshead proposed that each sanitary authority should for a period of twelve months act independently as regarded the appointment of a medical officer of health. The Rev. J. F. Collins seconded the motion. Mr. Bowles thought the Act was passed because certain of the local authorities would not carry out the provisions of the Nuisances Removal and Diseases Prevention Act, and it became their duty loyally to accept the new Act, and energetically carry it out. Holding the principle that one efficient and independent man would be better than having a local man for each union district, he proposed, as an amendment, "That, recognising the principle of combination, it is desirable that the county of Berks be divided into two or more districts, and that the several town and country sanitary authorities be respectively invited to co-operate in the appointment of a medical officer of health." Mr. Hibbert (Cookham) seconded the amendment. The

Chairman took the opinion of the conference by a show of hands, when there were 18 for and 18 against it. At an urgent request a second show was taken, when there were 20 for and 18 against the amendment. The conference then adjourned until February 15th.

WEST DERBY LOCAL BOARD.

AN extraordinary proceeding lately took place at a special meeting of the West-Derby Local Board. On January 7th the Board proceeded to the election of a Medical Officer of Health for the district. There were seven candidates, two of whom were members of the board, but the appointment was, by a majority of two, conferred upon Dr. William Carter, of Liverpool. On the 16th instant a special meeting of the board was held, when Mr. Cotton proposed, and Mr. Miller seconded, the rescinding of the resolution appointing Mr. Carter, on the ground that the election was conducted by ballot, and that the whole proceeding of the board was invalid. The motion was vigorously supported by Dr. Fitzpatrick, one of the rejected candidates, and, after a warm discussion, was carried by ten to eight. Mr. Cotton then moved that Mr. Glazebrook, who received three votes at the election, and was previously a member of the board, should be appointed to the office; but the chairman declined to put the resolution to the board, stating that there was no vacancy, inasmuch as Dr. Carter was appointed for twelve months. Upon this, Dr. Fitzpatrick threatened the chairman with a *mandamus*, and warned the board that they would be responsible for any act Dr. Carter might do as Medical Officer of Health. The meeting was then adjourned.

CORRESPONDENCE.

THE SIGNIFICANCE OF ALBUMINURIA.

SIR,—In common with many others, I have read with great interest the double discussions which have during the past months been conducted in your columns. Dr. George Johnson *versus* Sir William Gull and Dr. Sutton, Dr. Dickinson *versus* Dr. Roberts and others, have given to the subject of Bright's disease that prominence which it demands. Albuminuria is a word which has been frequently used, during the last two months especially. Would not, may I ask, the present be a good time to invite from one or more of these deservedly reputed authorities his opinion as to the diagnostic value of albuminuria?

1. What is the diagnostic value of albumen in the urine?

2. What is the diagnostic value of non-albuminous urine? To include tube-casts would be superfluous, as ordinarily they are not sought for, and the search for them is not, apparently, likely to be general for some time to come.

3. Will the presence of albumen warrant the supposition that organic change is going on in the kidneys, or has gone on? Will its absence justify us in concluding that no disease exists?

I would be personally grateful if one of these well known writers would give his opinion; or, even better, if each would give his opinion, and they could be inserted side by side. I trust no one of them will think this suggestion improper, for cases are known where albuminuria existed and no longer exists. In my own case, after scarlatina (five years ago) there was albuminuria for six months; but because there is no albuminuria now, does it follow that no damage has been done? Personally I think there has, if gout be any evidence. On the other hand, kidneys have been found most extensively diseased where no albumen has been detected during life. In short, can we rely upon the test-tube for the diagnosis of Bright's disease?

I am, etc., J. MILNER FOTHERGILL, M.D.

16, Bentinck Street, Manchester Square, January 6th, 1873.

THE ADMINISTRATION OF CHLOROFORM.

SIR,—It has occurred to me that the circumstances of the demise of His Majesty the Emperor Napoleon have, in some degree, a melancholy interest, with regard to one of the great practical questions of the present time—the administration of anæsthetics.

From what we learn by the last bulletin issued, it appears that the sudden invasion of symptoms, pointing to asphyxia or *true pulselessness*, followed a period of such refreshing sleep and comfort to the illustrious patient, that a lithotritic manipulation was appointed to take place a couple of hours later.

Now, it is reasonable to consider what might have been the gravity of the case, if these symptoms had but been delayed during this slender interval. Had they been suddenly ushered in during the operation,

under the influence of chloroform, it is certain that no question would have arisen, at such a moment, as to the cause; the failing pulse would have been accepted as a positive indication—a premonitory signal of danger from chloroform—the administration of which would have been suspended; and, after all reanimating attempts had failed, as they must have done, another instance, but this time a classical and an historical one, of unforeseen calamity and death, would have been cited to the discredit of chloroform. Who can aver the doom that in haste and injustice would then have overtaken it? How many medical men would have forthwith expunged chloroform from the list of anæsthetics, and consigned it to oblivion?

Viewed as they stand, however, I think that the facts are acceptable to many who, like myself, support the argument advanced by Sir James Simpson, as an additional proof of the probability that many of the deaths attributed to chloroform, by reason of their occurrence under its influence (*post hoc ergo propter hoc*), might, in reality, have had place altogether apart from it, and these, too, without any assignable cause, such as shock from operation. (Works of Sir J. Y. Simpson, Bart., vol. ii, p. 151.)

Just now, while the dangers and coincident mortality of chloroform inhalation, are actively discussed and brought prominently before the profession, thanks to the advocacy of the BRITISH MEDICAL JOURNAL, the question of the comparative safety of other anæsthetics, and notably of sulphuric ether, has been energetically opened.

It will be some time, however, before any decision can be pronounced in a matter which must embrace statistics of greater magnitude than perhaps any other in the domain of medicine; for, let it be borne in mind, statistics of limited extent, which frequently exhibit an encouraging succession of fortunate cases, are often ultimately followed by a levelling run of bad luck, so that at least one fallacious factor may be eliminated from others of no less value.

I am, etc., DAVID PAGE, M.B.Ed.

Kirkby Lonsdale, Westmorland, Jan. 11th, 1873.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on January 21st.

Butler, Francis William, L.S.A., Camberwell
Bartlett, William, Connaught Square
Corbin, Edward K., Guernsey
Dyer, Henry Geary, L.R.C.P. and L.M.Edin., Ringwood, Hants
Emmerson, William Lindsay, Leicester
Fairbank, William, L.S.A., Highbury Hill
Farmer, Cottenham, Anerly, Surrey
Ferguson, George B., M.B., Cheltenham
Groves, Henry Joseph Firth, L.S.A., Dorchester
Hatfield, William Henry, Old Burlington Street
Heane, William Crawshaw, L.S.A., Cinderford, Gloucestershire
Hope, Samuel Wilson, L.R.C.P.Lond., Dulwich
Jones, Edgar Averay, Leicester
Lawrence, George Edgar, Bath
Power, George Edward, Lewisham
Shaw, Walter, L.S.A., Athelston Hill, Hereford
Smith, James Ouston, L.R.C.P. and L.M.Edin., Weaverham, Cheshire
Spear, John, Folkestone
Taylor, John William, Lewes, Sussex
Tunley, John, West Bromwich
Whitshed, James L., Myddelton Square
Widdas, George David, York
Williams, Richard, Bala, North Wales

The following gentlemen were admitted members on January 22nd.

Barnes, Arthur B., Faversham, Kent
Boulger, Isaac, Gravesend
Clague, John, L.S.A., Castletown, Isle of Man
Dove, Harry, L.S.A., Norwich
Durant, Edmund, L.R.C.P.Edin., Delamere Crescent, Westbourne Terrace
Elliott, Charles Boulton, Moreton Place, Belgrave Road
Lewtas, John, Liverpool
Newby, Charles Henry, Mecklenburgh Square
Powell, Evan, Bridgend, Glamorganshire
Powell, James, Bedford Terrace, Plumstead
Ransford, Thomas Davis, St. Thomas's Terrace
Roedel, Joseph Waldemar, Bath
Saunders, Everard Home, Devonport
Stowers, James Herbert, Kennington Park Road
Sunderland, William, Birmingham
Thomas, George Tucker, Everett Street, Russell Square
Webber, William Littleton, Modbury, Devon
Welch, Samuel, L.S.A., Hackney Road
Williams, William, M.D., Barmouth, North Wales

The following gentlemen were admitted members on January 23rd.

Barnard, Charles Edward, Hobart Town, Tasmania
Brigham, Henry George, Stanley Street, Pimlico
Clyma, Handsford Hosking, L.S.A., Red Hill, Surrey

Coke, William Harriott, Tottenham
 Copeland, William Lowry, M.D., Ontario, Canada
 Dodd, Alexander Russell, Westbourne Terrace Road
 Gibbs, Robert, Brompton, S.W.
 Mitcheson, Joseph Hopkins, Edmonton
 Murray, William, M.B. Dublin, Limerick
 Padman, John, Notting Hill, W.
 Payne, Henry Peter, Southampton
 Reckitt, William B., Birmingham
 Rogers, Edward Coulton, Modbury, Devon
 Wallis, William, L.S.A., Hartfield, near East Grinstead, Sussex
 West, Rowland Hill, Chippenham, Wilts
 Wilkinson, Auburn, L.M. Durham, Tynemouth
 Williams, William Henry, Tavistock, Devon
 Wood, Henry Thorold, Onslow Square, Brompton

The following gentlemen were admitted members on January 24th.

Barrow, Albert Boyce, Newmarket, Cambridgeshire
 Bateman, Lewis Philip, Dudley, Worcestershire
 Chinery, Charles Warner, Lymington, Hants
 Clark, Frederick Cheeseman, L.S.A., Croydon, Surrey
 Elliot, Norman Bruce, L.S.A., Denmark Hill, S.E.
 Gibson, Henry C. Mends, Truro, Cornwall
 Griffin, Charles Thomas, Ledbury, Gloucestershire
 Kingcombe, Alfred Partridge, L.S.A., Ivy Bridge, Devon
 Lewis, Frederick William, L.S.A., Llandovery, Carmarthenshire
 Moss, Robert Campbell, Stifford, near Grays, Essex
 Nicholson, Arthur, Newark, Notts
 Palmer, Montague Henry Campbell, L.S.A., Newbury, Berks
 Parkhouse, Henry, L.S.A., Braintree, Essex
 Peregrine, Hugh Ley, Half-moon Street, Piccadilly
 Richards, George Pickering, L.R.C.P. and L.M. Edin., Bury Street, St. James's Square
 Skinner, Robert Alexander, Camden Road, Camden Town
 Spurgin, William Henry, Thrapstone, Northamptonshire
 Wilson, William Wright, Acock's Green, near Birmingham
 Yeates, William Michaelson, Birmingham

Of the 110 candidates admitted to their final examination during last week, 26 failed to satisfy the Court of Examiners, and were referred for six months' further professional study.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, January 23rd, 1873.

Jordan, John, Birmingham

As Assistants in compounding and dispensing medicines.

Andrews, William Leatham, Aldborough
 Worthington, William, Preston, Lancashire

At the Preliminary Examination in Arts, held at the Hall of the Society, on the 24th and 25th of January, 1873, 29 candidates presented themselves; of whom 12 were rejected, and the following 17 passed, and received certificates of proficiency in general education. In the First Class, in the order of merit.

1. Daniel Philip Meadows. 2. John Poland. 3. Leonard Charles Wooldridge.
 4. Millice Culpin.

In the Second Class, in alphabetical order.

E. A. Aldridge, F. G. Baker, E. S. Dyer, N. S. Foster, W. Haydon, S. A. Hayman, F. M. Heygate, C. G. Hutchinson, Thomas James, G. Leigh Lye, A. W. Pearson, A. P. Powell, and Gregory Stock.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 14th, 15th, and 16th of January, the following candidates obtained the License to practise Medicine.

Bowers, Edward	Shaw, James
Brady, Andrew John	Smith, Charles Catterson
Piers, Charles Edward	Sutton, John Richard Henry
Redmond, Gabriel O'Connell F.	Webb, Samuel Henry

The following candidates obtained the Midwifery Diploma.

Brady, Andrew John	Smith, Charles Catterson
Redmond, Gabriel O'Connell F.	Sutton, John Richard Henry
Shaw, James	Webb, Samuel Henry

MEDICAL VACANCIES.

The following vacancies are announced:—

ANDOVER UNION—Medical Officer for the Fyfield District: £65 per annum, and extra fees.
BOURN RURAL SANITARY DISTRICT—Medical Officer of Health: £150 per annum.
BRADFORD (Yorkshire) URBAN SANITARY DISTRICT—Medical Officer of Health: £500 per annum.
BRECKNOCK UNION—Medical Officer for the Defynnock District: £90 per ann.
DUNFANAGHY UNION, co. Donegal—Second Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Crossroads Dispensary District: £100 per annum, and fees.
GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.
HALIFAX INFIRMARY—House-Surgeon: £80 per annum, increasing to £100, with board, lodgings, and attendance.
HOXTON HOUSE LUNATIC ASYLUM—Assistant Medical Officer: £120 per annum, board, lodging, and washing.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.

INFIRMARY FOR EPILEPSY AND PARALYSIS, Portland Terrace, Regent's Park—Medical Superintendent: £50 per annum.

KILRUSH UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cragaknoch Dispensary District: £100 per annum, and fees.

MANCHESTER, City of—Public Analyst: £150 per annum.

MANCHESTER ROYAL EYE HOSPITAL—Honorary Medical Officer.

NAVAL MEDICAL SERVICE—Assistant-Surgeons.

NEWPORT UNION, Monmouthshire—Medical Officer for the St. Woollos District and the Workhouse: £172 per annum.

NORTHALLERTON UNION, Yorkshire—Medical Officer for the Borrowby District: £10 per annum.

NORTH UIST—Parochial Medical Officer.

NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £100 per annum, rooms, board, and washing.

PARSONSTOWN UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Frankford Dispensary District: £100 per annum, and fees.

RATHDOWN UNION, co. Dublin—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Stillorgan Division of the Blackrock and Stillorgan Dispensary District: £110 per annum, and fees.

SURREY DISPENSARY, Great Dover Street—Dispenser.

TAUNTON URBAN AND RURAL SANITARY DISTRICTS—Joint Medical Officer of Health: £600 per annum.

THIRSK UNION, Yorkshire—Medical Officer and Public Vaccinator for the Knapton District: £21 per annum, and fees.

UNITED LAW CLERKS SOCIETY—Medical Officer.

UNIVERSITY COLLEGE HOSPITAL—Surgical Registrar.

UNIVERSITY OF LONDON—Assistant Registrar: £500 per annum.

WALTON-ON-THE-HILL—Medical Officer of Health: £30 per annum.

WARWICKSHIRE—Medical Visitor of Lunatic Asylums.

WIDNES URBAN SANITARY DISTRICT—Medical Officer of Health: £40 per annum.

WORCESTER DISPENSARY—Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

YATES, W. P., Esq., appointed Honorary Medical Officer to the Jersey General Dispensary and Infirmary.

GODSON, Clement, M.B., appointed Physician to the Samaritan Free Hospital for Women and Children, *vice* A. Wiltshire, M.D., resigned.

ROBERTSON, R., M.D., appointed Physician to the Liverpool Hospital for Consumption and Diseases of the Chest, *vice* R. Gee, M.D., appointed Consulting Physician.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

BROWN, David Dyce, M.A., M.D., Aberdeen, to Eliza, eldest daughter of Sir William Coote SETON of Pitmedden, Bart., at Pitmedden, Udry, on January 23rd, by the Rev. David Brown, D.D., Professor of Theology, Aberdeen, father of the bridegroom. No cards.

DEATHS.

BISHOP, William Henry, Esq., Surgeon, at North Malvern, aged 60, on January 21.
BODKIN, Thomas, Esq., Surgeon, at Park Villas, Selhurst Road, South Norwood, aged 62, on January 23rd.

HALL,—On January 22, at Surrey House, Sheffield, Susan, wife of John Charles Hall, F.R.C.P. Ed.

LYNCH, Daniel, Esq., Surgeon, at Higher Broughton, Manchester, aged 68, on January 15.

NUTTALL, Francis, Esq., Surgeon to the Bury Dispensary, at Bury, Lancashire, on January 17.

***RISDON**, William, Esq., Surgeon, at Dolton, North Devon, aged 61, on January 17.

MR. JOSEPH WELSH, of Clun, Salop, was elected a Fellow of the Faculty of Physicians and Surgeons of Glasgow, on the 16th ultimo.

BOOKS, ETC., RECEIVED.

Operative Surgery. By C. F. Maunder. Second Edition. London: 1873.
Fistula, Hæmorrhoids, Painful Ulcer, Stricture, Prolapsus, and other Diseases of the Rectum. By W. Allingham. Second Edition. London: 1873.
The Eighth Annual Report of the Sanitary Commissioners with the Government of India for 1871. Calcutta: 1872.
Tweedie's Temperance Year-Book for 1873. London: 1873.
Punishments in Education. By Wm. Fredk. Collier. London: 1872.
The Pathology and Treatment of Small pox. By Robert H. Bakewell, M.D. London: 1872.
Researches on the Action and Sounds of the Heart. By G. Paton, M.D. London: 1873.
Epidemiology: or the Remote Cause of Epidemic Diseases. Part I. By John Parkin, M.D. London: 1873.
Lectures on the Philosophy of Law. By James Hutchinson Stirling, F.R.C.S. London: 1873.
A Digest of the Statutes relating to the Public Health. By George F. Chambers, F.R.A.S. London: 1872.
A Treatise on Gout, Rheumatism, and Rheumatic Gout. By Austin Meldon. London: 1872.
A Treatise on Diseases of the Skin. By Austin Meldon. London: 1872.
Catechism of Zoology. By Rev. J. F. Blake, M.A., F.G.S. London: 1873.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Henry Lee, Lettsomian Lectures on Urethral Discharges. No. III: Different, non-Syphilitic, Discharges.

TUESDAY.—Pathological Society of London, 8 P.M. Dr. John Murray: Extensive Hairy Moles—a living subject. Mr. Lawson: Drawings of a Hairy Mole which covered the whole of the Back. Dr. Moxon: Simple Stricture of Hepatic Ducts associated with Vitiligoidea. Dr. Moxon: Cancer of the Ileum, causing Dilatation. Dr. Theodore Williams: Aneurism of the Arch of the Aorta partly cured. Mr. Butlin: Aneurism of Subclavian Artery, showing the Process of Natural Cure. Dr. Vandyke Carter: Urinary Calculi from India. Dr. Vandyke Carter: Drawings of Elephantiasis Arabum. Dr. Douglas Powell: Secondary Sarcoma of the Lung and Mediastinum. Mr. Coupland: Simple Ulcer of the Duodenum, causing Obliteration of the Gall-Bladder and Hepatic Duct.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. President's Address; Professor Lazarewitch, "On a Case of Puerperal Convulsions"; Dr. Braxton Hicks, "On two Cases of Cephalotripsy"; Dr. Heywood Smith, "On the Injection of Perchloride of Iron in *Post Partum* Hæmorrhage"; Dr. Bantock, "On the Pathology of certain so-called Unilocular Ovarian Cysts."—Royal Microscopical Society, 8 P.M. Anniversary.

THURSDAY.—Hunterian Society, 8 P.M. Dr. Westmacott, "Case of Skin-Disease produced by Coloured Gloves"; Mr. T. Carr Jackson, "Case of Excision of Hip-joint"; Mr. de Méric, "On Gonorrhœal Abscess."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

INQUIRER (Dublin).—We see no objection to the arrangement proposed.

DR. FUSSELL.—With great pleasure.

A COMPLAINANT, if unable to obtain redress otherwise, should apply to the county justices, who are the paymasters.

THE LATE EMPEROR NAPOLEON.

SIR,—I have read the description of the *post mortem* appearances in the case of the late Emperor, at Chislehurst. I do not quite agree with Sir William Gull, who appears to differ from the six medical gentlemen who were also present at the necropsy.

A patient received, two years ago, a blow in the region of the false ribs, on the right side. For about a week thereafter he passed a little blood in his urine. Eighteen months ago he complained of a constant weariness in the right lumbar region, increased by violent exertion or exposure to cold, and accompanied by a desire to micturate frequently, passing at times pale blood in the urine. About six months ago he was confined to bed for a week with intense pain, commencing in the right testicle, accompanied with fever, restlessness, and vomiting. He has had several attacks of pain which, however, somewhat suddenly subsided three weeks ago. In its stead, he now complains of urinary irritability, the pain being worst after micturation. The pain is referred to the orifice of the urethra. After rough exercise he passes blood. What would be the diagnosis in this case? and where did this case commence? I think the late Emperor's disease began in the kidney, and I quite agree with Dr. Horace Dobell, in his remarks at p. 79 of the JOURNAL of January 18th.

Redruth, January 20, 1873.

HENRY HARRIS, M.D.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

DR. KIDD.—It would surely occupy less of Dr. Charles Kidd's time to furnish the references to the deaths which he alleges to have occurred from ether, than to pen the voluminous and discursive manuscripts with which he has for some weeks past favoured us. When he sends his list, it shall be published.

ACTION OF THE CALABAR BEAN ON THE IRIS.

SIR,—Can any of your readers enlighten me as to the action of the Calabar bean as a myotic? Belladonna is, I suppose, generally considered to act by temporarily paralysing the circular fibres of the iris, though by some, I believe it is thought to act on the retina, dilatation of the pupil taking place as a secondary result. I am anxious to know whether the Calabar bean paralyses the radiating, or irritates the circular fibres of the iris, in either of which cases, I imagine, contraction of the pupil would be the result.

Matlock, Somerset, January 1873.

I am, etc.,

GEORGE GREENSLADE.

FRACTURE OF ILLUM FROM MUSCULAR ACTION.

SIR,—In answer to your correspondent, Mr. W. E. Hyde, in the JOURNAL of Nov. 2, I beg to inform him that two years ago I had a very similar case to the one he mentions; viz., fracture of the ilium from muscular action.

A young midshipman was running a race with a friend of his in the Crystal Palace grounds, and, being behind his friend, he "put on a spurt", and the severe muscular action detached a piece of the anterior superior spine of the ilium, about the size of a walnut. He did not fall at the time, but stopped as soon as he was able, got on his friend's back, and sought advice. He was about nineteen years of age, perfectly healthy, and of good muscular development. I strapped and bandaged the pelvis and sent him home. The case afterwards came under the notice of Mr. Le Gros Clark, who very courteously wrote to me on the subject, and confirmed my diagnosis.

Woodside, Anerley Road, Upper Norwood, S.

I am, etc.,

J. SIDNEY TURNER.

SIR,—As I observe that, in your issue of December 21st, a desire is expressed that those who have made use of guarana will state whether benefit has ensued, I beg to state that I have administered it to two patients, one a young man, the other an elderly lady, both of whom frequently suffer from migraine. The dose taken by the young man was ten grains; and the headache from which he was then suffering was removed in less than an hour, apparently by this means. The lady has on two occasions taken twelve grains of the powder, and on each occasion her headache, which is frequently most severe and accompanied by distressing retching, etc., has subsided very soon afterwards, and disappeared entirely, without any retching or vomiting having occurred, much before its usual time had elapsed.

Louth, January 23rd, 1873.

I am, etc.,

T. WEMYSS BOGG.

HOSPITALS AND GENERAL PRACTITIONERS.

SIR,—From the necessary curtailment in the report of our meeting at the London Tavern, you will perhaps allow me to correct one or two misapprehensions that may have arisen in consequence. Though I advocated the poor-law and the voluntary hospitals being administered from a common centre, I am not aware that I insisted on the Poor-Law Board being that centre; but rather such a board as the Charity Commissioners might appoint, with representatives from both centres, to insure their harmonious action. The indirect loss of patients, I attributed to the *éclat* of hospital officers attracting to their private residences patients well able to pay general practitioners, but unable to afford the fancy fees of consultants. These patients, instead of being referred back to the medical men in their own neighbourhood, are often sent with the consultant's card into the hospital—a rather dog in the manger action, he not being willing to take the lower fee himself, does not allow others to enjoy it. The moribund children and old people constantly thrown on the hands of general practitioners, after being hospitalised to extremes, were referred to as bringing more than a fair share of discredit on the general practitioner in his own neighbourhood, by obliging him to account for numerous deaths, when with the treatment of the patient, and any possible emolument, he has had nothing to do.

I am, etc.,

PERCY LESLIE, M.D.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Jan. 25th; The Manchester Guardian, Jan. 29th; The Aberdeen Daily Free Press, Jan. 24th; The Bath Express, Jan. 25th; The Birmingham Daily Post, Jan. 27th; The Glasgow Herald, Jan. 29th; The Aberdeen Daily Press, Jan. 28th; The Scotsman, Jan. 28th; The Exeter and Plymouth Gazette; The North Wales Chronicle; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Southey, London; Dr. Smart, Penge; Mr. W. S. Savory, London; Dr. George Johnson, London; Dr. Moxon, London; Dr. Wickham Legg, London; Our Dublin Correspondent; Mr. Teevan, London; Mr. J. S. Browne-Mason, Exeter; Dr. A. Nieten, London; M.D.; Mr. Liebreich, London; Mr. Butt, Cheltenham; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Hermann Weber, London; Mr. Everitt Norton, London; Mr. Whitford, London; Mr. Prescott Hewett, London; Mr. P. Squire, London; Mr. J. W. Langmore, London; The Secretary of the Royal Medical and Chirurgical Society; Dr. J. Adamson, Hetton-le-Hole; Mr. E. G. Archer, Jersey; Mr. W. Adams, London; Dr. Dyce Brown, Aberdeen; Dr. Mackie, Inch; Dr. Hollis, London; Mr. Blaise, London; Miss Bodkin; Dr. Whitehead, Manchester; Dr. J. C. Hall, Sheffield; Dr. Fussell, Brighton; Mr. C. D. Marriott, Aldridge; Dr. Sharp, Thornhill; Mr. Reeves, London; Dr. Walker, Peterborough; Dr. Styrap, Shrewsbury; Mr. Hedley, Newcastle-on-Tyne; Mr. J. B. Blackett, London; Our Liverpool Correspondent; Dr. Campbell, Bridge of Allan; Dr. J. W. Moore, Dublin; Mr. Greenslade, Martock; Mr. Rawson, London; Mr. J. D. Hill, London; Mr. G. Eastes, London; Dr. Crichton Browne, Wakefield; Mr. Haynes Walton, London; Mr. Poole, London; Dr. R. Robertson, Liverpool; Dr. Gourley; Inquirer, Dublin; Mr. R. V. Smith, Manchester; Our Glasgow Correspondent; Mr. W. Lucy, Birmingham; The Secretary of the Pathological Society; Dr. Horace Dobell, London; Dr. Clement Godson, London; etc.

CLINICAL LECTURES

ON THE

EXAMINATION OF PATIENTS BEFORE
OPERATING ON THEM.*Delivered at St. Bartholomew's Hospital.*

By W. S. SAVORY, F.R.S.,

Surgeon to and Lecturer on Surgery at the Hospital; etc.

III.

THEN, for the physical or other examination of the internal organs—the heart, lungs, kidneys. Are they sound, or do they betray any evidence of disease or defect? If so, of what probable nature is it? Is it present or past? Are morbid changes still in progress, or is there evidence only of the damage done by former mischief? And what of such damage; how does it tell? What risks does it engender? In what direction is it suggestive of inability to bear the shock or strain of an operation?

First, of the heart. Suppose there is evidence of insufficiency of some of the valves. This would probably be the result of past mischief; and it may be, if there have been time enough, that the difficulty to be overcome has been, in large measure, met by augmented power. As a rule, one might say of such mischief, if it stand alone, that it does not add largely to the risk of an operation. By its mechanical effect it is not, perhaps, in relation to an injury, a very great evil; but the worst of it is, that in many cases it is suggestive of a constitutional flaw. The public are easily alarmed about chloroform, and patients who hesitate to take it will often urge, in justification of their fears, a real or supposed affection of the heart. I do not know that there is any evidence to show that the risks of chloroform, when judiciously given, are materially increased by defect of the cardiac valves. But change in the substance of the heart—fatty degeneration—is a far more formidable disease for the surgeon, and, unfortunately, a far more treacherous one too. Its signs are not so obvious: the earlier stages of it especially are not usually, I believe, revealed by definite signs, and yet we know how terrible a crisis awaits this affection. Sudden deaths, even without any obvious determining cause, are only too familiar to us. The shock of an operation then must surely be extremely hazardous. And if an operation must be done in the face of evidence suggestive of such degeneration, it is well for the surgeon if, beforehand, he has put the case clearly and strongly before his patient's friends, making them fully understand and appreciate the danger.

Suppose there is evidence of aneurismal dilatation of the aorta, I would repeat shortly what I have said of valvular imperfection—that it is not, perhaps, so material in itself as in its suggestion of degenerative changes proceeding elsewhere. Such a condition is very likely to be brought to our notice when considering the question of operation for an external aneurism; and here, of course, it tells with especial force, when it is so important that the artery we secure by ligature should be in a healthy state. Evidence of degeneration of a part of the arterial system elsewhere than about the aneurism would furnish an argument—though I think by no means a conclusive one—in favour of compression against ligature.

Then, with regard to the lungs. No one, if he could possibly help it, would operate in the presence of any inflammatory disease, if there were any prospect of it passing away. Embarrassment of the pulmonary circulation tells sadly upon a patient after any considerable operation, and, at the least, is very sure to add largely to his distress. A constrained position, then, becomes terribly irksome. Every effort at coughing shakes him and produces much suffering, and immediate danger arises from the difficulty or impracticability of expectoration. After certain operations, indeed, the presence of cough is particularly mischievous—after those for hernia and cataract, for example, for obvious reasons.

But the great majority of affections of the lungs which are brought under the notice of the surgeon before operation are those which are placed collectively under the head of phthisis. I hardly know how to handle this subject in the space which I can give to it. Under the head of phthisis—of disease destructive of lung-substance—are now included changes differing most widely in their issues and in the degree of mischief wrought by them. But the surgeon, for his part, can bring these questions to two or three points. First, assuming that there is evidence of mischief in the lung, is the disease active or quiescent? If active,

what is its probable issue and duration? If it be quiet, how much damage has been done; and in what condition of health and strength has it left the person? What has been its history hitherto? How far can we judge of the future by the past? And of the operation, in relation to this point, what is the nature and extent of the demand it will make upon the powers of the constitution? And last, chief and most critical question of all—How, in relation to the health and strength, will the operation stand in comparison with the disease for which it is proposed as a remedy? You see, in the face of such mischief in the lung, the question comes to this—How can the patient's health and strength or constitutional capital be best preserved? Will the operation make less demand upon it than the disease? With lung-mischief in progress, who would think of subjecting a person to the stress of a considerable operation if it were merely one of expediency—say for the remedy or removal of deformity? Even with lung-mischief at the time quiet, but recently active, who would wantonly incur such a risk? But now, supposing disease of a joint or other part which, from pain or discharge, was telling steadily and surely upon the powers, if by an operation the local tax could be lessened, ought it to be declined on the ground of considerable lung-mischief? Ought we not to choose the less evil of the two? Sometimes it is said we ought not to run the risk of stopping a local drain, which may be serviceable in keeping quiet disease in the chest. But if such a local drain be exhausting, the smaller question is swallowed up in the larger, which, I repeat, in such a state of health is this—By what means can we best reduce to a minimum the demand upon the powers? When this great question is urgent, all minor ones, about the appearance or usefulness of a part, have little place. Nay, we may not hope to be able to save life; we can only aspire to prolong it. You see, then, my view of the matter comes to this. We have to consider the question of operation, in the worst of such cases, only in reference to the disease of the lungs. However unpromising that may be, if the operation, in its relation to the constitutional power, be a local mischief less than the disease it sweeps away, it should be done. Truly, the surgeon's work, in such a case, is not an encouraging one; but surgeons expect no privilege in the choice of cases. But there is this further consideration. An operation may be preferable to the mischief it proposes to remove, inasmuch as there is no chance of the disease abating; but then the operation itself will inflict a shock, and the remedy, for a time, may be more severe than the disease. Now, the shock in such a case, and for reasons already given, is not, perhaps, of serious moment, but has the patient a chance of weathering the subsequent storm? If the wound can be repaired he has gained largely, perhaps gained everything; but what if he should sink prematurely, and so die, as it will be said, of the operation? Why, the surgeon must weigh this momentous question in every such case for himself. He can have no guide in the matter but his clinical experience.

But, then, the disease in the chest may be so slight as not to rise into such urgent importance. Here again, if the operation, in relation to the system, be a less evil than the disease, there can be, ordinarily, no hesitation about performing it. But, in operations of expediency, the surgeon must, in each such case, measure for himself the risk, taking into consideration other circumstances in respect of which, perhaps, no two cases will prove to be alike. If the patient be an adult, the whole matter must be laid before him; if a child, before his friends. Only remember that, in such cases, we have the chance of waiting and watching long, and so of arriving at a much sounder conclusion.

A surgeon has the strongest possible reason for not neglecting to examine thoroughly into the state of the kidneys. Physiologically, the kidneys are not so immediately essential to life as the heart or lungs; but, surgically, a healthy state of the kidneys is more important to the issue of an operation than that of any other organ. And cannot we understand why this is so? The kidneys, like all other organs, in some degree share in the shock of an operation, but after this there is, as we know, often a considerable stress put upon them, inasmuch as they have to excrete from a blood strangely disturbed, even, perhaps, materially altered in its composition by the local mischief in progress, or extraordinary action. Now, when the kidneys are healthy or tolerably sound, they respond to the call—prove equal to the extra work—and are, no doubt, the chief means by which the blood is enabled to unburthen itself. But if the kidneys are at fault, what ensues? They may be much damaged, and yet with working power sufficient for the purposes of a quiet existence. Week after week, or month after month, during the calm of a regular life, they betray no evidence of flaw or weakness. Such impairment of health as may ensue, is unheeded or otherwise explained. The urine might tell the tale if questioned; but no complaint, perhaps, points to the need of examining it. But the storm of an operation coming suddenly upon them, they give way altogether; fail to answer to the call, and the patient rapidly sinks. Gentlemen, never

be tempted to do an operation without, when possible, looking thoroughly into the working condition of the kidneys. Fortunately you have, in the urine, an honest and straightforward witness which it may be well to question, not once only, but several times. And if the urine should prove to be abnormal, you must learn to weigh the evidence it yields; and I need not tell you that you find far better guides in works on or teachers of medicine, than I can prove. So on this head I will venture to offer only a single remark. I have observed that, when a dresser is asked to examine and report upon a patient's urine, he sometimes understands this to mean only looking for albumen; or, at least, he reports next day—no albumen, or much albumen, as the case may be. If there be albumen, he usually examines further for tubercasts, and may take the specific gravity of the urine. But this last observation is occasionally not made at all, and sometimes thrown into the background as merely a supplement to the others. Now, to the surgeon, I think the last point—the specific gravity of the urine—in the question to which he seeks an answer, is of supreme importance. The damage done or change of structure is told more in detail no doubt by heat, nitric acid, and the microscope, but the working power of the kidney which is still left, is told, I fancy, more surely and directly by observations aimed at the amount of its normal constituents carried off in the urine. I am not so stupid as to tell you that you may learn this by simply taking the specific gravity of the urine; but, and especially when from any other signs there are grounds of suspicion, repeated observations on the specific gravity checked by measurements of the quantity of urine, will, I think, most satisfactorily indicate to you your future course, either of having nothing to do with an operation, or of pursuing further the inquiry.

I cannot, need not, point out the bearing upon the question before us of disease or unsoundness of other organs, such as the liver or stomach. Of course, any weakness, in any part, is unfavourable so far as it goes; but, on the other hand, it is well to know that these subordinate organs may be much damaged and yet the patient may be carried safely through a formidable operation. And the great point here is the same as in the case of the kidney. Setting aside active or acute disease, the question chiefly turns upon the amount of working power left. I can give you a striking illustration of what is here meant. A girl, about fourteen years of age, was the subject of incurable and destructive disease of the knee-joint, which, moreover, was the seat of intense pain. For all this there was no remedy short of removal. But, then, her state of health and general condition were very unpromising. Her powers had been greatly reduced and she was very feeble. And with all this her liver was very much enlarged, reaching far down into a distended abdomen. The diagnosis of both physicians and surgeons was that the liver was the seat of very extensive amyloid or lardaceous deposit; and the mischief appeared to all so grave that I could get no encouragement in the way of operation. But day after day the poor girl with pallid and anxious face begged that something might be done; and, watching her for some time, I was led to believe that a considerable amount of working power must be still left to the liver. In her appetite and digestion were some of the best signs about her, and there was nothing materially wrong in her urine. Under these circumstances, then, I ventured to amputate her thigh, declaring, however, that I had little hope of complete recovery from the operation, and that I interfered rather with the view of escaping the reproach which has been attached to the profession for not paying greater regard to euthanasia. But the girl not only recovered completely, but even rapidly, from the operation. The relief was absolute. Her progress in health and strength was, for some weeks afterwards, uninterrupted; and at length she left the hospital with a sound stump, and in general condition much improved, but with a liver as large as ever. On one or two occasions, at intervals of a few months, I saw her subsequently. She appeared to be a thorough invalid, with no immediate prospect of any material change.

One other great question still remains for consideration. I have hitherto spoken of an operation only in general terms—only vaguely, as large or considerable. But, of course, even of capital operations, there is a vast difference in the degree of danger; and thus we have to reckon, so far as we can, the amount of risk to which each one exposes the patient, independent of any particular weakness on his part. Now, of course there is much in the way of statistics on this subject, but I would advise you not to trust such figures too far. They can only point to general conclusions, and must be applied, with all caution, to particular cases. The question, after all, must of course be, in each case, a personal one. Each patient, apart from any special unsoundness, is sure to present certain individual features which mark him out, in some way or other, from the average. And there can be no more difficult and delicate duty for the surgeon, none calling into exercise higher qualities of his art than the application of general knowledge derived from statistics or previous experience, to the formation of a just prognosis in

any individual case. For example, statistics speak of primary and secondary amputations, but in each case of proposed secondary amputation almost everything, perhaps, turns upon the question of time—upon the state of the patient on whom such an operation is performed. Then, again, think how very much must be allowed for in applying statistics of operations in hernia to any one case. Still, with all this, there are certain large conclusions on which we may securely rest. Removal of the breast, for instance, is an eminently favourable one among large operations; and the same may be said of great operations on the face, for example, removal of the upper jaw. How marked is usually the contrast between the proceeding itself and the subsequent progress of the case! So, again, patients usually recover very rapidly from operations on the tongue, even when the greater portion of it is removed. On the other hand, as we know very well, grave results are apt to follow operations apparently trivial, if they involve the exposure of a serous or synovial cavity; and operations on the male urethra are sometimes very treacherous.

And here, gentlemen, I must stop, although, in truth, I have hardly begun. When it occurred to me that I might devote a clinical lecture or two to some consideration of the matters I have hinted at, I saw at once that, in the time allowed me, I could do no more than trace the barest outline of the subject; and now I find that, as usual, I have fallen far short of my purpose, even of this one. Still, I venture to hope that I have not altogether failed of the chief object I had in view—to direct your thoughts to questions too often unheeded or overlooked, and to impress upon you the paramount importance of sparing no pains in the endeavour to answer them.

THE ACTION OF MERCURY.

BY ROBERT FARQUHARSON, M.D.

THE unfortunate idiosyncrasy of Dr. Cheadle's patient reminds me of a case in which severe symptoms were produced even by a smaller dose of mercury.

A relative of my own spent many years in the West Indies, and was treated there for fever, according to the fashion of the day, with almost incredible quantities of calomel. Ever since that period, she has been so susceptible to the action of the drug as to find it necessary, when consulting any fresh medical man, to lay her peculiarities in this respect fully before him. On arriving in London, however, she was seized with what is popularly called a bilious attack; and, unluckily forgetting to make her usual stipulation, the doctor in attendance naturally enough prescribed a couple of pills containing three grains of calomel and five of colocynth. Furious salivation almost immediately set in, with marked gastric disturbance and general debility; and several months elapsed before either her gums or her strength were restored to their normal condition. This lady's daughter exhibits an almost equal intolerance of mercury in any form; and I am thus led to infer that prolonged residence in a tropical climate may serve to encourage, if not actually produce, such a type of constitution.

We also know that debility has a decided tendency to cause excessive action of this therapeutic agent. Of this I remember a typical instance, which occurred in the Coldstream Guards' Hospital some years ago; two privates having been salivated, one by three, and the other by two, calomel vapour-baths, each containing twenty grains. This naturally excited some surprise, as the men were robust, and as such accidents rarely happened; but all became clear when we found that they had inadvertently been kept on very low diet during the four or five days following their admission. The rectification of this error speedily put them all right; but the circumstance impresses forcibly on us the necessity of combining tonic diet and regimen with anything like a mercurial course. If we feed our patients well, give them a moderate allowance of stimulant, with iron or quinine, they will fatten and do well; whereas the semi-starvation enjoined by the dogmas of former days proved its fallacy by the results. With syphilis as the whip, and mercury as the spur, patients went downhill with sad rapidity; and not a little of this must have been due to the debilitating influence of low diet.

In conclusion, M. Diday (*L'Histoire Naturelle de la Syphilis*) tells us to beware of the action of mercury in persons with light or reddish hair. I think I have seen some reason to accept this caution; and it obtains confirmation from the ladies above referred to, whose hair was of a light reddish mauve colour.

ABSTRACT OF LECTURES ON THE VARIETIES OF PHTHISIS.

By REGINALD SOUTHEY, M.D., F.R.C.P.,
Physician to St. Bartholomew's Hospital.

PHTHISIS is not an exact disease. The cases of it with which we meet are seldom *fac-similes* one of another. It is not, like one of the exanthemata, stamped with such regular features that a few lines of definition easily fence it off from every other malady and describe it in abstract. The term itself is retained, by those who employ it at once most properly and most strictly, to meet a special and peculiar want, as a heading which sums up our knowledge and our ignorance of a disease in which the symptoms are complex, the affection general as well as local, but the issue particular. It is not surprising that distinct morbid processes should be included under the generic term thus employed to comprehend them; but in each case there are degenerations of the pulmonary tissues which have progressed with greater or less rapidity, and finally led to symptoms and disorganisations of the lungs more or less peculiar and significant.

Those, and I am among them, who believe that the modes of commencement of this disease are different, hold that distinct subforms or varieties exist; and to the determination of these varieties they address themselves, with the view of discovering what tokens during life distinguish them, and may be relied upon to predicate the course and issue of each particular form of the complaint. That the problem is no easy one to solve, you may take for granted; for the self-same questions—namely, what constitutes pulmonary consumption, and what varieties of it are met with—have been propounded ever since Laennec published his first discoveries. But the answers, ever new, are never the same.

To be as precise as possible in your ideas of what should be held to constitute phthisis, you will do well to consider Dr. Andrew Clark's able definition of it—"all progressive consolidations and circumscribed suppurative degenerations of the lungs attended by hectic fever and general tissue-waste." That a disease thus defined will present varieties, who shall gainsay? But let me premise, too, my conviction here that medical men will arrive at no agreement upon these, unless they recognise this guiding rule for separating these subforms from each other—viz., practical utility. The law of classification is the law of arrangement upon good reasons, for the better understanding of the things classified; and how far this principle has been observed or violated by those who have recently multiplied the varieties of phthisis, I will shortly give you the materials for judging. As our knowledge of disease increases, so our nomenclature must expand and become more precise; but let us be careful lest our fancies outstrip our facts.

At the outset, therefore, I propound to you my first question: Upon what basis can an useful classification of the varieties presented by phthisis be made?

Most observers are agreed that pathological grounds are the only safe and sure ones upon which to build distinctions. Unfortunately, those lung-diseases whose morbid anatomy is understood, already stand clearly and distinctly classified. I mean that pleurisy, bronchitis, pneumonia, emphysema, atrophy, interstitial disease of the lung, cirrhosis, abscess, pulmonary apoplexy, cancer, acute miliary tuberculosis, syphilitic gummata, have each and all been set upon their separate pedestals, and looked at well all round, although perhaps not yet photographed from every view-point.

While we are agreed that a disease partly local and partly general exists, to which the name of phthisis is accorded, you should be aware that it is thus vaguely named, because its morbid anatomy at the *post mortem* table has been rather a vexed question; first, because when patients survived long enough for the full measure of lung-disorganisation to take place, this was so great; secondly, because when accident or other disease cut off a patient whose phthisis was quite incipient, the earliest departures from the normal were indistinct and capable of being differently interpreted. Wherefore, without falling directly foul of such definitive titles as lobular and lobar pneumonic phthisis, fibrous phthisis, infiltrated tubercular phthisis, hæmorrhagic, croupous, catarrhal phthisis, and the like, I must ask you to take these terms for what they are worth, upon the respect which you attach to the authorities who employ them. Clinically, for the separation of a distinct variety, we require distinct features and a distinct course.

Grade of inflammation, or special character in the products of inflammation, has been employed for separating the subforms of phthisis. Thus you will read of simple exudative phthisis, recurrent, congestive, albuminoid, corpuscular, fibrinous, and true tubercular phthisis. But, clinically, you will find such distinctions of little use to you; since, although the physical signs during life may and do sometimes suggest some special kind of morbid process, they seldom appoint this with precision enough for an exact diagnosis; and, as we know from observation in the progress of one and the same case of pulmonary consumption, every kind of inflammation may present itself, and very various products of inflammation be formed. Further, the distinctions afforded by such headings as acute inflammatory phthisis, subacute and chronic phthisis, are of small help, except to indicate what prognosis has been given, since most ordinary cases of consumption will at one time or other of their course present acute, subacute, and chronic symptoms.

Can temperament afford us no grounds for the separation of the varieties of this affection? That the lymphatic temperament furnishes the largest contingent of the ordinary chronic scrofulous phthisis, and the nervous temperament the greater proportion of cases of acute miliary tuberculosis, most observers are agreed; but temperament, as a basis for distinguishing one form of phthisis from another, is not merely itself insufficient, but would be found conducive to error.

But let us examine together more closely the varieties which have at different times and by different authors been proposed, and estimate fairly their clinical value. I will take the latest writer first—Dr. Douglas Powell—who, in a recently published book, gives us the following definition of phthisis: "Progressive consolidation and decay of the lung, with progressive wasting of the body." Dr. Powell perceives that two kinds of morbid processes are included under phthisis—the one an inflammatory process, pursuing an acute, chronic, or chequered course; the other the formation of a new growth—tubercle. The principle upon which he separates the subforms or varieties of the affection which he describes, is difference in pathology. Alveolar catarrh is with him the starting-point of all inflammatory phthisis. This alveolar catarrh either recovers or proceeds to damage the lung by exciting one of three varieties of disease—*a.* Catarrhal pneumonic phthisis; *b.* Tuberculo-pneumonic phthisis; *c.* Tuberculo-fibroid phthisis. You will not fail to notice that the two kinds of morbid processes originally distinguished by him were tubercle and inflammation. Blood-effusion from capillaries—but whether from those of the bronchi or alveoli, he does not specify—is the start-point of his second great subform; and, since he closely follows Niemeyer in all but the lucidity of that writer, we may presume that this *phthisis ab hæmoptoe* is the same as that described by the great German professor—*i. e.*, is phthisis excited by infarction of blood effused in the bronchi, but drawn into the air-cells, where it remains to undergo degeneration itself and excite inflammation. However true or false the fact may be—for I will not stop here to discuss it—for purposes of classification upon morbid processes and pathological grounds, it is not satisfactory to find that this hæmorrhagic phthisis may either occur coincidentally with the pneumonic phthisis above mentioned as of alveolar origin, or may give rise to pneumonic phthisis secondarily. Dr. Powell's third subform is acute tubercular pneumonic phthisis, either disseminated, or racemose, or diffuse, which destroys the lung by one of three different processes—1, by simple extension, the lung never breaking down; 2, by coincident pneumonic processes—caseation, softening, ulceration; 3, by coalescence, which, if it mean more than simple extension from different centres, implies, we must presume, infiltration of grey indurative material, the exudative product of fibro-nuclear progenitors, into the alveoli. His fourth subform is fibroid phthisis, of which he has a right to make a separate variety, if he assume it, according to his principles of classification, to have special pathological origin; but in one and the same breath he destroys his own case, saying, "This is a very chronic and never a primary form of phthisis, being always associated with the chronic forms of other varieties." The fifth and last subform which he makes is phthisis with recurrent hæmoptysis. The primary lesion here he hypothesises to be pulmonary arterial hæmorrhage. Its main symptom is hæmoptysis; its pathological characteristic feature, chronic induration of the lung, with slow formation of cavities.

Gentlemen, I think you will allow that classification *ab initio morbi* is liable to land us in confusion.

Dr. James Pollock, in his valuable work on the *Elements of Prognosis in Consumption*, distinguishes between the subforms of the disease upon their respective clinical features. He makes three principal varieties—acute, ordinary chronic, and strumous phthisis. Each variety is further divided into two subforms. Thus there is an acute mixed and an acute pure; and his descriptions of these leave no room for doubt as to what class of cases he is separating from each other. His illustrative

examples justify all his observations. His acute mixed is the acute pneumonic phthisis of some authors—a form which you have heard me distinguish from others as embolic or pyæmic phthisis. His acute pure is acute tuberculosis of the lungs. One leading feature of acute phthisis noticed by him—the absence of hæmoptysis—is well worth your remembering. His ordinary chronic phthisis is identical with that form elsewhere described as catarrhal pneumonia; it is the variety which especially befalls persons of the lymphatic temperament, and to the subjects of chronic rheumatism and heart-valvular lesions. It is characterised by a long second stage—that, namely, of consolidation; is usually commenced by one copious hæmoptysis, but not attended with further smaller ones. Dr. Pollock does not, like Niemeyer, refer the consolidation to the hæmoptysis, but both to one common cause—congestion. It is attended by repeated asthmatic attacks; but, although the appetite is good and the digestive powers apparently unimpaired, the patient steadily, and at times quickly, loses weight. The physical signs admit a subdivision of this ordinary chronic phthisis into two subforms—1, where the consolidation or deposits are limited to the apex; 2, where the consolidations are scattered throughout both lungs indifferently. His third or strumous variety of phthisis is that in which a cavity or cavities form quickly, and the patient lives through what is called a prolonged third stage of his complaint. This is the form which presents all the most ordinary complications, such as dyspeptic symptoms, intercurrent bronchitis, fistula *in ano*, albuminuria, pneumothorax, diarrhoea, etc.; which is attended by repeated attacks of hæmoptysis, and by occasional grave hæmorrhages from pulmonary aneurisms. It is the form which attacks scrofulous individuals, as well as those who are debilitated by vice and intemperance. Its two subforms are respectively—1, acute scrofulous or broncho-pneumonic phthisis; 2, chronic scrofulous or lobular pneumonic phthisis. Upon this scheme, it will be allowed that our knowledge of the disease is advanced, and that the symptoms which should determine our prognosis in any particular case are advantageously grouped together.

It is with some fear of exhausting your patience that I find myself compelled to analyse the views of a few other authorities upon phthisis.

Dr. Aitken makes a primary distinction between the diathesis of tubercle and that of scrofula. He describes acute tuberculosis, to which he attributes two subforms, a disseminated and an infiltrated. The disseminated is the tubercle-growth, which he apportions to its favourite seat in the connective tissue of the lung, the sheaths of the blood-vessels, or the walls of the bronchi. The infiltrated is the deposit that takes place in the alveoli, forming the lung-consolidations and softenings of ordinary scrofulous phthisis. He distinguishes his varieties of the disease upon a tripod basis—mode of origin, symptoms, and dyscrasia. Thus his first variety, the latent or occult form of phthisis, is recognisable enough as acute tuberculosis. “Young persons of well marked tuberculous cachexia, at ages between sixteen and twenty-five, are its chief victims.” The complaint begins with debility, languor, emaciation; follows with slight tickling cough and hectic fever; and pursues an invariable downward course with high temperature to exhaustion and death. His second variety—febrile or galloping consumption—begins with rigors and bilious symptoms; follows with epistaxis, coryza, early and great prostration, urgent dyspnoea, cough, expectoration, nocturnal delirium, continued fever, and death in from twenty days to twelve weeks. I shall have occasion hereafter to revert to this variety, which all authors set apart, because it has highly distinct features; and shall endeavour to show you that, when separated from tuberculosis, it is best described under the name of embolic or septicæmic phthisis. His third variety is that in which hæmoptysis is a first or early symptom. His fourth variety is syphilitic phthisis, which begins with bronchitis, and might be perhaps described apart as broncho-pneumonic phthisis.

Hence you see that almost every author who elaborates his thoughts upon pulmonary consumption at all, perceives that different forms of it exist, and endeavours with more or less success to distinguish between them, from Dr. Peter Mere Latham, with his simple but clear differentiation between mixed and unmixed phthisis, down to Dr. Bennett, with his eight varieties, recently propounded in an article on Phthisis published in Dr. Russell Reynolds's *System of Medicine*. Of these varieties I append a list, to which I have attached synonyms where these are apparent to me.

1. Chronic Phthisis. *Syn.*: Ordinary phthisis; Pollock's long second stage phthisis; chronic pneumonic phthisis; infiltrated tubercle; unmixed phthisis; phthisis of the lung-chested.

2. Foreign Body Phthisis. *Syn.*: Chronic cirrhosis of lung; chronic asthmatic phthisis; carbonaceous phthisis; stonemasons' phthisis; knife-grinders', file-grinders', and needle-pointers' phthisis; wool-carders' and shoddy phthisis; tea-sorters' phthisis; dustmen's phthisis.

3. Acute Phthisis. *Syn.*: Tubercular phthisis; acute tuberculosis of lungs; galloping consumption; embolic phthisis.

4. Gradually developed Phthisis. *Syn.*: Chronic scrofulous phthisis; lobular pneumonic phthisis; Pollock's phthisis with prolonged third stage.

5. Hæmorrhagic Phthisis. *Syn.*: Phthisis ab hæmoptoe (Niemeyer); phthisis with early hæmoptysis (Pollock); cheesy degeneration of nodules of extravasated blood (Andrew Clark).

6. Bronchitic Phthisis. *Syn.*: Asthmatic phthisis; phthisis following hooping-cough.

7. Laryngeal Phthisis. *Syn.*: Syphilitic phthisis(?); drunkards' phthisis(?). An ordinary complication of phthisis, scarcely serving to distinguish a variety.

8. Pneumonic Phthisis. *Syn.*: Phthisis commencing in an acute pneumonia, never completely resolved; chronic pneumonia.

Dr. Andrew Clark has described nine varieties of phthisis, separating these upon distinct anatomical characters. I will specify them.

1. Tubercular or specific phthisis.

2. Scrofulous or epithelial phthisis: the old primitive yellow tubercle.

3. Catarrhal or bronchial phthisis: dilatation and ulceration of bronchi, with adjacent cheesy deposits.

4. Pneumonic phthisis: phthisis commencing in lobular or lobar consolidations of the lung.

5. Fibrous phthisis: phthisis commencing in interstitial pneumonia, excited by mechanical irritants, or supervening on rheumatic inflammations of the lungs, and promoted by those constitutional states and that general hypertrophy of interstitial tissue which determine cirrhosis of the liver and the contracted granular kidney.

6. Amyloid phthisis.

7. Syphilitic phthisis: localised and diffused gummata.

8. Hæmorrhagic phthisis.

9. Embolic phthisis.

Without criticising these varieties of the disease which Dr. Bennett and Dr. Andrew Clark have thought fit to enumerate separately, I may remark that, so long as any distinct pathological changes of which we possess definite knowledge can be traced in the lungs, we shall act wisely in giving local and precise names to them. Thus I see forcible reasons against calling a disease phthisis, to which the element of vagueness and generality is properly attached, so long as a well observed progressive degeneration of the pulmonary tissue can be shown to be the sum and substance of it.

What I wish you to bear in mind, is the definition of phthisis upon which we started, just as I desire that you should separate your ideas of it from the lung-affections, now better known, which have in former days been mistaken for it, and still present difficulties in differential diagnosis: I mean bronchitis with saccular dilatations of bronchi; cirrhosis of the lung with atrophy of the alveoli and general dilatation of the bronchi; syphilitic gummata of the lungs; the changes secondary to pleurisy, to collapse, to mitral regurgitation or stenosis, to tumours, to abscess, and to injuries.

I should like you to distinguish between chronic pneumonia and phthisis whenever you have sufficient grounds for doing so, and to restrict yourselves in the employment of the latter term as much as possible, seeing that it is not merely a word of ill omen, but oftentimes a refuge for the ignorant, the careless, and the irresolute in diagnosis. There will remain occasions enough for its use when you discover progressive lung-consolidations and intercurrent broncho-pneumonia pursuing their work of destruction together in cases which have a clinical history and an aggregate of complex physical signs and general symptoms which fitly entitle them to be called pulmonary consumptions. Now it is to such phthisis as this, whose exact pathology remains difficult to review even upon the necropsy-table, that I am addressing myself; and it is to the varieties of it which their course and symptoms indicate, that I direct your attention to-day.

The old views of phthisis may, perhaps, be briefly and profitably expounded by me here, and contrasted with those which are at the present day more generally entertained. It is agreeable to find that the names of things have changed, while the observed facts have remained stationary. By the old theory, any material that blocked up the air-cells, and underwent secondary changes in them, was called a deposit, and entitled tubercle. There were two kinds of these deposits recognised—one, the miliary grey granulation of Bayle; the other, the infiltrated exudation, more or less yellow in colour, which blocked up lobules or lobes of the lung. Both forms of deposit were liable to subsequent alterations and degenerations; they either became encysted, or softened into cheesy or hardened into calcareous masses. They were deposited, it was surmised, by reason of some constitutional blood-taint. This blood-taint, said and still say many, arose from substances, products of the retrograde metamorphosis of tissue, which con-

taminated it. Local causes, principally congestive inflammation, determined these deposits in the lungs; but they might take place anywhere in the body, especially in glandular structures. They tended to excite inflammatory changes in the tissues round about them, which became ulcerated, and so allowed their elimination.

According to more modern theories, true tubercle—the tiny adenoid lymphatic gland-like growth which spreads and multiplies in its periphery—is most often, if not quite always, a secondary feature in the lungs; it springs up only where connective tissue extends, and is found, therefore, most frequently and most easily, upon the pleura and in the interlobar and interlobular tissues. Any product of inflammation, pent-up pus, or tissue undergoing necrobiosis—death in a living coffin—may excite the formation of tubercle in persons constitutionally predisposed towards it. But most modern pathologists affirm that the solidification of the lungs which constitutes ordinary phthisis is not the tubercle-growth at all, or only secondarily so, but an infarction of the air cells individually, or to the sum of lobules or lobes with cellular products of inflammation.

These pneumonic solidifications differ very little, if at all, in microscopical features, from those of ordinary catarrhal pneumonia, but exhibit less capacity for being reabsorbed after an uncertain and doubtless varying lapse of time, during which they act detrimentally, partly by the pressure upon the tissues about them, and partly as plugs excluding air and so obstructing the capillary circulation. They degenerate, soften, and break down, in consequence of inflammatory or softening changes which they have excited round about them.

Finally, the pneumonia spreads in enlarging circles, and is complicated by bronchitis; and the metamorphosed products of inflammation are partly expectorated, partly scattered broadcast through the body by the medium of the circulating fluid; and out of this condition of septicæmia and general gland stimulation true tubercle may spring up, like a fungus on its congenial soil.

Hence you see that both the older and the younger pathologists are nearly agreed, when they are discussing one and the same thing—phthisis, not tuberculosis. One calls its first beginning an exudation; the other, a pneumonic proliferation of cells, taking place in the alveoli.

This, then, is the modern doctrine which I wish you to understand: that tuberculosis is a general disease, which may pervade the body without noticeable implication of the lungs; but that phthisis is, in its sense and substance, a lung-disease with general constitutional symptoms.

One great difficulty in the classification of kinds of phthisis upon its morbid anatomy is, that this is really little known. I speak, of course, of the very early stages. If a patient die by accident, or after short illness, and some slight pneumonic infarctions be found in his lungs, it is very inconclusive reasoning to avow that these were the early seeds of a phthisis which he might have developed had he lived longer. Quite equally illogical is the deduction drawn from one or two cases of persons dying during pulmonary hæmorrhage, and in whose lungs blood-infarcts are discovered, that phthisis is the result of hæmoptysis.

I should be afraid to say at how many *post mortem* examinations upon the bodies of persons who have died presumably of phthisis, it has been my lot to attend; but in no single instance have I ever seen any evidence of the origin of the disease from blood-clots drawn into and softening in the air-cells. On the other hand, I have seen appearances the result of lung-embolism, stasis, and extravasation of blood, with degeneration and softening of tissue, and formation of small abscesses, as well as cases of pulmonary apoplexy, either of which may have suggested to Niemeyer his theory of the origin of certain forms of phthisis *ab hæmoptoe*.

In conclusion, accept this as my definition of what I understand by phthisis: a progressive lung-degeneration, beginning differently, but about whose modes of origin little is known certainly—in its progress limited to no one lung-element, and attended by febrile disturbance and general constitutional complications.

Important facts for you to bear in mind about phthisis are, then, that the tubercle-growth may be engrafted upon chronic lung-consolidations of various origins. Thus there is no form of phthisis which may not present this histological element as a complication; and there are forms of lung-degeneration in which this is the principal, if not the sole feature. But for these last, I should prefer the name acute tuberculosis of the lungs, to phthisis.

Now, of the disease defined by me, the varieties will not be many. Cirrhosis, brown induration, unilateral chronic pneumonia, amyloid disease, must be excluded.

To justify the separation of one form of phthisis from another, we must demand clear clinical distinctions. The cases must be different throughout, from commencement to termination—distinguishable by

symptoms, by course, by history, by duration, by issue, by amenability to treatment. Try them by this touchstone, and tell me if you can distinguish between a catarrhal and an epithelial phthisis, between an embolic and a hæmorrhagic, between a broncho-pneumonic and a lobular pneumonic; if you can separate phthisis with recurrent hæmoptysis from scrofulous phthisis, a tuberculo-pneumonic phthisis from a tuberculo-fibroid, a syphilitic from a drunkard's phthisis; for I cannot. And let me warn you against establishing separate varieties upon theoretical grounds that will not bear probing. The only three species or kinds of phthisis which I find it in my practice useful to distinguish from each other are—1, embolic* or septicæmic phthisis; 2, ordinary or scrofulous phthisis; 3, foreign body phthisis. And these are all influenced in their course and progress by the gravity of the original lesion, by the abiding or temporary nature of the exciting causes, and by the habit of body and temperament—the constitution, in one word, of the individual attacked. If these forms have existence at all, and really be unlike each other in etiology and pathology, we shall not have occasion to seek far and wide for typical examples of them, since the cases of phthisis annually admitted into the medical wards of our hospital form 17.22 per cent. of all the admissions. But for the clinical evidence of these I must ask you to wait, until I have further opportunity of addressing you.

NOTES TOWARDS THE HISTORY OF THE MEDICAL STAFF OF THE ENGLISH ARMY PRIOR TO THE ACCESSION OF THE TUDORS.†

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[Continued from page 113 of last number.]

THE next page of military medical history opens in the reign of Edward I, at the commencement of the fourteenth century. The Crusades had taken up the interval since the Conquest, beginning in 1096 and ending in 1291 A.D.; and it would appear that so late as the third crusade (Richard and Philip) these fanatical expeditions were unattended by any professors of medical and surgical knowledge. This can scarcely be wondered at when we reflect that, as concerns their spiritual wants, they were without special advisers, each crusader being provided before setting out with the consecrated elements; and as the functions of the priestly office were thus superseded, so were those of the leech by relics and amulets. Probably the direct intercourse with the Saracens may have caused respect for their superior medical attainments and practice, as the celebrated Arabian school was then at its climax, and the works of Rhazes and Avicenna were in high repute. It may indeed be credible that in a warfare where courtesies were not unknown, the surgeons in the suite of Saladin, and his humane brother Saphadin, may have afforded their aid to the wounded in the camp of Cœur de Lion. Although the crowned heads of England were not represented in the Crusades like those of France, yet their scions and their great nobles brought together large contingents, conducting them on French principles rather than by any independent nationality. Among the traditions of the Crusaders, we find that Robert, eldest son of the Conqueror, was distinguished by his many acts of bravery and chivalry in the Holy Land, which he left in consequence of a severe wound. On his return he landed at Brindisi, and tarried in South Italy to have his wound cured by the famous professors of Salerno. While under treatment, he received a wound of the heart from a fair Norman, Princess Sibylla of Apulia, who may have done the nursing, which was common in those days, as it has again become in our own, and he made her his wife.

Richard I was the only English king who undertook a crusade. He did this with a large army and fleet, but the chroniclers say nought of medical attendants either in this or in the fleet of Philip of France; and Ducange, in his notations on Vinesauf, who was with Philip, makes this the ground for doubting that there were any. Our own Roger of Hoveden tells us that the English expedition was detained at Rhodes owing to the sickness of the king. Soon after landing at Acre, both Richard and Philip were seized with a disease, "*quam Arnaldiam vocant*, of which they lay near to death, and they became bald; but

* By embolic phthisis, I mean a degeneration of lung-tissue commenced by arterio-capillary pluggings or embolisms, and attended by localised extravasations of blood and formation of abscesses. Highly instructive examples of this form of disease have been recently under my observation, and will afford materials for a future communication.

† Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

by the mercy of God they recovered from their weakness, and became stronger and more resolute in God's service". This happened in June 1191. About a year later after his miraculous exploits in the recapture of Jaffa, Richard fell ill again; and, in broken health, he left Palestine in October 1192 A.D.

There can be no question of the mutual respect that existed between Cœur de Lion and Saladin; and it is a well recorded fact, that on the plain of Jaffa Saladin sent presents of fruit and of cooling snow to ameliorate the sufferings of his adversary; and with that fact in view it is credible that skilful Arabian physicians may have been sent to advise on his treatment. It is certain that if Richard were without a military physician in his train, he must frequently have felt the want of such a follower.

When Edward I was proclaimed King of England in November 1272, he was absent in the Holy Land on the eighth and last Crusade, in which he was to have co-operated with St. Louis of France, who unhappily met his death by dysentery before Tunis in 1270, on the outward voyage; and, from the silence of the Sire de Joinville on the point, there is ground to doubt his having had a medical attendant near him. Prince Edward of England would appear to have been situated better, as there was at hand an English surgeon to treat the murderous wound dealt him by an assassin at Jaffa in June 1272. Our contemporary chroniclers are silent on the romantic story of Eleanor sucking the poisoned wound inflicted on her husband. Carte, who is a very national English historian, giving his authorities, states: "The assassin, drawing a poisoned dagger, attempted to stab the prince in the belly, but the prince, endeavouring to parry it with his arm, received there a deep wound, and, striking at the villain's heels with his foot, seized the dagger and plunged it in his heart, though in wresting it violently from him he gave himself a wound in the forehead. The wound in his arm appearing very dangerous and likely to gangrene, the prince thought fit the next day to make a will; but the bad flesh being cut away by an English surgeon, it was healed in a little more than a fortnight, though not so thoroughly but he felt from time to time exquisite pain, and the scar which was left dropped some moisture continually for several years, till it was again laid open and then entirely cured."* From this evidence, we may judge it to have been a punctured wound involving the bone, and the primary operation a deep incision or two for the relief of inflammatory tension. That a sinus remained, leading to an exfoliation that required a second incision for its removal, is the easiest way to account for the remoter consequences. The romantic stories of poison and suction may be altogether dispensed with.

This incident affords proof that Prince Edward had with or near him in Palestine, in the year 1274 A.D., a skilful English surgeon, whose name, unhappily, is lost to fame, but his art must tend to exalt our traditional ideas of the condition of practical surgery in that age. I think that this unknown individual has a fixed claim as an English army surgeon worthy to be remembered for having been instrumental in saving the life of the grandest of our Plantagenet kings.

King Edward I having experienced personally the value of surgeons in the field and in the camp, it is not likely that he ever forgot the lesson. There are no records of the military economy of his expeditions into Wales, nor of his first expedition into Scotland in 1298, when Falkirk was the great field of slaughter; but his second invasion affords to the inquirer its invaluable record of costs in the wardrobe accounts of royal expenditure A.D. 1299-1300, that form the starting-point of our economical history. It may be apprehended that it is only from the absence of similar accounts of older date that we remain ignorant of an earlier like organisation. Where money is recorded to have been paid for services rendered, we have landmarks of history at least as certain as the face of a medal or coin, the presentation of which has sufficed to set at rest many a disputed point. With this wardrobe account before us, we cannot hesitate to fix the year 1300 A.D. as a date when an army medical service had actual existence among us. There are charges in the marshal's (war-office) expenditure for a physician and his two juniors (*valetti sui*), and for two surgeons, with one of whom there were two assistants (*socii*). Some of these, as well as an apothecary, are introduced in the household accounts on some heads of expenditure, in a manner showing the distinctions then matured be-

tween military and household medical services, or camp and court. The names and qualifications and ranks of the individuals are as follows.

John de Kenle.....	Phisicus regis	Miles simplex.
John de Shireburn....	Valettus suus	Scutifer.
William de Rigethorn.	Do.	Do.
Philip de Belvaco ...	Cirurgicus regis	Miles simplex.
Edmund de Baunton.	Socius suus	Scutifer.
One name unknown...	Do.	Do.
Master Peter.....	Cirurgicus	Scutifer simplex.
Peter or Perroto	Apotecarius reginæ.	

Thus, we learn that in A.D. 1300, the professional distinctions of physicians, surgeons, and apothecaries, were recognised at our court, and it seems to me doubtful whether the last two names on this list were or were not of the same person. *Valettus* is an abbreviation of *vassalettus*, a diminutive of *vassallus*, holding lands by military tenure under a feudal baron as tenant *in capite* from the king. The designation was applied to youthful aspirants of rank, even to those of noble families, who served in the retinues of the kings, princes, or great feudatories, before obtaining knighthood.

With regard to emoluments: The physician De Kenle, and the surgeon De Belvaco, appear to have received the pay of simple knights, two shillings a day, when knights bannerets were paid three shillings. The assistant-physicians, de Shireburn and de Rigethorn, and the assistant-surgeons, de Baunton and his nameless associate, had one shilling a day, like mounted lancers, and vintners, or sergeants of twenty footmen. In addition, the surgeon was repaid for expenditure on medicine and appliances in the field or at the court, and the physician was allowed one shilling a day subsistence-money when absent from the courtier's table on the king's service.

Physicians, surgeons and their assistants, were allowed the keep of horses for their conveyance, but pack-horses seem not to have been allowed to the assistants. The army practice was to begin daily pay on the date of presenting the charger for valuation, after which its loss or injury was compensated if it happened "servicio regis"; and, in other cases, when that could not be strictly proved, compensation was made "ad elemosynam". These rules applied to all alike on the marshal's roll. Thus, the king's physician was paid "ad elemosynam" for a horse dead at Greenwich, and the king's surgeon was paid for three horses dead in Scotland, "servicio regis", and for one, "ad elemosynam", which he seems to have lent his assistant, Baunton, to carry his baggage on the march.

Another head of expenditure elucidates the status of these medical officers. The "Roba" list presents to us the clothing or uniform allowances paid to those on the marshal's roll and royal household. The first scale was an annual allowance of sixteen marks, or £10:13:4 paid to bannerets; and the second scale, eight marks, to simple knights. The king's physician, De Kenle, and his surgeon, De Belvaco, receiving the second scale, indicates their social position at court and in the army to have been with rank of knighthood.

The "valetti" of the physician and the "socii" of the surgeon are not named on the "roba" list; but they appear on the pay list as "scutiferi."

Pietro, "cirurgus," was of inferior rank to De Belvaco, "cirurgus regis," and his name appears among those of the courtiers, "scutiferi simplices," receiving only £2 a-year for uniform. As this "cirurgus" does not appear as such until A.D. 1302, and as Pietro, or Pierrot, "apotecarius reginæ," is named in 1300 and 1301, and not in 1302, I am of opinion that they were the same person. Having come from France with the young Queen Margaret, he was probably the first apothecary introduced into England, where he may have found his to be an inconvenient title,* and have changed it for the better known one of surgeon. There is evidence of his having been at York, in waiting on the Queen, in the summer of 1300, but no evidence of his being in Scotland.

To comprehend fully the relations of these men with the army invading Scotland, it is needful to be acquainted with the king's movements. The feudal system was in full operation, and he had ordered his barons to assemble with their vassals at Berwick in the autumn of 1299 A.D., he being at the same time under contract to marry Margaret, the sister of Philip, King of France. The marriage was celebrated in Canterbury Cathedral on the 8th of September, and the queen was left at St. Alban's on the 2nd of November. Edward joined his army at Berwick on the 20th December, when his barons protested against any warlike operations at a season when the roads

* In Gale's *Rerum Anglicorum Scriptores*, we have, in the Chronicles of Walter Hemingford, a circumstantial description of the wound of Prince Edward: "Vocantur ergo chirurgici, et medicamenta imponunt. Sed post dies paucos, videntes denigrescere carnem, mussitaverunt inter se, nec erat ulla lætitia in populo suo, quod ille perpendens dixit eis; Quid est quod mussitatis, nonne sanari possum? Dicite mihi, nec timeatis. Et ait unus natione Anglus; Curari potes, sed oportet te dura pati. Et ille; Si passus sum, quidem fuero, numquid sanitatem promittis? Et ait; Promitto quidem, et sub pœnâ capitis mei. Et ait; Committo ergo me tibi, et expete quæcunque volueris. Mane autem facto incidit denigratam carnem brachii sui et projecit ex toto."

* Previous to this, the title "Apotecarius" was not unused in England, but it had a much more lofty signification, being applied to the king's treasurer or keeper of the chest or depository. Madox, *Hist. of Exchequer*, vol. i, p. 79, states that Bishop Nigellus of London paid King Henry II the sum of £400 for the patent of Apotecarius, king's treasurer granted to his son Richard Nigellus.

were quagmires. The castle of Stirling was abandoned to its fate, and the army dispersed until the summer of 1300 A.D., when it reassembled at Berwick, and, under the king's command, made some ineffectual incursions of Galloway.

The "wardrobe accounts" show that De Belvaco, "cirurgus regis," with his "socii," was present with the army in the fall of 1299, and that De Kenle, "physicus regis," was then at Caversham, by the king's command, in attendance on his daughter, the Countess of Gloucester, in childbed. In September and October, 1301 A.D., the "valletti" of De Kenle were with the army in Scotland, and thus we know that the medical staff of the army in 1200-1300 A.D., comprised both physicians and surgeons.

In comparing the estimate set on medical services at various periods of history, it is of interest to note that the physician and surgeon of the army then received the same daily pay as the Admiral of the fleet—the first of that rank in English history—and their subordinates the same as the captains of the ships composing the fleet. This is an outline of the *personnel* of the earliest recorded medical staff of the English army with its rank and emoluments. It was established by Edward I, worthily styled the greatest and most glorious of the Plantagenets, who may have been conscious of having owed his life to the skill of an English surgeon when in the Holy Land.

[To be continued.]

THE ETIOLOGY OF PSORIASIS.

By BALMANNO SQUIRE, M.B.

I THINK it not altogether improbable that the expression met with in the Bible, "a leper as white as snow," may refer to this disease. Certainly nothing that I have yet met with in the shape of the "leprosy of the East" (elephantiasis Græcorum) merits the application of such a phrase, whereas psoriasis is the only disease I have seen that fairly corresponds to such a description.

I have long noticed psoriasis to be specially common amongst the Jews of this and other countries. At the east branch of the British Hospital for Diseases of the Skin, where I have had a good many of the poorer class of Jews under treatment, I have found the disease proportionately so much commoner with them than with other persons, as to attribute the frequency of it amongst them to the influence of race. It is well known that psoriasis is at least very often an unquestionably hereditary disease. I may add that amongst such of the higher class of Jews as I have known, either as acquaintances or patients, I have found the same special frequency of psoriasis; I am therefore persuaded that psoriasis must have been a common phase of what was termed leprosy amongst them when all serious skin-diseases were confounded under that title. It might be objected to this that psoriasis is not contagious; but such investigation as I have been able to make in the nature of the "leprosy of the East" has almost assured me that it also is not contagious, although it is commonly supposed, even in countries where it is prevalent, to be highly contagious.

The conclusion which I have formed as to this latter disease is, that its prevalence in certain countries is a question of climate, and not a question either of race or of contagion. The contagiousness of leprosy (vaguely so called) is probably limited to that proportion of cases which are simply cases of syphilis. The hereditary cases of leprosy are probably cases of psoriasis. Psoriasis, unlike elephantiasis Græcorum, is not an affair of climate; but, equally unlike it, it is an affair of ancestry. I cannot profess to say in what proportion the disease is distributed amongst the various tribes of mankind; but I do not go merely on such data as I have already advanced, in asserting it to be especially common amongst those who are of Jewish descent.

In estimating the influence of race in the causation of any given skin-disease, one has to encounter under ordinary circumstances very serious difficulties. In the first place, skin-diseases are apt to shade off one into the other; and the diagnosis of individual cases as definite entities is commonly enough a question of opinion even amongst those who have fairly earned the reputation of being experts. In the second place, different races of mankind are often so indistinguishably blended in one individual that the diagnosis of the race is at least as difficult as that of the disease. But psoriasis is, of all skin-diseases, the most definite and distinguishable, even when complicated with other eruptions; and the Jewish features (for the reason that the Jews are the only Asiatic nation that has extensively located itself amongst us) are the most readily identified even when the race has been for several generations a mixed one. Accordingly, I have followed out the subject amongst the general community, and I have arrived at the conclusion that psoriasis is commoner amongst those of partially Jewish de-

scend than it is with those who present no evidence of Asiatic origin. It will be understood that I am as far from asserting that every one who has psoriasis is of Asiatic descent, as I should be from saying that all persons who are of Asiatic descent have psoriasis.

It has been observed by Professor Hebra, in speaking of 3,000 patients treated by him for psoriasis, "Now these have, without exception, been persons of strong constitution and firm fibre, who were well nourished, and whose bodily functions were in perfect order: in a word, they have been blooming healthy individuals." I may add to this, that my own observations perfectly accord with this statement. The fact may possibly afford some explanation of what I have asserted, since the good average *physique* of the Jew is scarcely less remarkable than the unquestionably high average of his intellectual gifts.

THE URINE IN HÆMOPHILIA.

By J. WICKHAM LEGG, M.D., Casualty Physician to St. Bartholomew's Hospital.

FERDINAND UHLE, born December 26th, 1861, was admitted into St. Bartholomew's Hospital, under the care of Dr. Southey, on December 2nd, 1872. He was the subject of hæmophilia. When he was seventeen months old, spontaneous ecchymoses were noticed under the skin of the back and limbs. Epistaxis began at two years of age. Just before he was two years he fell and cut his forehead: he was treated by a doctor in Hanover, but the bleeding was not stopped till the child was almost dead. As a child, his nose bled every two or three months. About four years ago he had blood in his urine. He is said to bleed now occasionally when changing his milk-teeth.

His joints began to be swollen when about two years old. The knees, elbows, ankles, and small joints of the fingers, are swollen occasionally; the right knee is always bigger than the left. Four years ago, he was admitted into a hospital in London for his swollen knee; and, although the mother informed the surgeon in attendance of the patient's liability to bleed, leeches were applied to the joint: the bleeding from them, however, only lasted a day and a night. The patient has a brother, also the subject of hæmophilia; but there is no history of the disease amongst the other kinsfolk of the boy.

On December 3rd, he had blonde hair, gray eyes; he was anæmic. The left knee was much swollen; the patella floated upon the fluctuating swelling of the joint, but the ends of the bones forming the joint could be made out. The temperature and the heart-sounds were natural, as was also the liver-dulness. The spleen was not enlarged to palpation, though by some it was thought enlarged to percussion. The boy's appetite was good; he complained only of pain in the knee, aggravated at night. The knee was painted with tincture of iodine.

As the temperature was natural and the appetite good, it appeared to me a good case for investigating the amount of urea daily excreted; and I wish to express my thanks to Dr. Southey for his kindness in allowing me to make these observations. The boy was kept in bed during the ten days over which the observations extended. He had one motion daily. The urine was collected from 8 A.M. to 8 A.M.

On admission, the diet allowed was the milk-diet of the hospital—that is, twelve ounces of bread, two pints of tea, a pint of milk, and three-fourths of an ounce of butter, daily. To this was added, on December 5th, a mutton-chop daily; and on December 8th and 9th, four ounces of wine; but on December 10th the wine was exchanged for an extra pint of milk daily. The reaction of the urine throughout the period of observation was faintly acid; albumen was in no instance present, as tested by heat and nitric acid. No change of colour followed the addition of thirty or forty drops of fuming hydrochloric acid to a few grammes of the urine.

		Quantity of urine in cubic centimetres.	Urea. Grammes.
December	4—5	1170	20.6
"	5—6	1130	18.08
"	6—7	950	17.575
"	7—8	1330	13.275
"	8—9	Lost.	00
"	9—10	1030	22.145
"	10—11	920	16.56
"	11—12	1100	19.8
"	12—13	1700	16.35
"	13—14	1230	17.835

The urea was estimated by Liebig's volumetric process with nitrate of mercury, allowance being always made for the presence of chlorides.

On December 18th, the boy's weight was very nearly twenty *kilogrammes*. A day or two after the last observation on the urine, a spon-

taneous ecchymosis formed just below the left ham; it was about the size of a sixpence, and somewhat tender. The knee continued steadily to diminish in size during the observations.

The foregoing observations show no diminution in the amount of the urea; on the contrary, the amount is above the natural average. The observations of Grandidier (*Die Hæmophilie*, Leipzig, 1855, p. 36) and of Schliemann (*De Dispositione ad Hæmorrhagæpernici. hæredit.*, Diss. Inaug. Wirceburg, 1831, p. 19) showed some diminution of the urea, in one case being 1.8 per cent., only a little if anything below natural; in the other, .5 per cent., a considerable diminution. My own observations are confirmed by those of Fluger, who found no diminution in the urea in one of his cases. (Schmidt's *Jahrb.*, Band cxvii, p. 330.)

My friend, Dr. Norman Moore of St. Bartholomew's Hospital, has drawn my attention to a passage in Heberden's *Commentaries*, which he considers contains an allusion to hæmophilia. The passage may be found at page 340 of the edition published at London in 1802, in chapter 78, *De Purpureis Maculis*, and is as follows.

"In quodam puero sic affecto, si modo digitus leviter cuti imprimetur, continuo sanguis ex vasis vicinis effundebatur, et suggillatio, tanquam in collisis, fieret.

"Simul cum his maculis vidi tumores in artubus inferioribus oriri ejusdem coloris ac reliquæ cutis, et sine dolore, nisi cum membrum moveretur. Hi tumores post decem dies subsederunt, at notæ purpureæ paucos adhuc dies superfuerunt.

"Puerum quinquennem hujus modi tumores et dolores pessimè habuerunt. Penis adeo intumuerat, at urina ægrè reddi posset. Ad hæc, tormina interdum erant, cum vomitu, et simul stercora lineis cruentis notabantur; urina quoque sanguine colorabatur. Dolore crura occupante, æger non poterat ingredi, et brevi post doloris accessum crura punctiunculis cruentis referta erant. Post intermissiones paucorum dierum, tumores, et notæ cruentæ reverti solebant. Hæc mala diu puerum fatigabant. Quæ alvum leniter moverunt, videbantur aliquantulum juvare. In decocto corticis Peruviani parum, aut nihil erat auxilii."

It thus appears that, saving the traumatic hæmorrhages, this great observer had noticed all the most striking features in hæmophilia—the traumatic and spontaneous ecchymoses, the swellings of the joints, their liability to recur, and the improvement following aperients. I believe it is the first time that this interesting passage has been pointed out.

CASE OF HYDROPHOBIA.

By THOMAS PARTRIDGE, L.K.Q.C.P., M.R.C.S.E.

THE question raised by Dr. Burder, as to the cause, etc., of the disease known as hydrophobia, is my excuse for sending to the JOURNAL an imperfect report of a case that occurred in my practice when residing in Birmingham.

Mr. J. S., aged 39, druggist, of a stout plethoric habit and excitable temperament, sent for me at 11.30 P.M. on the Thursday before Good Friday, 1859. I found him in bed, greatly excited, and complaining of constrictive spasms in the anterior diaphragmatic region and a tingling sensation of the right forefinger. The pulse was quick and tremulous, the skin covered with a cold sweat; the pupils were dilated, and he had a wild despairing expression of countenance. He said, "I am going to have hydrophobia." His history was that, in June 1858, just 323 days previously, he was bitten on the forefinger of the right hand by his own terrier dog. The wound bled but little. He sucked it and applied poultices for a day or two. The wound healed slowly. He continued his usual avocations, and also read with me for the Apothecaries' Hall examination, which he passed in January. On the Tuesday preceding his death, while playing at quoits, he complained of a peculiar sensation in the right shoulder and forearm, which he attributed to rheumatism; it caused him to discontinue the game. The following day he felt very unwell, from loss of appetite, nausea, flatulence, and depression of spirits. These symptoms increased until the Thursday evening, when the sensation in the finger became worse, and then, for the first time, he suspected the cause and sent for me. On my approaching him, he threw up his hands, begged me not to go near him, and became very excited. He was unable to swallow any fluid, the attempt bringing on spasm of the glottis. I gave a quarter of a grain of morphia placed on the tongue every hour. After three doses he appeared calmer and inclined to sleep. I left about 4 A.M., requesting his wife to send for two other medical friends should he be worse. On Good Friday morning, at twelve o'clock, I visited him again, and found the symptoms greatly increased in severity. He was perfectly sensible, complaining of violent spasms, continually hawking and spitting a viscid frothy mucus, which at last he had to pull away from the

mouth with his fingers. Mr. Goodall, then house-surgeon to the General Hospital, administered chloroform by the advice of Dr. Bell Fletcher and Mr. A. Baker. Large doses of cannabis Indica were also given without relief. He sank exhausted at half-past five P.M. An inquest was held, but no *post mortem* examination was made.

The long stage of incubation, if it may be so called, and the fact of the dog having bitten several other persons without ill effects ensuing, will tend to support Dr. Burder's suggestions. I may add that his wife stated the dog appeared strange in manner several days previously, starting up and snapping, running under the chairs and tables in a peculiar way; and, with the belief common amongst the public, she poisoned the animal, thinking by so doing the person bitten would not be affected. I may also say that several of those who were with him during the attack complained of shooting pains in the arms and fingers for weeks afterwards.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE ADMINISTRATION OF ETHER.

[Continued from p. 116.]

STAMFORD INFIRMARY.

DR. NEWMAN, surgeon to the Infirmary, writes as follows. Ether has been administered in two cases requiring operation, which have recently occurred under my care in this infirmary. I am indebted to my friend Mr. Gibbings, house-surgeon, who gave the ether, for the following notes; and in the conclusions I also concur.

In the first case, that of F., aged 33, a healthy woman, having a growth from the abdominal wall requiring removal, the ether was given on a large sponge covered with a towel. The objections to this mode of administration seem to be that the drug is diffused to a disagreeable extent through the room, and that it is wastefully employed—as much as six ounces being required in this instance.

In the second case, M., aged 66, an epithelial growth was excised from the hand. A cone of pasteboard, eight inches deep, was cut so that the wide end would fit the face fairly well, and a sponge was fixed close to the small upper opening. Two ounces of ether were sufficient to produce complete anæsthesia, and an ounce was afterwards needed to keep up the effect. This man would have probably been a bad subject for chloroform. He had well-marked arcus, largely dilated cutaneous capillaries about the face and neck, and some indications of fatty heart. The heart-sounds were normal in rhythm, but feeble and heard over a large space. He had the reputation of drinking to excess.

The following points seem worthy of notice. 1. The time required to produce insensibility to pain was not longer with the ether than with chloroform as usually administered.—2. Recovery from the anæsthetic was much more rapid in the former than in the latter instance.—3. The stage of excitement was more marked with ether.—4. The pulse became more full and steady than before; and that this was maintained throughout the administration. This was especially to be noted in the second instance.—5. In neither case was there any subsequent sickness, or other disagreeable symptom, with the exception of some slight headache in the second instance.

A simple and easily managed inhaler would be of very material advantage.

SIR PATRICK DUN'S HOSPITAL, DUBLIN.

CASE OF CONCUSSION.

(Under the care of Dr. MOORE.)

ON August 26th last, William F., aged 30, when intoxicated, fell out of a cart on the back of his head. He remained about twenty minutes unconscious, and when he came to himself, as he termed it, he was unable to move, and had to be carried home. For nine days he remained in a generally paralytic state, with loss of motion and sensation in both upper and lower extremities, so that he could not move either fingers or toes; he had slight priapism, and was unable to pass urine. After the ninth day, he felt "pricking sensations" in his feet and hands. On admission to the hospital on the first week in October last, he complained of headache and of a dull aching sensation about the nape of the neck, and as far down as the middle dorsal region, especially when he remained for any length of time in the upright position. He had regained to a great extent the power of the lower extremities, but the

upper extremities were in a semi-paralysed state with anæsthesia. His chief complaint was sleeplessness.

The treatment adopted was twenty-five grain doses of chloral hydrate, which restored sleep. Electricity, through the medium of damp sponges, was applied daily along the course of the spine, which was rubbed with a liniment of soap and chloroform. He left the hospital on October 24th, with almost complete power of the upper extremities. This improvement has continued, and he is now daily employed in his ordinary avocation—that of a generally “handy man”.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

COFFEE AND SULPHATE OF QUININE.—M. Briquet considers the common practice of administering quinine in coffee open to much objection. He alleges that the tannin in the coffee coalesces with the quinine, forming a tasteless and insoluble and almost inert salt—the tannate of quinine, from which the stomach has as much difficulty in extracting quinine as from powdered bark. It is, he thinks, one of the worst preparations of quinine.

SARCOSIN IN GOUT.—At a recent meeting of the Berlin Medical Society, Dr. von Langenbeck exhibited some specimens of gouty concretions, and said that it was his intention to try sarcosin in one of the cases. Dr. Liebreich said that the physiological action of sarcosin had been investigated by Schulzen. It appeared to become substituted for one of the atoms of hydrogen in urea and also (in birds) uric acid, enabling soluble combinations to be formed.—*Berliner Klin. Wochenschr.*, Jan. 6, 1873.

AMMONIA INJECTIONS IN THE TREATMENT OF COLLAPSE.—Dr. Zülzer has been led to have recourse to the following energetic stimulant in the collapse of typhus: Essence of aniseed, 1 part; alcohol, 24 parts; liquor ammoniæ, 5 parts. He has employed it in doses varying from 15 to 30 drops, one injection being made in each limb, in cases where the pulse has been irregular and scarcely perceptible, the face cyanotic, the extremities cold, the voice extinct, etc. Under the influence of the injections, all the bad symptoms have, he says, been dissipated. Occasionally, small abscesses have occurred at the points of injection, but without evil consequences. He thinks this mode of treatment suitable not only to the collapse of typhus, but of cholera and pernicious fevers, and narcotic poisoning. It resembles, of course, Dr. Halford's treatment of snake-bites.

QUININE IN THE PRODRAMATA OF SMALL-POX.—Dr. Schwenniger of Liebenau, following a plan of treatment recommended by Dr. Schüller, has given quinine in the premonitory stage of small-pox. He confirms the statement of Dr. Schüller, that, given at this stage, it renders the eruptive stage milder, while, if not administered until the eruption has appeared, it has no effect on the severity of the disease. Dr. Schwenniger gave it to twenty-eight patients, all of whom were between 40 and 60 years old, with the exception of a girl aged 16. In eleven cases, the prodromata were severe—great pain in the loins, *malaise*, and delirium (the temperature varying from 105 to 106 deg. Fahr.) Quinine was given every hour for three days, two-and-a-half grammes being taken each day. The eruption in most was mild, and the patients were able to sit up some hours on the tenth day. In the other cases, where the premonitory symptoms were milder, the same treatment was followed; and the eruption was very slight—indeed, scarcely perceptible. Dr. Schwenniger observes that it is unsafe to conclude from a few cases that quinine is a preservative against small-pox; but he believes that the observations which he has made point to its efficacy in reducing the intensity of the disease, and he suggests more extensive observations on the subject.—*Berliner Klin. Wochenschrift*, November 25th, 1872.

CARBOLIC ACID DRESSING IN ERYSIPELAS.—Dr. von Kaczorowski of Posen states (*Berlin. Klin. Wochenschr.*, December 30, 1872) that erysipelas has lately been very prevalent there, attended in the more severe cases with sloughing of the skin, sometimes of entire limbs, with a tendency to spread over the whole body. All the ordinary applications—nitrate of silver, collodion, turpentine, cold, tar—have been employed without effect. Believing the disease to be connected with the presence of micrococci, Dr. Kaczorowski has applied with good effect a mixture of carbolic acid and oil of turpentine (one part in ten). This is laid on the affected part by means of the finger or a camel-hair

brush, and is well rubbed into the surrounding parts. Linen compresses dipped in a solution of acetate of lead (one part in one hundred of water) are then laid on; and over these are placed compresses gently wrung out of iced water, or bladders filled with ice. Lemonade, or a solution of chlorate of potash (one part in forty) is given internally, and a little wine every one or two hours. To allay pain, subcutaneous injections of opium into the neighbourhood of the affected parts are made night and morning. The result of this treatment is observed within from twenty-four to forty-eight hours; the process of exudation being diminished, and the temperature and pulse reduced. Dr. Hueter has recommended the use of tar in erysipelas; but Dr. Kaczorowski believes that, from its density, it is less likely to penetrate the skin than a solution of carbolic acid in turpentine.

TREATMENT OF CHILBLAINS.—F. Rhien recommends an aqueous solution of iodine and tannin as a remedy for chilblains. He says that the result exceeded his expectations—five applications of the remedy being successful. The application has also been tried by others, with good results when properly applied. The solution is made as follows. About an ounce of tannin is dissolved in half a pint of water; seventy-four grains of iodine are dissolved in an ounce and three-fourths of spirit of wine; the two solutions are then mixed, and enough water is added to make up the whole to two and a half pints. The remedy is applied once daily, the best time being before going to bed. The mixture is gently warmed over a very slow fire; the affected part (*e. g.*, the hand) is dipped in it while still cold, and held there until the liquid, on being stirred, feels uncomfortably hot. The vessel is then removed from the fire, and the hand is dried over it, without gloves. The vessel used must be of earthenware or porcelain, not of metal. Care should be taken not to use too great a quantity of iodine, especially when abrasions are present. According to Rhien, four or five applications are sufficient.—*Apotheker Zeitung*, No. 41, 1872; and *Med.-Chir. Centralblatt*, January 24th, 1873.

MIDWIFERY.

OVARIOTOMY.—The *New York Medical Journal* contains a long article on ovariectomy by Dr. Marion Sims, in which he says that he is not yet satisfied with the results of this operation. The death-rate is still too high; and, while the majority of operators are quibbling about the form of ligature or clamp, the great cause of death (septicæmia) is entirely overlooked. He proposes to puncture the *cul-de-sac* of the vagina behind the cervix uteri, and to pass a tube of some sort into the peritoneal cavity, to drain off any effusion that may take place in said cavity. This he recommends to be done as the final part of the operation. It cannot possibly do the least harm, and may possibly be the means of saving life. If no discharge take place, it can be removed *per vaginam* in a few days. In regard to the clamp, he thinks it has seen its best days. He prefers silver-wire ligature to anything else, as a rule.

PREGNANCY AND PARTURITION COMPLICATED WITH CIRRHOSIS AND ASCITES.—At a meeting of the Berlin Obstetrical Society on November 12th, Dr. Löhlein related the case of a woman aged 41, who was admitted to the lying-in institution on September 15th. When a girl, she had been troubled with disorder of the stomach, and had been jaundiced for some time; and twice (eight years and three weeks before admission) had vomited blood. She had been confined four times, and had had one abortion. In the present pregnancy, the abdomen became unusually large, and she felt great gastric uneasiness, especially after the last attack of hæmatemesis. The large amount of fluid in the abdomen, together with flatulent distension of the intestines and oedema of the genitalia, obscured the diagnosis of pregnancy until the sounds of the foetal heart were heard. She was confined on October 5th, the labour being rapid and easy. The circumference of the abdomen, which had been 121 centimetres, was reduced by only 2 centimetres. On the fifth day, she was seized with severe epigastric pain and fever, and the abdomen became larger. On October 22nd, she was tapped; and, after the withdrawal of the fluid, the liver was found to be contracted, and the spleen enlarged. The fluid reaccumulated, and she died on November 6th. At the necropsy, signs of recent peritonitis were found; the spleen was much enlarged, and contained ten infarcts, some very large; the intestines contained some blood; and the liver was in a state of cirrhosis. Dr. Löhlein remarked that in this case delivery had the effect of favouring the accumulation of fluid by the removal of the pressure on the portal veins. In such a case as that related, the induction of premature labour was not advisable.—*Berlin. Klin. Wochenschr.*, January 20th, 1873.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC INSTRUMENTS, AND RECENT IMPROVEMENTS IN THEIR APPLICATION:

WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE MEDICAL PRACTITIONER.

II.

ANOTHER constant battery which has excited a great deal of attention of late is the chloride of silver pair. This was originally devised by M. Marié Davy, and is mentioned as far back as 1859 in the *Comptes Rendus* of the French Academy. It fell, however, into oblivion, from which it was rescued simultaneously (in 1868) by Dr. Warren de la Rue and M. Pincus of Königsberg. Both these gentlemen honestly believed themselves the real discoverers of the chloride of silver pair, and entered into an animated controversy concerning priority, each claiming it as his own, but neither being the actual discoverer.

The chloride of silver pair essentially consists of zinc, to which is given the form either of a rod, or a cross, or a star, and a silver cup containing chloride of silver, which is suspended on a piece of silver wire. Both are immersed into diluted sulphuric acid, or into a solution of table-salt. When the battery is in action, the following decomposition takes place: hydrogen is set free at the silver plate, and combines with the chlorine of the chloride of silver to form hydrochloric acid, while metallic silver is deposited in a finely pulverised state in the silver cup.

M. Gaiffe has constructed two kinds of chloride of silver batteries, which differ according to the size of the pairs, and also in some other particulars. The smaller of these constitutes the most portable and least expensive constant battery which has as yet been constructed. It is made of 24, 36, 48, or 60 pairs of the battery, and may be carried in the coat-pocket. A B C D (Fig. 3) is the box containing the battery, and

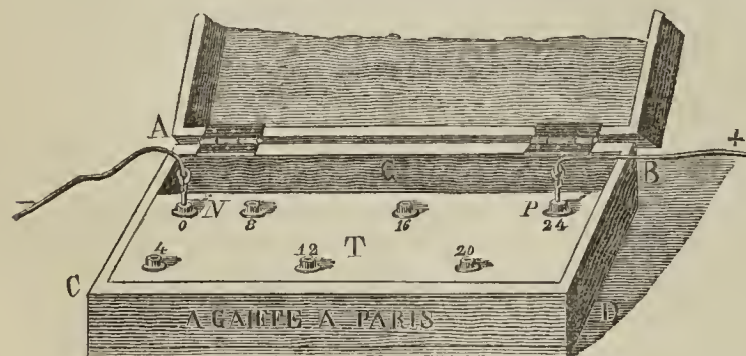


Fig. 3.

has the size of an octavo volume; T is the tablet, beneath which the several pairs are fixed: 0, 4, 8, 12, 16, 20, 24, are the studs communicating with the pairs, where the conducting wires are inserted; P is the positive and N the negative pole; G is the case in which the conducting wires and the directors are placed. The price is forty francs for twenty-four pairs, and rises by fifteen francs for every twelve pairs, so that one of sixty pairs costs about £3 10s. These batteries will work for eighty hours without being recharged. They are far superior to, and much cheaper than, Pulvermacher's chains. Experience shows, however, that a larger surface of metals is preferable, in a therapeutical point of view, to a small one; and we should, therefore, recommend these marvels of ingenuity and cheapness to those only who cannot afford to pay for the larger and more costly instruments.

The same manufacturer has constructed a larger chloride of silver battery (fig. 4), which not only lasts much longer than, but is also therapeutically preferable to, the one just described: although more bulky than the former, it is yet portable. It consists of from eighteen to sixty pairs, of which six are shown in the diagram (F F F F F F); N is the tablet covering the pairs; V V V V the binding screws; I the pedal by means of which the current may be interrupted; G the galvanometer; B B' the clamps of the conducting wires; O O the stud communicating with the negative pole of the first pair of the battery; 2-2, 4-4, 6-6, 8-8, etc., the studs connected with the positive poles of the second, fourth, sixth, and eighth pairs, and so on; N M' the handles which connect the clamp B B' with the number of pairs that are to be used, and

which allow the practitioner to act with different sets of pairs in the battery, so as to divide the chemical action; E E' are the directors. This apparatus is much more costly than the one previously described. An 18-pair one costs £8, and the price rises by £2 for every additional six pairs, so that the 60-pair one is £22. A commutator may be added

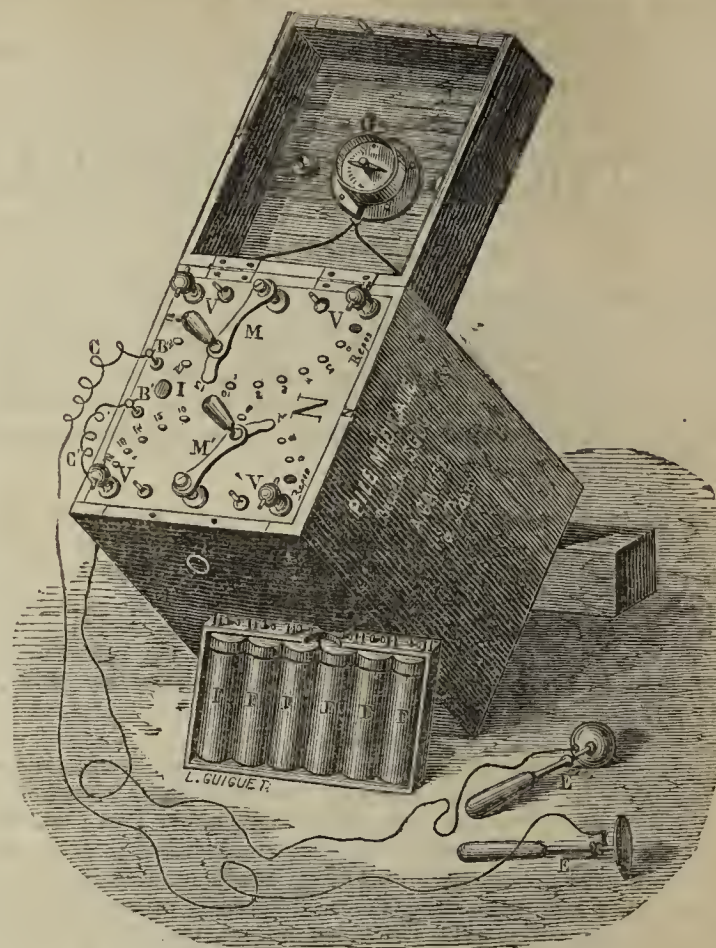


Fig. 4.

to any of these instruments at the expense of fifteen francs. These machines will work nearly eight hundred hours without being recharged, and do not require any further attendance in the intervals except putting the current on zero. If this be done, there is no chemical action, and consequently no destruction of the metals.

Dr. Stöhrer of Dresden has likewise constructed a chloride of silver battery, which consists of forty, fifty, or sixty pairs. A small quantity of chloride of silver is placed on the bottom of a cylindrical glass-tube about six inches high, and a strip of silver is made to touch the chloride of silver when the glass is raised. A cross of zinc is inserted in the upper portion of the tube, at a distance of about three inches from the chloride of silver. The battery is charged with diluted sulphuric acid, in the proportion of one to ten, and by a lifting arrangement the pair may be brought into contact with the fluid, or withdrawn from it.

Some chloride of silver must have been decomposed before the battery commences to act. The time which is necessary for this varies in the different batteries from five to ten minutes. The action may be accelerated by closing the circuit for a short time by means of a conjunctive wire. The battery ceases to act as soon as the chloride of silver is entirely reduced. This is seen by bubbles of hydrogen, which can no longer combine with chlorine, rising in the acidulated water. Such a phenomenon does not always occur simultaneously in all the pairs, but generally occurs first in one and then in another pair; but wherever it is seen some fresh chloride must be added at once, or the action of the battery would be materially interfered with. The price of Stöhrer's chloride of silver battery is from £6 5s. to £10 10s., and it may be procured through Messrs. Krohne and Sesemann, 8, Duke Street, Manchester Square.

The chloride of silver battery may, on the whole, be said to be still on its trial. We have no intimate practical acquaintance extending over a long space of time with any of the arrangements described above. A drawback to Gaiffe's old chloride of silver battery was, that it began to leak after having been in use for a time; but this has now been obviated by employing a much smaller quantity of liquid than formerly.

A portable battery, which for its excellent qualities has during the

last three or four years received a considerable share of popularity, is Foveaux's modification of Smee's (fig. 5). The adjoined diagram shows

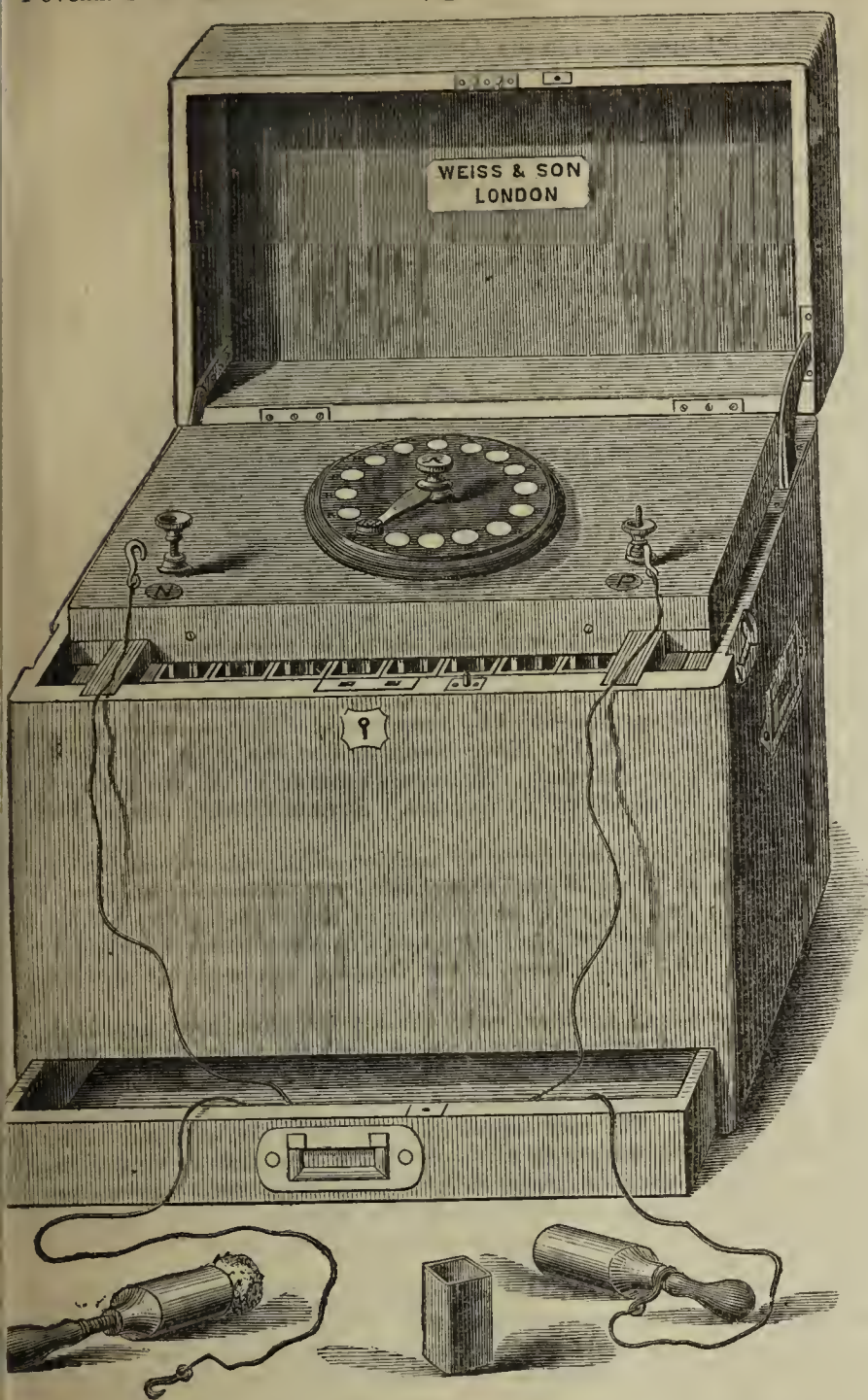


Fig. 5.

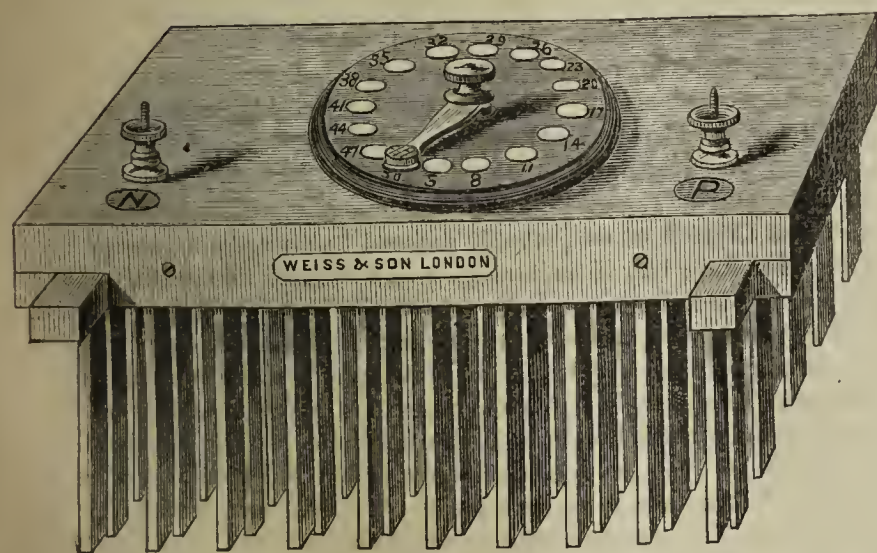


Fig. 6.

battery consisting of fifty pairs of plates, and such a strength is sufficient for almost all cases which present themselves in practice. Messrs.

Weiss, however, likewise construct batteries containing a lesser number of pairs—viz., twenty or thirty, which are strong enough for cases where the constant current is used about the neck and face. Fig. 6 shows the plates of platinised silver and zinc, attached to a board and dial, for selecting the power to be used; and fig. 7 shows the tray containing

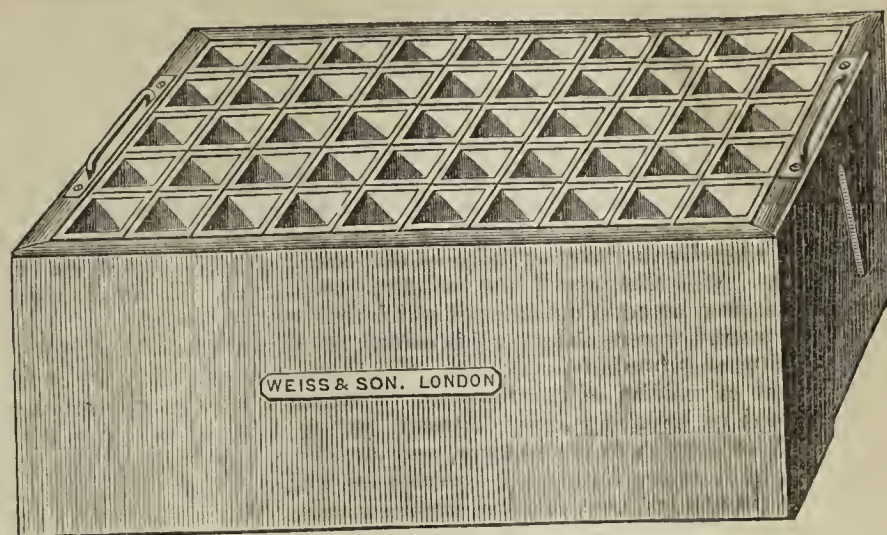


Fig. 7.

the cells. This battery is charged with diluted sulphuric acid, in the proportion of one to twenty or thirty. At the commencement of its action, one to thirty would be sufficient; but when the battery has been used for some time, and by the electrolytic effects of the current part of the sulphuric acid has been lost through sulphate of zinc having been formed, the action may again be considerably increased by adding ten or twenty minims of strong sulphuric acid to the liquid contained in each cell. This is a simpler mode of refreshing the battery than to empty all the liquid out and to put in an entirely new charge. The current can be rendered more durable by the occasional addition of a small quantity of bisulphate of mercury to the liquid, which would tend to keep all the zincs constantly amalgamated. We therefore throw out this hint to those who are already in possession of this instrument, or to intending purchasers.

The cells containing the plates are made either of vulcanite or of porcelain; vulcanite is lighter, but porcelain more durable. A vulcanite measure containing just a sufficient amount of liquid for the charge of one cell is sent out with the instrument. N and P are the negative and positive poles, and the power of the current is regulated by turning the index on the dial. The figures opposite to each stud in the dial indicate the number of pairs brought into action.

When the battery has once been charged, simple closing of the lid puts it out of action, while opening the lid renews the galvanic effect. This is done by keeping the plates suspended in the case, while the tray containing the cells is lifted up and down by a lever arrangement. Nothing more simple could well be devised; and, in order to prevent any unnecessary destruction of metals, it is therefore enough to close the battery and put it away.

Foveaux's battery furnishes a reliable constant current, but is, of course, subject to polarisation, and therefore diminishes in activity when it has been used for some time. When the battery is not freshly charged, the current sometimes sensibly diminishes in intensity during a single application of electricity. In order to obviate the inconvenience attaching to this, we recommend those who are in the habit of using this instrument to close the lid and then immediately to reopen it, when the current will be found to have returned to its previous power. The reason for this is a simply mechanical one: by taking the plates out of the liquid and then immersing them again, the bubbles of hydrogen which polarise the platinum are wiped off, and polarisation is thus done away with for the time being. If such opening and closing of the lid do no longer answer for rendering the strength of the current more uniform, a fresh charge is required. This is also indicated by the fact that, when the battery is weak, the metallic ends of the conducting wires, held together, do no longer cause the peculiar hissing noise, owing to a copious development of hydrogen, which is produced when they are connected in a fresh condition of the battery. If a perceptible hissing sound be produced in the battery without the circuit being closed by a conjunctive arch, the zinc requires re-amalgamation.

Foveaux's battery has the advantage that it can be easily refreshed by its possessor, so that it is not necessary to return it to the manufacturer for that purpose, unless it should have sustained any decided

injury. For refreshing the battery, you have to unscrew the cover of the plateboard, as well as the connexions between the plates and the dial, and the nuts of the pairs themselves. The zinc plates are then freshly amalgamated, if they appear to require it. The sulphate of zinc that may be found adhering is first scraped off with an old toothbrush, the bristles of which are moistened with diluted sulphuric acid (one to ten). When the clean metallic surface has reappeared, mercury is put on, which is found to adhere well provided the zincs are perfectly clean and moist. If the precaution be taken, as mentioned above, of adding a small quantity of bisulphate of mercury to the charge of the battery, the zincs will probably not even require reamalgamation, but a fresh quantity of diluted sulphuric acid will be sufficient to recharge the battery. When, however, the zincs have to be reamalgamated, you must be careful not to put any mercury on to the platinised silver plates, whereby the heterogeneity of the electro-motors would be destroyed. After the superfluous mercury has drained off, the parts are again screwed home in the order in which they were removed.

The manufacturers claim for this battery the advantages of portability, simplicity, and durability: to these, which are very essential, we must add that of solidity of construction. Foveaux's battery will stand a great deal of knocking about without getting hurt by it. We have taken it repeatedly to the country, and not given any over-anxious attention to it during its passage between our house and the patient's residence (in one instance over five hundred miles, with sea-transit). On no occasion has the battery left us in the lurch, but on arrival it was always found in good working condition. This is an important consideration, as some batteries are very fragile, and keep their proprietors in a state of nervous excitement and apprehension whenever they are removed from the familiar cupboard.

Foveaux's battery may be procured from Weiss and Son, 62, Strand, W.C., at the following prices: Fifty pairs, £12 12s.; thirty pairs, £8 10s.; twenty-five pairs, £7 5s.; and twenty pairs, £6. This includes sponge-holders and conducting wires.

SPECIAL CORRESPONDENCE.

ABERDEEN.

[FROM AN OCCASIONAL CORRESPONDENT.]

YOUR remarks on "Fever-breeding in Aberdeen," in the JOURNAL for the 11th January, have caused considerable comment here, and have had the good result of drawing attention to the resources at present available for meeting an epidemic of contagious disease. There is no doubt that your remarks, looking at one aspect of the subject, are to the point, and that they were really called for. It was time something was done in the way of providing a proper epidemic hospital; and our local authority, now that the small-pox epidemic is past and gone, seem inclined idly to fold their hands and to leave provision for future epidemics to be made only when the town is in a state of panic from the actual presence of zymotic disease. It is scarcely fair, however, to blame the hospital managers for neglecting that which does not fall to them. Indeed, they rather deserve credit for the recent improvements which they have made in their fever-wards, which will soon be quite sufficient for the accommodation in separate wards of such cases of infectious diseases as occur in the absence of an epidemic. If the infirmary managers would distinctly state to the local authority that no attempt will be made by the Infirmary to meet an epidemic outbreak, and that all the responsibility of making the arrangements necessary if such a calamity should occur will rest with the Town Council, that step would probably bring our civil rulers to their senses,—a "consummation devoutly to be wished."

To-day's number of the *Aberdeen Medical Student* contains two articles on the subject, both well worthy of attention. The same number of the *Student* also contains a paper by Dr. Alexander Ogston on Acupressure. Dr. Ogston, as one of the surgeons to the Infirmary, has had ample opportunities for observing the results of the use of this mode of arresting hæmorrhage; and his statement of the results as observed by him is so different from the commendations which have hitherto been heard from this quarter, that I think I cannot do better than quote part of his remarks. He says, speaking of acupressure:—"Having been eye-witness of its application and results in operations, from the very commencement of its introduction into the Aberdeen Infirmary, it has always been my impression, an impression shared by many other observers, that the alleged successes following the method

were much exaggerated. This impression gained ground as similar remarks were published by surgeons elsewhere, and led finally to my making an attempt to verify, according to my own judgment, the after-results of the operations in the Aberdeen Infirmary, where acupressure had been used. From the middle of November 1871, to the present time, I have observed and noted the results of such cases as fell under my notice, and, although some which occurred during that time *may* have been passed over, I have not intentionally omitted a single one which took place on the days on which I was able to be present at the infirmary. They are, however, few in number in comparison with the multitude of operations that some years ago used to gratify the then operators and students of the Aberdeen Medical School.

"1. On November 18th, 1871, Dr. Fiddes amputated an arm through the surgical neck of the humerus, in a case of compound fracture. Vessels acupressed. After being stitched up, it had again to be taken down for hæmorrhage. It was sloughing and suppurating on November 25th. 2. On November 23rd, 1871, Dr. Fiddes performed amputation of the thigh. Acupressure was employed. The house-surgeon had afterwards to take down the wound and use three ligatures for secondary hæmorrhage. On the 25th, the case was suppurating. 3. On November 22nd, 1871, Dr. Pirrie excised a cyst of the bulk of a gooseberry from the larynx. One bleeding vein was acupressed, and the wound closed with carbolised cat-gut suture. The wound was suppurating on November 25th. 4. On December 20th, 1871, Dr. Pirrie excised the left mamma. Two needles were used. The wound suppurated freely. 5. On January 10th, 1872, Dr. Pirrie removed a girl's foot by Syme's amputation. One needle used. Stump suppurating on January 15th. 6. On January 17th, 1872, Dr. Pirrie amputated at the thigh. Five vessels secured by acupressure. The case suppurated. 7. On May 15th, 1872, Dr. Pirrie amputated at the thigh, by Teale's operation. Six needles used. The case suppurated. 8. On 20th (?) 1872, Dr. Pirrie amputated the forearm. Several needles used. The case suppurated.

Besides these, there was lately an excision of the elbow-joint by Dr. Pirrie, which, as it could not have healed *per primam intentionem*, I do not quote; and a primary amputation of the thigh by Dr. Fiddes, where the patient did not live long enough to show either bleeding or suppuration. Dr. Kerr's cases, where ligature was used, are also not adduced.

"These cases tend to show, as might *à priori* have been expected, that the results of acupressure are pretty much the same all the world over, and that the divergence in opinion of the surgeons who have given it a trial depends upon the spectacles through which they regard the subject. We find suppuration in every one of these cases, and secondary hæmorrhage in two—enough to convince us that, even as judged by the results it yields in Aberdeen, acupressure cannot pretend to much, if any, superiority over the ligature. Under ligature, the patient may have more chance of suppuration; under acupressure, he has more chance of bleeding."

One point to which Dr. Ogston refers—viz., the falling off in the number of operations—is most marked. Whether this be due to the introduction of acupressure or not, I am not able to say; but it leads one to suspect that this element has at least something to do with the matter. But whether or not it be so, there is no doubt that ten years ago, with a population of about 73,000, the Aberdeen Infirmary afforded a much better field for the study of operative surgery than it does now with a city population of about 90,000.

* * The opinion of our esteemed correspondent on the question of the fever-accommodation in the Royal Infirmary is entitled to much weight and consideration. He very shrewdly sees that, if the Infirmary managers would distinctly state to the local authority that they will not undertake the responsibility of accommodating their fever-patients, the Town Council would probably proceed to erect the necessary Epidemic Hospital; but, if the managers had adopted this sensible course years ago, is it not most probable that the desired hospital would have been a long established fact? We therefore cannot help entertaining a very strong opinion that the hospital managers are very much indeed to blame for the strikingly feeble and disastrous policy which has been so painfully manifested by them in the epidemic history of Aberdeen. We fail to see that any credit whatever is due to the managers in the erection of fever-wards, the absence of which has been terribly felt for many years. The present managers may be more enlightened than their predecessors, but they have done only part of their duty as yet; they have built the additional fever-accommodation, but they have failed to insist on the performance of duty by the local authority.

LOCAL SECRETARIES will oblige by sending estimates of the number of new members, so that the proper number of JOURNALS may be ordered to be printed.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 8TH, 1873.

HÆMATOZOA AND CHYLURIA.*

THAT the blood of dogs may in certain cases swarm with minute nematoids, has been long established by the researches of MM. Gruby and Delafond. It is also true, though less commonly known, that such parasites may abound in the blood of the field-mouse and mole, and in that of the frog. That organisms so high in the scale as nematoids should be found to swarm as parasites in this situation is not a little surprising, though it is perhaps still more astonishing that they should produce such a comparatively trivial amount of inconvenience to the animals in whom they abound. Dogs, whose blood swarmed with these hæmatozoa, have actually lived and been kept under observation for five years. With such facts before us, we are almost tempted to ask, with Dujardin, concerning nematoids at least, "Si les helminthes sont véritablement nuisibles aux animaux dans lesquels ils habitent?" It is certain, however, that they are much less harmful when existing in the blood than some much simpler organisms would be. Minute ciliated infusoria have been found abundantly in the blood of the musk-deer, and in that of other animals, and their presence seems also to be of little consequence to the "hosts" which contain them; but it is quite otherwise if we have to do with bacteria or fungus-germs existing as hæmatozoa. When artificially introduced, it is true, they often give rise to very trivial effects, apparently because they soon die in a soil which is unsuitable for them; but if found to exist in this situation in the course of disease, the results are quite different. These organisms, then, appear in a medium which is suitable for them; they rapidly increase and multiply; and, whilst constituting the most unmistakable signs of certain diseases, their presence most frequently insures the very speedy death of the animal in which they are found. In illustration of this, we have only to recall the phenomena which take place in the epidemic muscardine of silk-worms, and in the *mal de rate* of horned cattle. Here fungus-germs or bacteridia rapidly multiply in the blood of the animals affected, and speedily bring about their death. Why should there be such a difference? Why may nematoids exist with comparative impunity in the blood, whilst the natural presence of fungus-germs or bacteria is frequently attended with speedily fatal results? These questions are in part capable of easy solution; and they derive much additional interest, as will now be seen, by the recent discovery of the presence of nematoids in the blood of man—a situation in which they had not been previously recognised. According to Mr. T. R. Lewis, to whom the honour of this discovery belongs, it appears that in certain individuals nematoids are "persistently so ubiquitous as to be obtained day after day in numbers, by simply pricking any portion of the body, even to the tips of the fingers and toes of both hands and of both feet". "On one occasion", he says, "six excellent specimens were obtained in a single drop of blood, by merely pricking the lobule of the ear." The minute nematoids so obtained have all been embryos in which the alimentary canal and sexual apparatus are quite undeveloped; their average length has been $\frac{1}{3}$ of an inch, and their breadth only $\frac{1}{30}$ of an inch. In all cases they have been living and extremely active, and have exhibited the most characteristic lashing movements.

It had been ascertained by Mr. Lewis, in March 1870, that nematoids

were constantly to be found in considerable quantities in certain specimens of chylous urine which had been passed by a man in the General Hospital of Calcutta; but it was not until July 1872 that the same observer discovered, "whilst examining the blood of a native suffering from diarrhoea", that similar organisms were to be found even in the blood itself—for it was speedily recognised, both by Mr. Lewis, and by his colleague Dr. D. Cunningham, that the nematoids obtained on the two occasions from different individuals were essentially similar. In the case of the man with chylous urine, who was kept under observation for two months, Mr. Lewis says: "The urine continued to present a white milky appearance, and yellowish-white coagula rapidly formed in the vessel into which it had been voided"; and these coagula, when teased with needles, were found to contain minute nematoids embedded in their substance, which, when liberated, began to exhibit slow but characteristic movements. In order to show that this was no mere coincidence of an accidental nature, Mr. Lewis now tells us that he has observed the urine in this condition, associated with more or less marked hæmaturia, in from fifteen to twenty patients. Several samples of urine were obtained from nearly all of them, and on every occasion the microscopic filariæ were also present. Of the persons thus affected (the larger number of whom were women), five were ascertained to be of pure European parentage, though three of them were born in India; the remainder were either East Indians or natives, in about equal proportions.

Examinations made since the date of the discovery of the nematoids in the blood, have shown that these hæmatozoa are invariably to be found in patients who are the subjects of chyluria, and in other cases they exist where such a symptom is wholly absent. In either case, however, it appears that there is "often no other very well marked symptom beyond general debility", so that there is frequently a difficulty in keeping such patients in hospital. Slight deafness has been complained of in several cases, and also slight disturbance of vision, with an occasional chronic inflammation of the eyelids and sclerotic conjunctiva. More or less diarrhoea may also be present; and chyluria, if previously absent, may at any time supervene quite suddenly. A long continuance of this last symptom is sure to lead to emaciation, though the appetite often continues good, and there is no mention of any febrile disturbance. In some patients who have been watched for a period of two months, the number of filariæ in the blood and also in the urine has notably diminished, so that, in half-a-dozen slides containing blood, not more than one or two of these organisms could be detected—whilst on a few occasions several slides were examined without any being found.

How long such nematoids may continue to exist in the blood of the same individual, still remains to be ascertained. It would seem probable, however, that in one of the cases which came under Mr. Lewis's observation, they had existed for two years and a half at least, whilst in another case attacks of chyluria had recurred three times in a period of sixteen years; so that, as he says, "For aught we know to the contrary, these filariæ may live for many years, and thus at any moment, no matter how long after a previous attack, nor in what country the person may reside, he may be surprised by the sudden accession of chyluria or any other obscure disease, such as will readily be understood by the physician when he becomes aware of the state of the blood". It is an undoubted fact, that chyluria is a malady which tends to recur in the same individual, but it would seem unlikely that the same person should become re-infected with hæmatozoa several times, and especially that re-infection should occur after years of residence in England.

The occurrence of chyluria is, therefore, looked upon as an altogether accidental complication, apt to occur at times in patients in whom these hæmatozoa exist. They would probably inhabit the lymphatic as well as the proper vascular system—though this does not yet seem to have been definitely proved. In such a case, any rupture of the tender walls of these vessels in certain parts of the urinary tract (owing, perhaps, to the impaction of a knot of struggling nematoids) would permit an outpour-

* On a Hæmatozoon inhabiting Human Blood: its relation to Chyluria and other Diseases. By T. R. Lewis, M.B., Assistant-Surgeon, H.M. British Forces (on special duty), attached to the Sanitary Commissioner with the Government of India.

ing of lymph and its admixture with the urine. A similar rupture of blood-vessels in the renal tract in some cases would lead to a coincident hæmaturia, as well as to an increase in the number of nematoids in the urine.

Not many new facts have been revealed concerning the constitution of chylous urine. It is more or less perfectly white, and may be passed through several layers of filtering paper without having its colour materially modified. It has a faint odour of milk, and a slightly acid reaction, whilst its specific gravity is usually low, ranging from 1016 to 1018. The more it approaches the appearance of milk, or the more blood there may be present, the more readily and firmly does the coagulation, to which we have previously alluded, tend to occur. Chemical analysis shows that such urine contains an abnormal amount of fatty and fibro-albuminous material, though no new chemical compounds seem to exist. No sugar has been found by Mr. Lewis, but the percentage of urea is somewhat diminished. "Casts" never appear to exist in such urine, though on microscopical examination it is found to be crowded with a finely molecular material; and in the meshes of the coagulated masses, in addition to the already mentioned nematoids, numerous granular cells are seen, apparently identical with those of chyle and lymph. Red blood-corpuscles may also exist in variable quantities. And concerning the nematoids which are to be found in the urine, it should be added that they agree in all respects with those met with in the blood—"some of the largest as well as some of the smallest examples are to be met with in this secretion."

Although chyluria is, therefore, to be regarded as a quasi-accidental complication of the general malady marked by the presence of the hæmatozoa in question, it is nevertheless a very frequent and most characteristic accompaniment; and we are at present best able to judge of the prevalence of the general affection by reference to the distribution of chyluria. Judged of in this manner, the malady may be said to be decidedly localised as to its origin. It is one which seems intimately related to a tropical climate; and, according to Mr. Lewis, in all the cases on record the persons attacked have at some period of their lives inhabited the East or West Indies, some parts of Africa, Bermuda, Brazil, or the Mauritius: though simple removal from such a climate has not sufficed to prevent the recurrence of the disease in England or in other parts of Europe.

If we turn to the inquiry as to the actual mode of origin of the disease, we can only report that absolutely nothing is known. The occurrence of such multitudes of invariably embryonic nematoids within the circulatory system only, would seem to be incapable of explanation save on the assumption of an infection by parent-worms, which were themselves contained either in the heart or great vessels; for careful microscopical examination seems to show that each embryo is enclosed within a delicate, hyaline, and closely investing sac, so that the "home" of the filaria in this stage of its existence appears to be the blood—"it does not seem to manifest any special tendency to migration", and there is no more reason for believing that it has penetrated into the vascular system from without. Mr. Lewis estimates the possible numbers within the blood of an individual at one time as about 140,000; and—these embryos being quite incapable of undergoing any process of reproduction—it would seem scarcely credible that such an enormous army could gain entry from without through any process of contamination of the system by "tank-waters" or other external media. Yet in a *post mortem* examination of the body of a person who had died from this affection, no trace of parent-worms could be detected within the heart or great vessels: and, moreover, amongst all the dogs suffering from the presence of similar embryo nematoids in the blood, which were carefully examined both during life and after death by MM. Gruby and Delafond, in only one case were adult nematoids found within the vascular system. The adult worms discovered in this exceptional case are not considered by Schneider and other authorities to have been the parents of the embryo filariæ. Their actual origin, therefore, in the dog as well as in man, still remains enshrouded by mystery; neither have we any more real knowledge as to how long individual embryos may

remain alive in the blood. Mr. Lewis thinks it proved "for certain" from his own observations that such hæmatozoa may remain two years and a half in the blood without undergoing any appreciable change. All that is really "certain" from the observations in question is, however, that an individual presenting the hæmatozoa at one time, may also be found to present similar hæmatozoa after the period above named. We cannot be sure that those last seen were some of the same as were seen on the first occasion, because we know nothing definite as to the extent of the various means of elimination or destruction within the system, or as to the possible sources, whether homogenetic or heterogenetic, of fresh supplies of embryos within the body of the "host". It seems very difficult to believe that the same hæmatozoa could persist for so long a period in such a state of ceaseless activity, as must be necessitated by their circulation with the blood, and yet undergo no change, developmental or otherwise.

It certainly is very surprising that the presence of such multitudes of active organisms within the blood should not give rise to much more serious morbid conditions. The activity of these creatures (the diameter of which does not exceed that of a blood-corpuscle) is however probably one of the main causes why stoppages in and rupture of blood-vessels do not more frequently occur. And one reason for the small amount of harm which the presence of these nematoids entails, as compared with that occasioned by multitudes of fungus-germs or bacteria, is doubtless to be found in the absence of that power of self-multiplication by means of which these latter hordes soon succeed in destroying their "hosts".

Mr. Lewis's observations are of great value, and they clearly show, as he says, "the importance of a careful microscopical examination of the blood of persons suffering from obscure diseases, in tropical countries especially". They open up, in fact, a new and most important field of inquiry, which, we hope, will now be entered upon by many other observers.

THE THERAPEUTIC VALUE OF BROMIDE OF POTASSIUM.

M. VOISIN completes an elaborate report on the history and properties of this valuable drug, which has extended over several numbers of the *Archives Générales de Médecine*, by a discussion of its therapeutic value. He divides its action under two heads—a sedative action on the spinal cord and medulla oblongata, and a constrictive action on the muscular fibres and capillaries, which is seen in the anæmia of the organs and tissues which it produces. The first action explains its efficacy in the states of disease accompanied by excitement of the cord and medulla, such as epilepsy, chorea, simple and traumatic tetanus, spinal irritation of hysterical patients, painful paraplegia of nervous females, and pains and cramps of spinal origin. It is, on the other hand, useless in pains of peripheral origin, gastralgia, and in general in painful conditions which have not a special origin. By its second action, that of anæmiating the tissues, it is useful in simple congestive visceral affections, and where no neoplastic effusion exists, as in simple meningo-cerebral congestion; but it is useless in chronic diffused meningo-encephalitis, and other inflammatory affections accompanied with plastic exudation or proliferation of tissue. This action makes it useful in spermatorrhœa, and in diminishing buccal, pharyngeal, and vaginal secretion, as in simple leucorrhœa.

Its efficacy in epilepsy is incontestable, even where a great number of attacks have occurred (4,000), or when the disease is of long duration (fifteen years). Cure is interfered with by organic causes—hereditary tuberculosis and alcoholism, malformation of the brain, onanism, plastic effusions, sclerosis, clots, softening, conditions often causing loss of special sense or motor power. Menstrual epilepsy is less favourably affected by the bromide. On this subject, M. Voisin gives ample details. As to tetanus, he observes that most of the wounded soldiers at the Salpêtrière during the siege of Paris, who had tetanus, suffered for some days pre-

Feb. 8, 1873.]

viously from clonic spasm of the limb when it was touched or during the dressings. Warned by this observation of soldiers in neighbouring wards, he administered the bromide in full doses in all such cases in his own wards (6 to 11 *grammes* a day). None suffered from tetanus, although one of them presented the first phenomena of tetanus for twenty-four hours. He relates three cases of well marked traumatic tetanus, uninfluenced by chloral, in which cure was effected by bromide of potassium in an initial dose of 8 *grammes* (120 grains), and three subcutaneous injections of morphia during the day in the right thigh.

Bromide of ammonium has not seemed to him to produce quite the same effects as bromide of potassium. The bromide of sodium he regards as having an identical action. The bromide of cadmium produces vomiting, which renders its administration impossible.

M. Voisin insists that, vast as is the field of usefulness of bromide of potassium, its employment must be restricted to cases in which the spinal cord is excited, and needs to be tranquillised; and to those in which there is reason for exercising a constrictive action on the capillary vessels and anæmiating the tissues. Beyond this range of cases, the employment of the bromide is, he thinks, out of place; and it would injure the reputation of this medicine to employ it against all painful sensations, of whatever character and whatever origin they may be.

THE DEATH FROM NITROUS OXIDE.

In another column, we publish further details from Exeter concerning the recent death from nitrous oxide. What we published last week was founded upon the reports forwarded to us by the medical gentlemen and the dentist concerned, who omitted, however, to supply some further information for which we asked. The result of the investigation on the spot undertaken by Mr. Braine appears to confirm the views which we have expressed on the subject, as do also the course of the discussion at the Odontological Society and the communication of Mr. Coleman. The death, it was generally admitted, was apparently not due to the direct action of the gas. Of the two hypotheses which we suggested as indicated by the described mode of death—apoplexy, or the introduction into the larynx of a foreign body, viz., blood, or a piece of the tooth or of the gag—Mr. Coleman inclines to adopt the former, and Mr. Braine espoused the latter, producing the gag and showing that a bit had been broken off it. An accident of this latter kind proved fatal to a patient some time since in London, and it was briefly recorded at the time in our columns. The death is not of a nature to shake confidence in this most valuable anæsthetic, but it will certainly inspire a salutary caution. It is a great deal too much the fashion now to shun slight pains and to have indiscriminate recourse to anæsthetics. It is impossible to suppose that the vital phenomena attending complete anæsthesia can ever be altogether free from danger; and it would be well that all cases should be published in which subsequent troubles—such as depression, sickness, etc.—have attended the administration of nitrous oxide gas.

THE Committee of the "Horace Wells Testimonial Fund"—Chairman, Mr. J. E. Erichsen—have fixed upon the 25th of March, 1873, as the last day for receiving subscriptions to this Fund, which should be sent to the Treasurer, J. T. Clover, Esq., 3, Cavendish Place, Cavendish Square; and F. Woodhouse Braine, Esq., 56, Maddox Street, Hanover Square.

A PRIZE of 500 *lire* (£20) offered by the editorial staff of *Lo Sperimentale* for the best essay published in that journal during the year 1872, has been awarded by a committee of the Medico-Physical Society of Florence to Dr. Schiff, for a paper on "The Pneumogastric Nerve as an Accelerator of the Movements of the Heart." A paper by Dr. Lussana, on the "Entero-hepatic Circulation", was mentioned as worthy of praise.

DR. MOXON, assistant-physician to Guy's Hospital, has been unanimously elected physician to the hospital, in the room of Dr. Owen Rees, resigned.

A NEW MEDICAL DEGREE.

THE General Medical Council of Education and Registration will meet on March 12th, to consider the schemes proposed for conjoint examination for licences to practise medicine and surgery in Great Britain.

THE VIENNA EXHIBITION.

THE leading medical paper of Vienna renews its urgent demand for the early adoption of measures for improving the sanitary condition of Vienna. The small-pox epidemic, it says, is not diminishing; an invasion of cholera is threatened—cases, indeed, have already appeared; and the time of the International Exhibition is approaching.

ETHER AS AN ANÆSTHETIC.

THE editor of the *American Quarterly Journal of Medical Sciences*, after summarising some of the more important communications which have recently appeared in our columns on this subject, says: "It will be seen that a decided reaction has at last taken place in England in favour of ether as an anæsthetic. It is surprising that so many surgeons should have thus long obstinately persisted in preferring the use of chloroform, notwithstanding the numerous deaths which have followed its use, and the strong array of evidence which has been adduced, in this journal and elsewhere, of the superior safety of ether."

HOW TO DEAL WITH THE PUBLIC HEALTH ACT.

SOME time ago, the Lanchester Board of Guardians appointed a rural sanitary board, and in due time it was decided to have a medical officer and an inspector for the union, at a cost to the latter of something like £750. The appointment of a rural sanitary board has just been rescinded, and it has been decided that the board shall be composed wholly of the guardians of the union.

POISONOUS COLOURING MATTERS.

DR. HIRT of Breslau has recently called attention to the increasing use in trade of poisonous colouring matters, especially those containing arsenic and lead. He visited the establishments of confectioners, gingerbread-makers, stationers, toy-dealers, hair-dressers, coloured paper makers, and flower-makers, and had arrived at the following results. He detected arsenic in the colouring matters used for painting over sugar-plums, and also in the green paper employed for wrapping articles of food, for covering toys, and for lamp-shades. Arsenic was also found in the paints in children's paint-boxes. Lead was found in the colouring matter of articles of food, in coloured papers used for packing substances of food, and the covering of toys, as well as in children's paints and in wafers and hair-dyes. The danger incurred, especially by children, in consequence of the use of lead-colours in papers used for packing, Dr. Hirt stated to be very great. A brick-coloured paper, containing red lead, is very extensively used for packing chocolate-tablets and *bonbons*; and Dr. Meusel found each sheet to contain about 28 grains of lead, representing about 29 grains of oxide or 51 grains of sugar of lead. Each sheet is sufficient for packing sixteen chocolate-tablets or from thirty-two to thirty-six *bonbons*; consequently, with each tablet there are 3 grains of sugar of lead, and with each *bonbon* 1½ grain. It is not necessary that the children should lick the paper to produce poisoning; for the sugar used in *bonbons* has a tendency to unite with the lead and form a saccharate, and thus to render soluble the perhaps otherwise insoluble lead-compounds. The boxes containing the chocolate-tablets and *bonbons* are often damp, and the wrapping-paper is soft and pervious to moisture; and there can be no doubt that the materials contained in the papers must come into contact with the lead and become impregnated with the poison. Dr. Hirt remarked that various orders of government passed during the last fifty years were in force, and were

sufficient, if carried out, to prevent the use of such materials as those to which he referred; but they were not sufficiently known, and were only in force in the district of Breslau—the town itself being apparently exempt.

ARTIFICIAL RESPIRATION IN SNAKE-BITE.

AFTER recording some further experiments on antidotes to snake-bite, which only add to the already long list of failures, Dr. Fayrer describes (*Indian Medical Journal*, January 1st) the following rather hopeful experiment performed by him at St. Bartholomew's Hospital laboratory, with the assistance of Dr. Lauder Brunton. "A rabbit was previously prepared by having a cannula introduced into the trachea. A feeble dose of the cobra-poison was then injected into its hip. In about twenty minutes it showed manifest signs of poisoning, paralysis gradually coming on; power of moving or co-ordinating the limbs lost. In a few minutes more, it was dead apparently to all consciousness. Artificial respiration was commenced; and, though to all appearance the animal was dead, the heart continued to beat vigorously, and went on doing so for three hours, when I was obliged to leave. The temperature was gradually failing, having fallen from 101 to 96 in that time." He adds: "The action of cobra-poison evidently in some, if not all respects, resembles that of the curara or wourali, which kills by paralysing the peripheral distribution of the motor nerves. Animals so poisoned have been recovered by artificial respiration, after being for hours in a state of seeming death. I do not yet feel at all certain whether cobra-poison acts on the nerve-centres alone, or on the peripheral extremities, as in curara; perhaps it may be a combination of both. But it appears to me that this method of sustaining life by artificial respiration, which might be done in ordinary bites, offers the most reasonable prospect of enabling the patient to live until the excreting organs shall have eliminated the poison from the system. I at the same time cannot but express my fear that irreparable mischief may have been done by the poison, which may prevent recovery in cases where severe poisoning has occurred. I hope to pursue the subject further; meanwhile, I believe that the most rational ground of hoping for relief is indicated."

THE OBSTETRICAL SOCIETY OF LONDON.

THE Transfusion Committee appointed by this Society has adopted the following programme of its aims and objects. 1. To collect evidence from gentlemen who have had experience in cases of transfusion. 2. To obtain the particulars of all recorded cases (performed on the human subject), with the view of finding out, as far as possible, to what extent the so-called successful cases were due to transfusion. 3. To examine the various kinds of instruments used in both the *mediate* and *immediate* forms of the operation. 4. If considered necessary, to institute further experiments for the purpose of determining how far transfusion may be relied upon as a means of saving life, and also the best mode of performing the operation. The Committee will be happy to receive communications on this subject, which should be addressed to the Honorary Secretary, Dr. Madge, at the Society's Library, 291, Regent Street, W. In so useful a labour, it is desirable that the Committee should be supported by all who are able to afford information on the subject.

CONTEMPORARY MEDICAL BIOGRAPHIES.

A GOOD effect has followed the observations which we recently felt called upon to make, concerning the objectionable character of the eulogies of living practitioners which were appended to the first part of the series of portraits of living medical men issued by Messrs. Barraud and Jerrard. In the second part, which has just been forwarded to us, the notice that the biographies had been submitted to the subjects of them for revision has been removed. In its place is a notice that the publishers, "being satisfied that the most difficult task they had set themselves, of attaching the biographies of living men to their portraits, though acceptable to many, is surrounded with difficulty, and distasteful to the bulk of the profession, have decided that the future

numbers of the 'Medical Profession' shall, when the subject of the memoir is living, contain merely a concise summary of the principal events in the career of the celebrities therein portrayed." The portraits issued this month are very good likenesses of Dr. Burrows and Sir James Paget; and the accompanying notices are brief and unobjectionable recitals of the public positions which they have held and their published works, very carelessly printed and misspelt. The attempt to revive the abuses of a dangerous and unprofessional practice may, therefore, be looked upon as at an end. It may be hoped that it is ended once for all. It was not satisfactory to find the usual puffs of these charming portraits and these interesting and well written biographies inserted in some of our medical contemporaries, or to find weekly medical papers of repute, such as the *Medical Times and Gazette*, openly encouraging the practice. It is more satisfactory to learn from the circular of the publisher that "the great bulk of the profession" concurred in the strictures which we pronounced; and that, in deference to the expression of that feeling, they will henceforth discontinue their literary efforts at contemporary eulogy of the celebrities who sit to them. It is fair to say that the photographic part of the work is very well done, and that the likenesses are agreeable and faithful.

THE LATE CASE OF BALMFORTH v. BUCKLEY AND FLETCHER.

IT will be remembered that at the South Lancashire Assizes, held in August last, the cases of Balmforth v. Buckley and Fletcher were heard—actions for damages for alleged negligence by the defendants, who are medical gentlemen residing in Manchester, which resulted in a verdict of 40s. and costs against them. A number of medical gentlemen sympathising with the defendants, and considering that they had used proper care and diligence, started a subscription, which met with a ready response from 221 medical brethren in fifty different towns, including the metropolis; and on January 21st a meeting was held at the Clarence Hotel, in Manchester, Dr. Royle presiding, for the purpose of presenting Mr. Buckley and Dr. Fletcher with £210, after expenses had been deducted, the amount subscribed. There was a numerous attendance. Dr. Royle, in making the presentation, said that, had it not been for an unfortunate chain of circumstances to which they were indebted for their meeting that night, their two friends, Dr. Fletcher and Mr. Buckley, would not have had the opportunity of meeting with that sympathy, with the brotherly and professional affection which that meeting was calculated to show. They must not look at the result of their efforts as simply a sum of money collected for a special purpose—the great value which the two gentlemen in question would attach to it was the fact that it was the result of the spontaneous good feeling of their professional brethren, not only there but in the neighbourhood round about Manchester, in which it was their privilege to live. He would not take up their time by going through the whole of the particulars of that unfortunate trial. While they were willing and would protect the public, they would protect their profession, and while protecting the profession they would guard the interests of the public. It had been upon this principle that they wished to show their attachment, their sympathy, and their moral support to two professional brethren who were in an unfortunate position which might be the fate of any one of them, and they wished them to accept the presentation on that principle alone. He had the greatest pleasure in presenting to Dr. Fletcher and Mr. Buckley the cheque for the balance of the money collected—about £210. He hoped it would stimulate them to persevere in the cause of their profession, and to work with greater diligence and perseverance than ever they had done before. Dr. Ogden Fletcher, in acknowledging the presentation, said that when the action was commenced against them they felt they could not compromise it. When professional friends put themselves to a great deal of trouble to help them out of a difficulty, it was the greatest possible kindness one professional friend could do for another. They looked upon the cheque not so much for its intrinsic value—though that was important—but as an indication of the kindness which was shown them in the time apparently of trouble, and of the feeling of the profession shown through

them, to its members when cases of that sort should arise. Mr. Buckley also briefly returned thanks. Dr. Ogden Fletcher then proposed votes of thanks to the president, honorary secretaries, and committee, which were seconded by Mr. Buckley, supported by Dr. Fletcher, and carried unanimously. Dr. Ledward, Dr. Morley Harrison, the Chairman, Dr. Woodcock, and other gentlemen replied, and the meeting was then brought to a close.

BRITISH PHARMACOPŒIA.

PROFESSOR REDWOOD communicated to the meeting of the Pharmaceutical Society last Wednesday that, the *British Pharmacopæia* being now out of print, it was in contemplation to reprint it, and at the same time to add a supplement containing such new remedies as have been brought into use recently.

ACCIDENTAL POISONING.

SOME days ago Dr. Diplock, Coroner for West Middlesex, held an inquest at the Central London District Schools, Hanwell, upon the body of a lad named John Winter, who was poisoned on Thursday through drinking carbolic acid from a bottle placed in a cupboard. The evidence given was to the effect that the servants in the establishment had been allowed carbolic acid to clean the wards. The deceased is supposed to have reached the cupboard by the aid of a chair, and to have drunk some of the poison in ignorance of its deleterious qualities.

DR. KAHN'S MUSEUM.

THREE men, one of them bearing the *alias* of Dr. Kahn, and being the proprietor of an anatomical museum near the Haymarket, surrendered to bail on Tuesday at the Central Criminal Court, to answer the charge of unlawfully publishing an obscene and indecent libel, in the form of a treatise on marriage, sold at the rate of thirty thousand copies annually. The jury stopped the reading of extracts by the prosecuting counsel, and all the prisoners were found guilty—although for one of them, named Romilly, a lighter punishment was recommended, on the ground of his having acted merely as a servant. Sentence was postponed.

LONDON DRINKING-WATER.

LONDON drinking-water is still far below the standard of purity. Dr. Frankland reports that during the last month the liquid supplied by seven out of the eight water-companies who draw from the Thames and the Lea, was "much contaminated with organic matters". On the other hand, the waters of the New River, East London, and Kent companies were clear and transparent. Of the companies which derive their supplies from the Thames, the West Middlesex alone delivered efficiently filtered water. In Birmingham, matters are apparently even worse. Dr. Hill states that, although "the water was pretty clear, it contained a high proportion of organic nitrogen", indicating very recent sewage contamination.

LANCASHIRE FUND CONVALESCENT HOSPITAL.

AT a meeting recently held at Manchester of the General Committee of the Fund for the Relief of the Manufacturing Districts (a committee established during the late cotton famine), it was resolved that, with the consent of the Court of Chancery, the balance of the fund still in their hands should be used for the building and endowment of a Convalescent Home. The surplus funds in hand are £130,000. The scheme for the Hospital is as follows:

"1. To appropriate about £30,000 of the surplus fund to the purchase of a site, and to the building of the central offices of an establishment for convalescents, and of accommodation for not less than sixty patients. 2. To invest the balance for the future extension and maintenance of the Hospital. 3. To provide from the interest of this balance for the 'establishment charges' of the Hospital. 4. Such part of the cost of the maintenance of patients, as is not provided for by the central fund, to be borne by the district or person sending the convalescent patient. 5. To provide a site of sufficient extent for the building of other convalescent houses or wards for patients, either by general or local subscriptions, or charity of benefactors."

On the whole, we think this is a wise way of employing the large surplus. The money was originally given in trust for the operatives suffering from the cotton famine: that disaster and its consequences having passed away, the question arose how to turn the fund to the best account for the working population. However well the operative may struggle against sickness in his home, change of air, often so necessary to restore health, is a luxury which he cannot afford; and we think that convalescent homes, by placing this within his reach, do a good work, though at the same time we heartily second Sir J. Kay Shuttleworth in saying that such institutions should, in a great degree, be supported by the contributions of the working men themselves.

ROYAL JAM.

AT the last meeting of the City Commissioners of Sewers, Dr. Tidy called the attention of the Court to the fact that 210 boxes of bad figs, weighing 8,000 lbs. in all, had been seized at Cox's Quay, and stated that he had reason to believe this was only a small portion of an enormous quantity which had arrived in the docks. Of themselves the figs, which were rotten and maggoty, were quite unsaleable, but they were principally used in the manufacture of jam, together with glue, bad plums, and the sweepings of fruit-warehouses. The seeds and a small quantity of raspberry jam, with which the concoction was mixed, gave the so-called "preserve" a genuine appearance, and it was largely sold among the poor under the name of "Family preserve", "Royal jam", "Fruit preserve", and "Household jam". It was very desirable that the remainder of the figs should be seized; and he believed that the warehousemen themselves, to whom they had been consigned from abroad, would be as glad as any one to get rid of them. On the motion of Mr. Bedford, the Commission referred the matter to the medical officers and the solicitor, to decide how far legally they could go. The chairman said they were much indebted to Dr. Tidy for bringing the subject before them.

CEREBRAL ANATOMY AND PSYCHOLOGICAL MEDICINE.

DR. MEYNERT, well known for his valuable researches on the anatomy of the brain, and for his essay on the subject in Stricker's *Manual of Human and Comparative Histology*, has been appointed ordinary professor of psychological medicine in the University of Vienna. Considerable commotion has been excited on the occasion, in consequence of a remark made by Rokitsky, that "Dr. Meynert had been the first to bring psychological medicine into the circle of scientific investigations, from which it had previously not had a place." The *Wiener Medizin. Wochenschrift*, while admitting the value of Meynert's labours, calls to mind the researches (besides those of Fallopius, Malacarne, Vicq d'Azyr, and other old writers) of Foville, Leuret, Gratiolet, Parchappe, Calmeil, Duchek, etc., as showing that the remark of the veteran pathologist is not to be accepted as correct. Our contemporary, however, curiously omits all reference to British observers, especially Lockhart Clarke, whose researches are referred to in several parts of Dr. Meynert's treatise.

MOROCCO DRUGS.

AT the evening meeting of the Pharmaceutical Society of Great Britain, held on Wednesday last, Dr. Arthur Leared gave some interesting information respecting drugs collected in Morocco during a recent visit to that country. Although the science of medicine owes much to the Arab race, which is well represented in Morocco, Dr. Leared found the difficulties besetting an inquirer to be very great, in consequence of the ignorance and fanaticism of those who now practise the strange jumble of astrology and pharmacy which there passes for the healing art. The vegetable products of Morocco, Dr. Leared states, are those of a subtropical country, in which there is great variety as regards the nature of the soil, elevation above the sea-level, and irrigation, great diversity of climate and soil being sometimes experienced within narrow limits. One circumstance that struck him forcibly was the peculiar sporadic distribution of plants, since it almost seemed as if they, like the people of the country, were possessed of exclusive ten-

dencies which prevented one kind from mixing with another. As might be expected, many of the drugs proved to be old friends with new names, among which may be mentioned caraway, anise, and fennel seed, ammoniacum and euphorbium gums, rue, cassia, Indian hemp, castor and croton oils, orris root, ambergris, etc. A certain amount of interest attaches to the identification of our own remedies among the Moors, and Dr. Leared is not without hope that some addition to our materia medica may result from the present inquiry. Out of about sixty articles mentioned, he reckons that one-half are well known and commonly used by ourselves, or else derived from botanical sources so closely allied as to be practically the same. About one-fourth are known to but not used by us; and the remainder are derived from plants not at all in use here, or not yet identified. One point worthy of notice is that, while a great number of natural orders are represented, there is a great preponderance of the labiate order.

THE TESTING OF SUGAR.

In the current number of *Iron* (the new name of the *Mechanics' Magazine*), there is a short note on sugar by Mr. Wanklyn. Sugar, it appears, is the heaviest organic compound—the substance which, being composed only of organic elements, has the highest specific gravity. When it has been ascertained that a given specimen of commercial sugar contains nothing mineral, and it is desired to know whether any impurity of an organic nature is present, Mr. Wanklyn recommends the making of a specific gravity determination. Any lowering of the specific gravity indicates the presence of something which is not cane-sugar. The difficulty of taking the specific gravity of sugar (which is notoriously soluble in water) is overcome by the employment of ether instead of water. Mr. Wanklyn proposes the taking of specific gravities of articles of food as a ready and valuable test of sophistication.

OZONE-WATER.

THERE is some probability of ozone becoming of importance in medicine. From a notice in the *Philosophical Magazine*, it appears that that substance is sensibly soluble in water, and that a German firm, Messrs. Krebs, Kroll, and Company, of Berlin, are manufacturing a solution of it for medicinal use. This solution contains about one part by weight in one hundred thousand parts of water, and appears to be genuine, being free from peroxide of hydrogen, and from nitrous and nitric acids. The solubility of common oxygen is about five parts by weight in one hundred thousand parts by weight of water. This small proportion of dissolved oxygen is vitally important to the fishes which breathe it. Ozone, as many of our readers will doubtless know, is condensed oxygen—oxygen in an allotropic modification—and is vastly more powerful than ordinary oxygen. We are quite prepared to find that the strength of the solution of ozone is adequate for medicinal use.

SCOTLAND.

NATURAL SCIENCE AT ABERDEEN.

DR STRUTHERS has commenced his usual winter evening course of lectures on anatomy, for students in divinity and arts, at the University of Aberdeen. The lectures are free to these gentlemen, and also to all who take an interest in natural science.

FEVER-BREEDING IN ABERDEEN.

THE subject of fever-accommodation in Aberdeen, which led to the publication in our columns of some strictures on the management of the Royal Infirmary, has called forth a considerable amount of correspondence in our public-spirited and independent contemporary the *Aberdeen Daily Free Press*. An Aberdeen correspondent sends the following. We have received numerous similar communications.

"I do most sincerely trust that your well-directed efforts on our behalf may lead to some definite and straightforward principle of action

on the part of the managers of our Infirmary, and that they will refuse to meet epidemics for the local authority henceforth. There are those among us who think that your hard hitting has been applied somewhat too exclusively against the very much devoted, but, notwithstanding, slightly pachydermatous breasts of the managers, and that you have omitted, except on one occasion, I think, to reserve the left hand for the medical staff. The fact is, that the constitution of our infirmary is very faulty in this respect—viz., that there is no medical committee, and questions of paramount importance are thus apt to be decided by the managers without securing the opinion of the staff. There is often, I am told, a desultory sort of cross-questioning going on between the managers, and perhaps one or two of the staff, on important questions. Instead of this loose method of procedure, all medical questions should be referred to a medical committee. An admirable suggestion on this point was recently made by the *Aberdeen Daily Free Press*, to the effect that this board should be appointed by the general body of managers; that it should consist of the entire staff, together with other medical men of the town, whose experience would be of service; that it should have the right to take the initiative; and, while possessing the power only of recommending to the committee of management, should, in common with it, have the power of appeal to the general body of managers on questions at issue between them. The adoption of some such measure would lead to common and responsible action on the part of the medical officers, and would, I am sure, tend to the promotion of many needed reforms in the infirmary."

PROPOSED AMALGAMATION OF THE GLASGOW MATERNITY AND THE UNIVERSITY LYING-IN HOSPITAL.

IT is rather unfortunate, as it seems to us, that an attempt to amalgamate these two institutions has, for some reason which does not well appear, miscarried. At a meeting of the Glasgow Maternity Hospital on the 23rd ultimo, a proposal of the directors to unite the hospitals was negatived by a considerable majority. It seems quite clear that Glasgow cannot support two good lying-in hospitals, and we are afraid that in the meantime it must be content with two indifferent ones. The constitution proposed for the directorate of the amalgamated hospital was very similar to that of the Royal Infirmary, where there are representatives of the University in the Board; and for all purposes we could hardly conceive a board better composed than that of the Infirmary, both for the general administration and the educational department of the institution. We have never heard that the mixture of the students of the two schools in the Infirmary has ever been attended with any disadvantage. It seems, therefore, unfortunate that these two hospitals, whose history already shows sufficient jealousy, should still remain separate. We hope, however, that the last has not been heard of the praiseworthy attempt to unite them.

IRELAND.

NEXT Wednesday, in consequence of a memorial addressed by the Sanitary Association of Dublin to the Corporation, that body have agreed to receive a deputation from the Association in reference to the sanitary condition of the city, which is extremely unsatisfactory.

AT a special meeting of the Council of the Royal College of Surgeons in Ireland held lately, Dr. Cronyn was elected Assistant-Lecturer on Midwifery to the College, in consequence of the temporary absence of Dr. Sawyer (the Professor of Midwifery), owing to bad health.

SMALL-POX.

AT present, small-pox is very prevalent in Lurgan, there being nineteen cases in the workhouse hospital, all of a very serious character. In Clonmel, also, the disease is spreading, owing to the refusal of the poorer classes attacked with this disorder to leave their homes, so that the guardians of that town have applied to the Local Government Board to inquire whether they can legally compel patients affected with small-pox to come into hospital, where ample accommodation has been provided for them.

Feb. 8, 1873.]

ADMINISTRATION OF NITROUS OXIDE AS AN ANÆSTHETIC: THE RECENT DEATH AT EXETER.

AT the ordinary monthly meeting of the Odontological Society of Great Britain on February 3rd, the President, Mr. ISAAC SHEFFIELD, delivered his introductory address.

Mr. WOODHOUSE BRAINE, after thanking the Society for the honour they had recently conferred upon him by electing him one of their honorary members, said that he felt he could show his appreciation of their kindness in no better way at the present time than by going to Exeter and ascertaining the fullest particulars of the case of alleged death from the administration of nitrous oxide gas, and laying the information thus obtained before the members of the Society. Mr. Braine then read the following paper, which had been prepared by Mr. Browne-Mason, in conjunction with Dr. Drake and Dr. Pattinson.

"On January 22nd, a lady, then residing at Seaton, Axminster, Devon, came to consult me about the removal of an upper second molar on the left side of the mouth. The patient was thirty-eight years of age, had generally good health, and there was no reason for believing that any thoracic disease existed. She was of middle height, stout, with a peculiar cast of countenance, having prominent eyes, and a very flat superior maxillary arch. The lower maxilla being very underhung, the nasal arch was somewhat flattened; and this, together with her having chronic elongation of the uvula, and considerable enlargement of both tonsils, interfered slightly with her breathing, rendering it at times somewhat loud, and that sort of breathing which may be expressed by the term snorting, particularly after much exertion, such as going upstairs.

"On the day in question, she was unusually well and in good spirits. On inspecting her mouth, I found considerable disorder in the arrangement of the teeth on the left side of the upper jaw. The second bicuspid was situated with what should have been its posterior surface in juxtaposition with and against the lingual surface of the second molar, which was the tooth to be extracted. This tooth had been the subject of so much caries, that a probe could be passed right through from the anterior to the posterior surface. The pulp was gone, and there was excessive periosteal inflammation, the bicuspid being quite sound. I was desirous of saving it, expecting that in time, after the removal of the molar, it would drop into the dental arch, and become useful. It was not possible to remove the tooth with the ordinary forceps without disturbing the bicuspid, so I decided on cutting off the crown of the diseased tooth with the excising forceps, then separating the fangs and removing them singly.

"The patient, who had never taken the gas before—being accompanied by her brother-in-law, Dr. Pattinson, who was also her medical attendant—desiring to be placed under the influence of the gas, she was seated in a Morrison's chair, which was inclined backward, the face being turned somewhat up to enable the upper teeth to be conveniently reached, and I proceeded to administer it in my usual way. Having ascertained that the patient had perfect freedom for breathing, the dress being open at the neck and throat, and quite loose elsewhere, I filled a gas-holder of six-gallon capacity from one of Ash's fifty-gallon iron bottles containing liquid gas. I used the ordinary face-piece usually supplied with the apparatus, but without the supplementary bag. The gag used on the occasion—an ordinary wooden one—is now shown you, and was inserted between the first molar and the second bicuspid in both jaws on the right side of the mouth, and well locked by the cusps of those teeth.

"I gave Dr. Pattinson charge of the pulse at the left wrist. After the patient had taken about half a dozen respirations, he exclaimed that the pulse was not so rapid; but he states that its volume did not vary. I removed the face-piece, saying 'Let us do without it,' and cut off the crown of the tooth with the excising forceps. This did not hurt the patient, as the pulp was gone, but on my thrusting a spear-pointed instrument into the pulp-cavity, and with a twist splitting the fangs, so much pain was produced owing to the previous inflammation of the periosteum of the fangs, that the patient declared that she could not bear any further operation unless more gas were given her. On rinsing out her mouth, the water was returned tinged with blood. An interval of ten minutes took place, during which the patient was somewhat hysterical, and, the bleeding having quite ceased, the same gag was replaced in its former position and the inhalation resumed. Dr. Pattinson cannot agree that the bleeding had quite ceased; it was never other than slight, but he thinks there must have been a minute quantity of blood exuding from the gum during the second inhalation. At Dr.

Pattinson's request, I now took charge of the pulse at the right side, while he held that at the left. The patient took the gas well, but just before losing consciousness she raised her right hand and pushed off the inhaler, which I replaced, and continued the inhalation. Dr. Pattinson states it as his impression that no more gas was given after the inhaler was pushed away, the eyes never having closed. I noticed that the pupil of the right eye was slightly dilated, and on touching the conjunctiva, reflex action took place, showing that this membrane was not completely insensible. On removing the inhaler, I am quite certain, no blueness existed; and, finding the stumps exposed and uncovered with blood, I proceeded to operate, and attempted to seize the palatine fang with a pair of stump-forceps, but, the edge giving way, I dislodged it with an elevator, with which I afterwards easily removed the outer fangs. The whole operation lasted about three-quarters of a minute. I received all the fragments of tooth in my fingers, and feel quite sure nothing passed backwards into the throat. I then saw, for the first time, blueness of the lips; but Dr. Pattinson had noticed that during the operation the ear on his side was bluish, and on looking at the face saw blueness there also, but he says he did not mention it, as he had heard of this discoloration occurring at gas administrations. The symptoms now became alarming, the features appeared puffy and swollen, the eye-balls protruding, the breathing thick and stertorous, the point of the tongue thrust between the teeth, but no convulsive movements were visible. The pulse and the appearance of the pupils at this period were not observed, attention being paid to more urgent matters. An old attendant who was in the room exclaimed—'Take out the gag; she is choking.' This was the first suspicion Dr. Pattinson had anything was going wrong. The gag was then forcibly removed. It needed great force to separate the jaws, and possibly it was then chipped as you now see. It was perfect when inserted, and exactly where I placed it at first.

"Mr. Braine, on examining the gag ten days after the operation, pointed out to me the broken surface which I had not seen before, but, as I had never looked at it since, the piece may have been broken accidentally after its use on this occasion. I then thrust the head forward, to see that no blood got into the throat, and passed my finger down over the tongue to draw it forward, as it had now dropped back. From this time, Dr. Pattinson thinks there was fixity of expression, and no further entrance of air into the chest. The window was thrown open, and the face dashed with cold water. I now left to fetch further assistance. Whilst I was absent, Dr. Pattinson continued his endeavours, and applied strong ammonia to the nostrils; there appeared to him to be some sensibility, inasmuch as she seemed to recoil slightly from the pungency of the ammonia. He then noticed about a tablespoonful of water lying at the back of the mouth, which had lodged there during the time he was dashing it over the face; he drew the head forwards to allow it to run out. I then returned, after an absence of about three minutes, with Dr. Drake, for years past one of the most eminent physicians of the city, and at the present time Consulting Physician to the Devon and Exeter Hospital. At this time, the pulse was felt in both radials, and in the left carotid. I substituted the handle of the forceps exhibited for my finger, to keep the tongue forward, for the purpose of allowing more free access of air; and Dr. Drake performed artificial respiration by alternately pressing on the throat and then allowing it to expand by its own elasticity, at the same time raising the arms; and this was continued until the pulse ceased to beat. When Dr. Drake came into the room, he found the patient in the position described; her countenance was dusky, face swollen, eyes projecting; the tongue was in the mouth, with mouth open. He put his finger into the throat, to find that nothing interfered with access of air, as far as he could; she made three or four expiratory movements, accompanied by a slight sound. During this time, the pulse beat regularly, and continued to do so nearly two minutes after all respiratory movements had ceased. It was quite impossible for him, seeing her in a dying state a few moments only before death, to form any positive and precise inference as to the immediate cause of death, but his impression is as stated at the inquest.

"The blueness about this time began to disappear; all our efforts were unavailing; the pulse ceased to beat, and death ensued. Two hours and a quarter after death, the blueness had entirely disappeared. It is much to be regretted that a *post mortem* examination was not permitted, as it would doubtless have cleared up many points which must now ever remain in obscurity."

Mr. WARWICK HELE of Carlisle then read his paper on an Automatic Apparatus for the Administration of Nitrous Oxide Gas. The paper was of too technical a character, however, to be intelligible in a brief report without the aid of the drawings and apparatus with which it was illustrated. Its chief points of interest can hence be only touched upon. These consisted of an ingenious contrivance for regulating the

supply of gas to the lungs of the patient by means of a double sextant and level connected with the gas-holder; an electric bell for indicating the quantity of gas passing from the gasometer to the patient; and, lastly, a stop-watch attached to the face-piece, and under the control of the inlet and shut-off valves. Thus, when the inhalation commenced, the opening of the valve allowed the watch to go on, and the shutting off the gas stopped it, and so, with the governing apparatus, gave a ready and accurate means of registering the time during which a patient inhaled a given quantity of the nitrous oxide.—In the discussion which then ensued, Mr. BRAINE made some further comments on the case. He produced the gag used on the occasion, and pointed out that a small portion had been recently broken off; but it was believed that this happened during its forcible removal from the jaws, and not during the course of the operation. The piece had not been found.—Mr. OAKLEY COLES wished to know whether artificial respiration was tried with the patient in any other position than that occupied by her in the operating-chair.—Mr. BRAINE replied that it was not.—Mr. SERCOMBE was glad to hear from Mr. Braine these fuller particulars, as he now felt that he could still assure his patients that nitrous oxide was a safe agent to use as an anæsthetic; for it was impossible, after Mr. Braine's report, to come to the conclusion that death had been caused by the administration of that agent. It was far more likely that the real cause was spasm of the glottis, producing suffocation; the spasm having arisen from some foreign body in the larynx. Mr. Sercombe considered that it was a matter for the deepest regret that a *post mortem* examination had not been made, so that the true cause of death might have been clearly ascertained.—Mr. COLEMAN, judging from the evidence before them, was inclined to the view that it was apoplexy, rather than asphyxia, which had produced death.—Mr. HELE mentioned a case of what he believed to be apnoea in a patient to whom he had given nitrous oxide, and where he believed that nothing but prompt action, with a view to produce artificial respiration, had saved the patient's life. The face became livid, and respiration imperceptible.—Mr. COLEMAN considered that the instance quoted by Mr. Hele was one of severe syncope rather than apnoea.—Mr. SEWILL then made some observations on the case, based on communications which he had been carrying on with Mr. Mason during the last week; but no additional facts of any interest were brought forward.—The President and members generally much regretted that, owing to the painful interest attaching to Mr. Mason's case, Mr. Hele's paper had not been discussed to the extent that its great value and scientific merits deserved. The meeting then adjourned.

CORRESPONDENCE.

THE RECENT ALLEGED DEATH FROM NITROUS OXIDE GAS.

SIR,—Scarcely has the final report of the Committee appointed to investigate the merits of nitrous oxide as an anæsthetic, containing the record of 58,000 administrations of the agent, been presented, when there comes to us from a distant part of the country, the sad and startling intelligence of a death occurring apparently in consequence of its effects.

In offering a few remarks upon this distressing event, permit me to call attention to the probable number of administrations in which this forms, in this country at least, the first attended with fatal results. When the report referred to above was being drawn up, it fell to my province to collect for the Committee the returns therein given. To satisfactorily attain that object, I made application to the makers of the gas to furnish me with the names of those who most largely consumed it: with much courtesy they at once complied with my request. It was almost entirely from these that I was enabled to collect the above numbers; but of those to whom I applied, about 250 in number, only about half responded to my request—they were, however, by far the largest consumers; still, with the lists furnished to me it was not difficult roughly to approximate the probable number of administrations effected by the whole. Making some allowance for exaggerations in the numbers returned in a few cases, I came to the conclusion that, up to the end of April last, there had been between 70,000 and 80,000 administrations of the gas. To a considerable number of persons making their own gas, no application was made; and, if to their administrations be added those which have been effected since their returns were handed in, we may, I think, fairly and safely set down the number, up to the present time—it is probably greater—as 100,000.

Sad as the circumstance is, it is one hardly unanticipated by any who have had much experience in the use of the agent; for, although

they have regarded it as the safest anæsthetic in use, they have never looked upon it as perfectly safe.

To patients who have put such a question as this, "Is the gas perfectly safe?" I have invariably answered, "No; but I do not think that in taking it you run a greater risk than you do in undertaking a railway journey."

In a paper published in the *St. Bartholomew's Hospital Reports* for 1869, I make the following observations: "If untoward results should occur, and it is hardly to be expected that some may not, should the nitrous oxide be exhibited many hundreds of thousands of times, we apprehend it will be some form of mischief occurring at the brain, from the giving way of diseased vessels. The occasional turgescence of the vessels of the face and head, in those especially whom we regard as likely subjects for apoplexy, has inclined us to this opinion; and whilst we have in all cases of this description most closely watched the effects of the agent, we have in some refrained from administering it at all."

From the somewhat imperfect report that has reached us respecting this case, I am much inclined to the belief that the cause of death was apoplexy. The symptoms recorded do not at all correspond to those which were witnessed in the case of numerous animals destroyed by the gas during the experiments performed by the Committee referred to. Death was in all cases the direct result of the gas being continued until respiration had fairly ceased; recovery invariably took place without any assistance whilst respiration continued, and artificial respiration always succeeded after it had ceased, provided the heart was still in action. Still more convinced should I have been that the cause of death was that to which I refer it, had we been informed that artificial respiration had been resorted to. It could not, under such circumstances, have saved the patient, but it would have helped to decide this point, as well as being a satisfaction to know that the plan strongly urged by the Committee in both their reports had had a fair trial.

In relation to this distressing case, the question arises, Are we justified in continuing the use of this agent for dental operations after what has occurred? My own impression is, that we are; the comfort, ease, and in very many cases, improved condition of health—this latter often means the prolonging, *i.e.*, the saving of life—which have been obtained through its instrumentality, fully warrant though with every care and precaution, the continuance of its use, even if its effects prove fatal in one case in every hundred thousand. I am, etc.,

ALFRED COLEMAN.

32, Old Burlington Street, Feb. 4th, 1873.

ETHER INHALERS.

SIR,—For some time past I have used cheap and simple inhalers made of card or paper, of which a pattern shall be shortly sent to you. They consist of short open cones, fitting the face, and containing a piece of sponge. They give the ether-vapour effectually, and without great waste, the large consumption of ether mentioned in some cases not being necessary. Chloroform can also be given in these inhalers, acting very well, and in smaller quantities than when a hollow sponge is used. I am, etc.,

W. E. C. NOURSE, F.R.C.S.

11, Marlborough Place, Brighton, January 27th, 1873.

SIR,—I see by your article on Ether Inhalation, that you are desirous of having an efficient inhaler. Will you allow me to refer you to the original invention figured and described in the *Pharmaceutical Journal* for January 1846, vol. vi, p. 351? The late eminent surgeon, Mr. Liston, having received a letter from America stating the anæsthetic properties of ether, requested me to contrive an instrument for him to use. He performed the first painless capital operation in this country with this inhaler, which is now in the museum of University College. I afterwards made a metal inhaler for field purposes. Both these apparatus answered perfectly a quarter of a century ago, and I see no reason why they should not answer quite as well now.

I am, etc., P. SQUIRE.

277, Oxford Street, London, January 25th, 1873.

* * We shall publish a description and illustrations of these inhalers next week.

THE ADMINISTRATION OF ETHER.

SIR,—I have for some time administered ether combined with air, the air which the patient breathes being passed over a vapour of ether, and have not experienced any of the disagreeable symptoms mentioned by your correspondent Dr. Jacob, in your *JOURNAL* of last week, as being due to the dilution of ether with air. On the contrary, sickness is very rare; only once was there troublesome delirium after the opera-

tion. The patients become insensible quite as soon, the average time required to produce insensibility being four minutes, and the quantity for ether used is considerably less. For instance, in a case of craniotomy at the Middlesex Hospital, the patient was brought under the influence of ether in three minutes; the operation lasted thirty-five minutes, during which time she took altogether two and a half ounces of ether; there was no excitement, either during or after the operation, and the patient only retched slightly once half an hour after the operation. In another case, ether was administered for over an hour; there was no sickness, and the patient inhaled under five ounces of ether. I shall feel obliged if some of your readers will inform me how they administer ether in operations involving the mouth. At present, I adopt the plan of passing the vapour of ether in the form of a spray into the mouth, but have not had sufficient experience as yet to report on the success or defect of this method. I am, etc.,

G. EVERITT NORTON, Chloroformist to the
Upper Baker Street, N.W. Middlesex Hospital.

ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—The abuse to which out-patient hospital relief is often subjected, receives a striking illustration in your report of the last meeting of the Royal Medical and Chirurgical Society, given in the current number of the JOURNAL.

Both the patients, whose cases are related in the paper brought forward, had been patients at the Moorfields Ophthalmic Hospital, and are described, the one as "a respectable small tradesman," and the other as "a lady," by which I understand that the former was a man in a comfortable way of business, and quite able to pay for medical attendance; whilst that the latter really was so, is shown by her afterwards consulting Mr. Hutchinson as a private patient. Is it customary, sir, for persons in social positions such as these to attend the above named hospital either with or without payment? For, if so, it is in either case equally unjust not only to the profession, but to the public generally, and it should at once be put a stop to, since the benefits of a charitable institution are manifestly not intended for those who can so well afford to pay for medical advice. It is indeed high time that the out-patient departments of all our hospitals, and more particularly of the special ones, should undergo thorough revision, in order to check the daily increasing evils of gratuitous medical advice, of which the instances now alluded to afford glaring examples. I am, etc.,

February 3rd, 1873.

F.R.C.S.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, at half-past Seven o'clock; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, }
E. C. BOARD, } *Honorary Secretaries.*

Bath, February 4th, 1873.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, JANUARY 21st, 1873.

Sir WILLIAM JENNER, Bart., K.C.B., M.D., President, in the Chair.

A REPORT was read from the Morbid Growth Committee on Mr. Spencer Watson's case of Recurrent Tumour of the Leg.

Glandular Obstruction and Pleuritis.—Dr. MOXON showed a specimen which, he said, revealed a consequence of former disease in lymphatic glands that has not yet received attention—namely, the intensification of inflammations in the region whose lymph is drained off through the glands affected. The specimen was a recent one, from the body of a woman who died of emphysema of the lungs, with dilated heart and dropsy. The right pleura showed a considerable recent pleurisy over the lower lobe, as is not unfrequent in such cases. The lymph in the pleural cavity had the usual characters of "plastic lymph", but the pleura itself was marked by a network of yellowish lines. These proved to be lymphatics full of pus, which the microscope showed to be recent and laudable. A large old glandular abscess was found below the right bronchus. The abscess-wall was thick, and the contents degenerate. The point raised on this specimen was the same as in the case which

Dr. Moxon showed a few weeks ago, wherein a similar suppurative inflammation of the pulmonary lymphatics was associated with old disease of the glands at the root of the lung. Dr. Moxon observed that as such suppuration of lymphatics is very rare, its occurrence in these cases of old glandular obstruction shows that the bad drainage due to this obstruction is a cause of local disease whose importance should be recognised.

Ankylosis of the Hip.—Mr. DUKE exhibited a specimen of ankylosis of the hip after disease, taken from the body of a girl aged 17, who had died of tubercular meningitis.—Mr. WILLIAM ADAMS, in asking the age of the patient, pointed out that true bony ankylosis in tubercular persons generally takes several years to form.—Mr. DUKE, in reply, stated that she died two years after ankylosis had occurred.

Fetus with Arrested Development.—Mr. W. ADAMS exhibited a fetus with symmetrical arrest of development in both hands and feet, which were below size, and exhibited curvature at the feet and knee-joints. He had been informed by Dr. Wilkinson, who had sent the specimen to him, that while the child was *in utero* the mother was frightened by a cripple who presented deficiency of the arms and legs.

Spindle-celled Sarcoma of the Liver.—Dr. MURCHISON exhibited specimens and drawings of a remarkable spindle-celled sarcoma of the liver. The gentleman from whose body the disease was removed consulted him on October 9th, 1871. During the previous eighteen months he had suffered from several attacks of pain under the right ribs, but unaccompanied with vomiting or jaundice. On each occasion, the pain left in two or three days. The tumour of the liver had only been discovered a month before he saw him. The gentleman had been told that the disease was hydatid. He complained of a burning pain in the liver; and the tumour had increased considerably during the past month. It now extended to the umbilicus and pubes, and the hepatic dulness reached to the right nipple. The surface was uneven, presenting excrescences, and was not hard; and there was bulging of the ribs, a frequent occurrence in hydatid. There was no tenderness, and no fluctuation. He had no appearance of cachexia, and was in good health, except that he suffered from sleeplessness and the burning pain alluded to. There was no family history of cancer. It appeared, however, that he had had one of his eyeballs removed nine years before by Mr. Hulke for tumour; and on inquiry it was found that this growth had originated from the choroid, and was a spindle-celled sarcoma. Dr. Murchison came to the conclusion that there was a connection between the two affections. Sir Wm. Gull also saw the patient, and formed a similar opinion. On June 9th, 1872, the tumour had enlarged, and he now was subject to shortness of breath; but the pain had left, and he was of exactly the same weight as he had been twelve months before. In consultation with Sir William Jenner, a trocar was passed, but only a small quantity of blood passed. The patient afterwards, it was found, went to a hydropathic establishment, where he died after much pain in the liver. The liver and tumour weighed twenty pounds. There were masses varying in size up to an orange in the viscus, which were found to be by Mr. Henry Arnott spindle-celled sarcoma. The clinical history was very different from that of cancer, and much more like that of hydatid.—Dr. CAYLEY said that this case furnished a strong argument in favour of the original local nature of malignant tumours. It was often argued that in many cases the secondary eruption of cancerous tumours took place at such long intervals, that this could not be due to infection from the primary growth, but must have been caused by the cancerous diathesis of the patient. But here was a case in which a growth that must have been secondary—for spindle-celled sarcoma of the liver, except as a secondary affection, was unknown—did not make its appearance for nine years after the extirpation of the primary disease; and therefore the lapse of time which might occur between the recurrence of cancerous tumours was no argument against their original local return.—Mr. ARNOTT said that it was hard to believe that secondary deposit should remain for nine years without showing signs of growth, but spindle-cell sarcoma was sometimes quiescent for a very long time. He related several interesting cases illustrating this.

Stomach in Poisoning with Hydrofluoric Acid.—Dr. ROBERT KING exhibited a stomach taken from the body of a person who had swallowed about half an ounce of hydrofluoric acid. The patient died in the Middlesex Hospital thirty-five minutes after swallowing the fluid. The symptoms were violent retching and vomiting, followed by speedy collapse and death. The lining membranes of the epiglottis and œsophagus were peeled off with ease; there was ecchymosis of the stomach; the throat was white and softened. There were ecchymoses in the heart, and the blood gave a strong acid reaction, he believed from absorption of the acid.

Aneurism of the Thoracic Aorta.—Mr. COUPLAND showed a specimen of aneurism of the thoracic aorta, extending from the tenth dorsal

to the seventh lumbar vertebra, which ruptured into the left pleura after converting the lower lobe of the lining into a mere bag. The patient, a man 28 years of age, was admitted with hæmoptysis into the Middlesex Hospital and died four days afterwards. There was a systolic murmur heard at the apex of the heart; but Mr. Coupland replied, in answer to Dr. Theodore Williams, that there was no murmur at the back.—Dr. MURCHISON stated that, in a case of his alluded to by Mr. Coupland, the abdominal aneurism had burst and passed in various directions, which might have accounted for the absence of murmur.

Bladder in a Patient who was Tapped.—Mr. BARWELL showed a bladder taken from the body of a patient who was tapped above the pubes for retention of urine. The cause of the retention was an abscess between the bladder and rectum, which, involving the enlarged prostate, led to the death of the patient a few days afterwards.

Fibrous Tumour of the Penis.—Mr. MARCUS BECK exhibited a fibrous tumour of the size of a hen's egg, for which the penis had been amputated. The tumour had recurred after removal, and it had become so intimately connected with the corpus spongiosum that separation was found to be impossible; hence the penis was amputated.

Fracture of Skull.—Mr. BECK brought forward a skull taken from the body of a man who had fallen on his head a distance of fifteen feet. There was a transverse fracture stretching across the base of the skull, caused by the impulsive force of the vertebral column, and an extensive fracture in the long diameter of the skull, involving the occipital, parietal, and frontal bones. There were two lacerations of the brain, one extending into the medulla.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 24TH, 1873.

CAMPBELL DE MORGAN, Esq., Vice-President, in the Chair.

Lowered Temperature in Injury of the Spinal Cord.—Dr. NIEDEN related a case, in which excessive lowering of temperature was observed, after a lesion of the spinal cord corresponding to the first and second dorsal vertebræ. F. D., aged 60, fell on October 5th, about fourteen or fifteen feet on his outstretched arms; he was insensible for a short time. When brought into the hospital, he could give an account of the accident. He complained of great pain across the shoulders and back, but no lesion of the spine could be detected. The lower extremities, and the trunk as high as the second intercostal space, were perfectly paralysed to motion and sensation. The temperature in the axilla was 95.2 degs. Fahr.; pulse regular and strong, 52. Respiration was carried on only by the diaphragm, 18 per minute. The bladder was paralysed; the urine was acid, and free from albumen and sugar. His appetite was good. The treatment consisted in rest in an horizontal position, and the application of twenty cups on the back. For some days there was no great alteration. The temperature rose at first gradually to 98.6 degs. Fahr., the pulse to 68, and the respirations were 18 per minute; but, on the morning of the third day, the temperature began to sink, so that on the morning of October 10th it was 95.8 degs. (pulse 52, resp. 16), falling gradually, on October 12th, to 90.2 degs. and 87.9 degs. Fahr. (pulse 42, resp. 14). The patient was in the same good mental condition as before. On October 13th, the temperature rose again from 86.2 degs. to 87 degs., while the pulse became weaker and smaller (40), and the respirations were accompanied by *râles*. On October 14th, the temperature sank to 84.3; pulse very weak (34); respirations 14. The mental faculties were quite intact; likewise the digestion. Œdema in both lungs increased. During the night of October 15th the patient was conscious; temperature 81 degs., pulse 30. His breathing became irregular, and he expired, with a temperature of 80.6 degs. Fahr. The necropsy showed a dislocation of the first dorsal vertebra upon the second, without fracture. There was a vast ecchymosis in the dura mater. The interior of the cord was softened and transformed into a reddish pulp. The lower parts of both lungs were excessively congested and cedematous; all the other organs were normal. Dr. Nieden remarked that similar sinking of temperature to 80.6 degs. Fahr. had, he believed, never been observed; but this case showed that life could be continued with a temperature of 81 degs. Fahr. The decrease of temperature was accompanied by the same sinking of heart-contractions. Difference of temperature between different parts of the body (axilla, rectum, mouth) existed only in a small degree. Literature showed that similar lesions of the medulla or the cervical marrow produced in one case sinking of temperature, while they were followed in another by rising of the temperature.—Dr. GREENHOW referred to a case of his own, published in the Society's *Transactions*, of atrophy of the brain, in which the temperature fell to 84 degs. two days before death, in the axilla, and 85 degs. in the rec-

tum.—Dr. RASCH referred to a case of injury to the head, which had come under his observation, in which a temperature of 90.2 was observed.—Dr. DOUGLAS POWELL observed that if Dr. Nieden's patient died from congestion of the lungs that condition would have an effect in lowering the temperature.—Dr. GREENHOW observed that his patient did not die from congestion of the lungs.—Dr. SOUTHEY remarked that, with the decrease in temperature, there was no increase of the respiration.—Dr. NIEDEN said that the respiration was affected in quality although not in quantity.—Dr. DOUGLAS POWELL observed that he could not breathe more quickly as he had only his diaphragm to respire with.—Dr. HERMANN WEBER thought that there was no proof for the correctness of the author's views, that the cause of the increase or decrease of bodily temperature in different cases of lesion of the spinal marrow depended merely on a disturbed balance between the production and expenditure of heat. He had repeatedly examined his friend Dr. Nieden's case, and had been unable to discover that the expenditure of heat was excessive, and that it could explain the remarkable decrease of temperature of the body; he had found the surface pale and cool. The whole condition of the patient had forced on him the impression that the production of heat was diminished. The very imperfect inspirations, and the weakness and infrequency of the heart's contractions appeared to him to support the view of diminished production, not of increased expenditure. On the other hand, he had observed in cases of lesion of the cervical marrow with increased temperature, that the surface of the body was very hot, that ice placed on the head melted rapidly, that the inspiratory movements, and the heart's contraction were increased as well in frequency as in aggregate intensity. He thought a careful examination of the products of tissue-change in the exhalation of the lungs, and in the urine, would probably corroborate the view that, in cases of increased bodily heat there was increased production, and *vice versa*. Dr. Weber thought that, without as yet accepting as proved the existence of a localised regulatory centre of heat, we must certainly not hastily accept the idea that the locality of the lesion of the nerve-centres has no influence on the increase or diminution of the production of heat.—Mr. LAWSON pointed out that, dislocation without fracture, as in the present case, was very rare.—Dr. BUZZARD asked if there was any lesion of the sympathetic ganglia, as without this we cannot attempt to localise the lesion. In hæmorrhage from ulcer of the stomach near the great ganglia, and in cholera, we have great fall in the temperature, and perhaps the ganglia were in this case involved.—Mr. DE MORGAN referred to a case which he had recorded, in which the bones below the injured spine did not unite. Two or three other instances of this had been since published. In Dr. Nieden's case the temperature of the whole body was affected. It is likely, then, that the sympathetic ganglia had something to do with it.

The Results of Twelve Cases of Operations for Stricture.—Mr. TEEVAN brought before the Society all those cases of stricture of the urethra, twelve in number, which had come under his care during the past year, and which had previously been operated on by himself or others. 1. Perineal section; good result. G. B. was operated on twenty-six years ago by Mr. Coulson. A large instrument has been regularly passed once a fortnight. 2. Puncture of bladder, *per rectum*; bad result. W. M. was operated on in a hospital in London thirteen years ago. When he left only a small instrument could be passed. The stricture soon became impassable. By gradual dilatation, he was enabled to pass a No. 4, when he ceased to attend. 3. Internal urethrotomy; bad result. M. de W. was operated on eight years ago by M. Leroy, *filc*. No instrument was afterwards passed, as the patient had to leave Paris. Mr. Teevan cured him by gradual dilatation. 4. Puncture of bladder above pubes; good result. W. O. was operated on thirty-five years ago by the late Mr. Earle. An instrument had been passed about four times a year. 5. Stricture twice split; bad result. J. M. was operated on at a hospital in London nine years ago. Gradual dilatation was kept up for some time, but the stricture relapsed, and the operation was again repeated, with similar results. Mr. Teevan divided both the strictures subcutaneously, and he left, passing the largest instrument. 6. Stricture split; bad result. W. B. had his stricture split in a hospital in London. Dilatation was kept up for six weeks. The patient is in a bad state, but will not allow any instrument to be passed. 7. Stricture split; bad result. W. S. had his stricture split by Mr. Armstrong Todd. Dilatation was carried on twice a week for ten weeks. When he came under Mr. Teevan's care, only the smallest instrument could be passed. 8. Stricture split; bad result. J. H. had his stricture split at a hospital in London. Dilatation was carried on every other day for two months after the operation. A relapse took place. He was cured by gradual dilatation. 9. Stricture twice split; bad result. G. C. had his stricture split at a hospital in London a year and a half ago. An instrument was passed once a week for a month. Speedy relapse took place. A second operation

was performed a month ago. The urethra will now only take a No. 2. 10. Boutonnière operation, four years ago, by Mr. Teevan; good result. The patient comes about once in two months to have a large bougie passed. 11. A gentleman had his stricture split by a hospital surgeon with bad result. The stricture relapsed so quickly that each week during which the dilatation was carried on for five months, a smaller instrument had to be used. When he came under Mr. Teevan's care the stricture was impassable. It was treated by gradual dilatation. 12. Stricture split; bad result. A gentleman had his stricture split by a hospital surgeon three years before he applied to Mr. Teevan. He was cured by gradual dilatation.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, DECEMBER 14TH, 1872.

EVORY KENNEDY, M.D., President, in the Chair.

Endometritis.—Dr. LOMBE ATTHILL read a paper on this affection. It might be defined as a low inflammation of the uterine mucous membrane, with vascular engorgement and implication of the glandular structure of the organ. Sometimes the cervix was engaged. The symptoms of endometritis were pain, leucorrhœa, dysmenorrhœa, menorrhagia, and reflex irritation. Pain was generally referred to one or all of three localities, viz., to the sacrum; to the edge of the false ribs, thence shooting to the shoulder on the left side; and to a point just over the pubes. The second was often almost pathognomonic of the disease. The physical signs of endometritis were: increased length of the uterine cavity; increased size of the same; increased bulk of the whole fundus; augmented sensibility of the uterine mucous membrane; a patulous *os internum*; and often an abnormal sensitiveness of the mucous membrane. In the treatment, palliative measures, including rest, warm hip-baths, mild aperients, and, above all, local depletion, sometimes acted beneficially. The last-named might be effected by leeching, but was far more effectually carried out by puncture of the cervix in one or two places to the depth of an eighth of an inch or thereabouts. Dr. Atthill exhibited a knife designed for this purpose. In severe cases operative interference was necessary; either by injecting fluids into the cavity of the uterus, or by passing up a piece of solid caustic, or by the application of fuming nitric acid, the acid nitrate of mercury, or other active agent. Dr. Atthill considered the application of fuming nitric acid to the interior of the uterus as simple, safe, and painless; and to Dr. Kidd belonged the priority of the adoption in Ireland of the internal application of the acid; while in America Drs. Miller and Marion Sims had previously carried out the same practice. The author advised the preliminary dilatation of the cervix uteri with sea-tangle or sponge-tent. The anterior lip of the uterus was then seized with a hook, and a stilette armed with a comparatively thick layer of cotton or roll of lint was passed rapidly up to the fundus. Strong nitric acid thus applied seldom caused any pain, and was not followed by any grave consequences, as the injection of even weak caustic solutions often was. In all cases where it was healthy, the cervix uteri should be protected from the action of the nitric acid. To reach all parts of the uterine cavity with the acid, the author had devised an intrauterine speculum, which could be expanded by means of a screw working through a long handle. The details of three cases of endometritis were given, and Dr. Atthill concluded by a vindication of the method of cauterisation of the uterus with nitric acid from the objections raised against it.—Dr. CHURCHILL made some general remarks on granular degeneration of the uterus, and on the harmlessness of the application of strong nitric acid to the uterine cavity.—Dr. RINGLAND related his experience of the local remedies to which Dr. Atthill had alluded. He considered solid caustic to be a most valuable remedial agent. He had seen injection of iodine followed in one case by a severe attack of hysteria, and from the use of nitric acid in hæmorrhoids and to the cervix uteri he had long ago been led to think of applying it to the interior of the uterus.—Dr. DENHAM had seen the President controlling hæmorrhage fully twenty-five years ago by passing up such powerful applications as strong nitric acid and butter of antimony into the uterine cavity. He had himself thrown up solution of iron and other strong fluids with safety and success.—Dr. JAMES LITTLE bore testimony to the facility attending the use of Dr. Atthill's speculum.—Dr. KIDD said that Ambroise Paré had applied strong nitric acid to the interior of the uterus, and it had long since been employed in the extirpation of warty growth.—Dr. BYRNE believed that nitric acid did not produce a slough in the interior of the uterus.—The PRESIDENT mentioned that strong caustics had been used in the treatment of uterine affections since 1840, at least. He corroborated Dr. Atthill's opinion as to the value of local depletion in some cases of endometritis. However, he preferred leeching as a means of carrying this out.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

SCHOLARSHIPS AND EXHIBITIONS IN NATURAL SCIENCE.—We quote from *Nature* the following List of Scholarships and Exhibitions for proficiency in Natural Science, offered at the several colleges in Cambridge during the present year.

Trinity College.—One or two of the value of about £80 *per annum*. The examination will be on April 5, and will be open to all Undergraduates of Cambridge and Oxford, and to persons under twenty who are not members of the Universities. Further information may be obtained from the Rev. E. Blore, tutor of Trinity College.

St. John's College.—One of the value of £50 *per annum*. The examination (in Chemistry, Physics, and Physiology, with Geology, Anatomy, and Botany) will be in December, and will be open to all persons who have not entered at the University, as well as to all who have entered and have not completed one term of residence. Natural Science is made one of the subjects of the annual college examination of its students at the end of the academical year, in May; and exhibitions and foundation scholarships will be awarded to students who show an amount of knowledge equivalent to that which in classics or mathematics usually gains an exhibition or scholarship in the college. In short, natural science is on the same footing with classics and mathematics, both as regards teaching and rewards.

Christ's College.—One or more, in value from £30 to £70, according to the number and merits of the candidates, tenable for three-and-a-half years, and for three years longer by those who reside during that period at the college. The examination will be on April 1st, and will be open to the undergraduates of the college; to non-collegiate undergraduates of Cambridge; to all undergraduates of Oxford; and to any students who are not members of either University. The candidates may select their own subjects for examination. There are other exhibitions which are distributed annually among the most deserving students of the college. Further information may be obtained from John Peile, Esq., tutor of the college.

Caius College.—One of the value of £60 *per annum*. The examination will be on April 1st, in Chemistry and Experimental Physics, Zoology, with Comparative Anatomy, Physiology, and Botany, with Vegetable Anatomy and Physiology; it will be open to students who have not commenced residence in the University. There is no limitation as to age. Scholarships of the value of £20 each, or more if the candidates are unusually good, are offered, for anatomy and physiology, to members of the college. Gentlemen elected to the Tancred Medical Studentships are required to enter at this college; these studentships are four in number, and the annual value of each is £113. Information respecting these may be obtained from B. J. L. Frere, Esq., 28, Lincoln's Inn Fields, London.

Clare College.—One of the value of £50 *per annum*, tenable for three-and-a-half years. The examination (in Chemistry, Chemical Physics, Comparative Anatomy, and Physiology, and Geology) will be on March 26th, and will be open to students intending to begin residence in October.

Downing College.—One or more of the value of £40 *per annum*. The examination (in Chemistry, Comparative Anatomy, and Physiology) will be early in April, and will be open to all students not members of the University, as well as all undergraduates in their first term.

Sydney College.—Two of the value of £40 *per annum*. The examination (in Heat, Electricity, Chemistry, Geology, Zoology and Physiology, and Botany) will be on April 1st, and will be open to all students who intend to commence residence in October.

Emmanuel College.—One or more of the value of £50 tenable for two years. The examination on April 1st, will be open to students who have not commenced residence.

Pembroke College.—One or more of the value of £20 to £60, according to merit. The examination (in June, in Chemistry, Physics, and other subjects) will be open to students under twenty years of age.

St. Peter's College.—One from £50 to £80 *per annum*, according to merit. The examination (date not yet fixed) in Comparative Anatomy and Physiology, and Botany, will be open to students who will be under twenty-one years of age on October 1st, 1873, and who have not commenced residence.

King's College.—One of the value of about £80 *per annum*. The examination, on April 21st, will be open to all candidates under twenty, and to undergraduates of the college in their first and second year. There will be an examination in elementary classics and mathematics, in addition to three or more papers in Natural Science, including Physics, Chemistry, and Physiology.

Although several subjects for examination are in each instance given, this is rather to afford the option of one or more to the candidates than to induce them to present a superficial knowledge of several. Indeed, it is expressly stated by some of the colleges that good clear knowledge of one or two subjects will be more esteemed than a general knowledge of several. Candidates, especially those who are not members of the University, will, in most instances, be required to show a fair knowledge of classics and mathematics, such, for example, as would enable them to pass the previous examination. There is no restriction on the ground of religious denomination in the case of these or of any of the scholarships or exhibitions in the colleges or in the University. Further information may be obtained from the tutors of the respective colleges. It may be added that Trinity College will give a fellowship for Natural Science once, at least, in three years: and that most of the colleges are understood to be willing to award fellowships for merit in Natural Science equivalent to that for which they are in the habit of giving them for classics and mathematics.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

SIR,—If "M.D.Lond., F.R.C.S.Eng." will read my correspondence, he will clearly see that my opinions are exactly similar to his own. I also agree with him in thinking it such a common-sense question, that it needs no advocate, if fairly put to the profession.

I am, etc.,

J. WICKHAM BARNES.

OXTON (CHESHIRE) LOCAL BOARD.

AT a meeting on February 3rd, Mr. R. S. Daniel, one of the district medical officers of the Birkenhead Union, was appointed medical officer for the township of Oxtan, under the new Public Health Act, at a salary of £30 a-year. There were five applicants, all resident practitioners.

[MEDICAL OFFICER OF HEALTH FOR NOTTINGHAM.

AT a meeting of the Town Council of the Borough of Nottingham, held on the 3rd instant, Dr. Edmund Seaton was appointed medical officer of health for that Borough. There were thirty-four candidates. The salary commences at £400 a year.

WEST DERBY LOCAL BOARD.

AT a meeting on February 4th, the resolution passed at a previous meeting, rescinding the appointment of Dr. Carter, medical officer under the Public Health Act, was rescinded by the unanimous vote of the Board, Dr. Carter being thereby confirmed in his appointment.

LEICESTERSHIRE.

A CONFERENCE of Poor-law guardians from the various unions in the county of Leicestershire was recently held at the Castle, in Leicester, the object of which was to take into consideration the advisability of appointing a medical officer of health for the whole county, or otherwise, as the meeting might determine. Mr. Long, the government inspector, was present, and explained to the meeting on what grounds he recommended the appointment of a medical officer of health over a large area. After a somewhat long discussion, it was resolved by a large majority that—"Whereas by Section No. 10 of the Public Health Act, it is enacted that, with the sanction of the Local Government Board, a medical officer of health may be appointed for a larger district than that represented by each urban or rural sanitary district, we, the representatives of the various sanitary authorities in the county, resolve to recommend to the parishes which we respectively represent, that they unite in the appointment of a medical officer of health."—In answer to a question regarding the salary of the medical officer, Mr. Long said he considered £800 *per annum* a reasonable sum to give.

ADULTERATION OF FOOD ACT.

THE local boards and vestries of the parishes and districts within the metropolis have now, with two exceptions, complied with the provisions of the Adulteration of Food Act, by the appointment of official analysts. The Act gives the local authorities the option of making the appointment by fixed salaries, by allowances for each analysis, or partly

by salary and partly by allowance; and all these alternatives have been adopted by the various boards. In Mile-end Old Town, Dr. Corner, the medical officer of health, has been appointed analyst, the question of salary being left in abeyance. In St. Pancras, Dr. Stevens has been nominated. In Hackney, Dr. Tripe, the medical officer, has been elected, the point of salary being left open for future consideration. In St. George's, Hanover Square, and Chelsea, it has also been resolved to include the office of analyst in the duties of officer of health. The Whitechapel Board have appointed Dr. Meymott Tidy, professor of chemistry at the London Hospital, at a fee of one guinea for the first hundred analyses, and a decreasing scale for cases beyond that number. Dr. Hardwicke has been elected for Paddington, Dr. Vinen for St. Olave, Dr. Muter for Wandsworth, and in St. Saviour's the office was voluntarily undertaken by the medical officer of health. In Poplar, the appointment has been given to Dr. Woodforde, one of the medical officers of health, payment being made for each analysis on a fixed scale. Dr. Letheby has been appointed analyst for the city; Dr. Bernays, professor of chemistry at St. Thomas's Hospital, has been appointed for Camberwell, Dr. Whitmore for Marylebone, Dr. Pavey for St. Luke's, Dr. Rogers for Limehouse, Dr. Muter for Lambeth and St. George's, Southwark. With three exceptions, the local authorities of each district have elected their own medical officers of health as analysts; and in Whitechapel the office was refused by Dr. Liddle, the medical officer, on the ground that medical officers were generally not competent to undertake the duties contemplated by the Act.

OBITUARY.

ISAAC BAKER BROWN, F.R.C.S.

ISAAC BAKER BROWN, born June 8th, 1812, was the second son of Isaac Baker Brown, Esq., of Colne Engaine, Essex. His mother was the daughter of Dr. Boyer, head master of Christ's Hospital in the days of Samuel Taylor Coleridge, Charles Lamb, and Bishop Middleton. Educated at Halstead, he was early apprenticed to Mr. Gilson of that town, at that time the principal surgeon of the county. On the termination of his apprenticeship he was entered at Guy's Hospital, becoming house-pupil of Mr. Hilton, where he was distinguished for his industry, and where he gained the Astley Cooper Prize for anatomy.

He passed the Royal College of Surgeons in 1834, and in the same year became a member of the Apothecaries' Hall. About that time he married, and settled in practice at the West End.

From his student days, when he read a paper at the Guy's Medical Society, on ovarian disease, he had always shown a great predilection for the study of obstetrics and diseases of women, and he was a most successful accoucheur. At the time when ovariectomy was most severely on its trial, he was an enthusiastic ovariectomist, and it may with truth be stated that he was an ovariectomist by conviction; that is, he decided to perform ovariectomy in cases of ovarian dropsy threatening life, only after repeated attempts to arrest the disease by what appeared less dangerous procedures. For example: he tried "mercury, carried to slight salivation, diuretics, and tonics," tapping, tapping and pressure, injection of iodine, excision of a portion of the cyst, and the establishment of a fistulous opening, so as to constantly drain away the secretion. Being, however, once convinced that nothing but extirpation could cure the disease, nothing deterred Mr. Brown from pursuing it in cases in which he saw a fair hope of recovery; and although his first three ovariectomies were attended with the death of the patient, he had the courage to perform it on the fourth case that came to him, which was that of his own sister. It may be interesting to know that this lady, operated on in 1852, afterwards married, has had several children, and is still living.

To Mr. Brown and Dr. Clay of Manchester, are undoubtedly due the merit of being the pioneers of ovariectomy; and through their honesty in publishing unsuccessful cases of ovariectomy, and fully entering into the causes of failure, they have been honourably imitated by their successors, who have learnt from earlier failures to adopt improved methods, which have brought them a still larger measure of success.

From a comparison, however, of cases operated on by Mr. Brown in the same periods as Mr. Spencer Wells or Dr. Keith, it will be seen that the former was to the full as fortunate in his results. While of Mr. Brown's first fifty-two cases he lost twenty-eight, of the last fifty published in the second edition of his work on *Ovarian Disease*, in 1868, he lost only eight; that is, he had a death-loss of only sixteen per cent., and recoveries to the extent of eighty-four per cent. Of course, these facts do not in any way detract from the grand successes of

Mr. Spencer Wells and Dr. Keith; but perhaps the important services of the early workers in this branch have hardly met with sufficient acknowledgment, and this has especially occurred in the case of the subject of our present notice.

In 1848, Mr. Brown became a Fellow of the College of Surgeons by examination, and about this time he took a very active part in founding St. Mary's Hospital, the first meeting being held in his dining-room. At the foundation festival of the hospital, his health was proposed by the chairman, Prince George of Cambridge, as "Founder of St. Mary's Hospital." On its inauguration he was appointed surgeon-accoucheur, a post not refilled since he resigned. Shortly afterwards he founded the "London Surgical Home," in 1858.

In 1854, Mr. Baker Brown published his work on *Surgical Diseases of Women* (which went through three editions)—the volume by which he achieved his fame and by which his name will be remembered.

His labours for the cure of ruptured perinæum, of prolapsus uteri, and of vesico-vaginal fistula, would alone have sufficed to rank him as a great operative surgeon. His plan of incising the os and cervix uteri in cases of hæmorrhage from intrauterine tumours has been followed by the best results, and is now largely practised. In the year 1861, he was visited by the eminent French surgeon M. Nélaton, who resided some days as his guest, having come to London expressly to witness his practice as an ovariologist. Mr. Brown performed on this occasion three ovariectomies in succession in one day. M. Nélaton saw him also operate on two other cases, and saw several under course of recovery after operation. On his return to Paris he gave an account, in a clinical lecture, of all he had seen; and it is not too much to say that through Mr. Brown's enthusiasm and success M. Nélaton introduced ovariectomy to the favourable notice of the profession in France.

In 1865 Mr. Brown was elected President of the Medical Society of London, and here he appeared to have reached his zenith. In the following year, he published his remarks on the *Curability of some Forms of Insanity, Epilepsy, and Hysteria*. Subsequently to the publication of this book, occurred the arraignment of Mr. Brown before the Obstetrical Society for unprofessional conduct, and his expulsion from the Society. After the verdict of the Obstetrical Society, his practice rapidly diminished. He made several endeavours to retrieve his fortunes, but successive attacks of paralysis entirely shattered his health, and for the last year he has been utterly helpless.

He was suddenly attacked on Saturday the 1st instant, with vomiting and headache. He soon became unconscious, and died on Monday morning, in the 61st year of his age. The necropsy showed recent and old clots in the brain, and partial softening of its substance.

Mr. Brown was twice married. By his second wife, he leaves three young children. His young son is a candidate for the foundation of Epsom College, and it is to be hoped that the profession, remembering only the good work his father has done, and how generous a supporter he was of the charity in his prosperity, will earnestly support the candidature.

WILLIAM RISDON, M.R.C.S.

Mr. RISDON died on January 17th, at Dolton, North Devon, aged 61. He was medical officer to two districts of the Torrington Union for a period of thirty years, besides having an extensive private practice. For the last four years of his life he had relinquished the arduous duties of his profession on account of his failing health. He was a Member of the Royal College of Surgeons of England, and a Licentiate of the Society of Apothecaries.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, having passed the required examinations, were admitted members, on January 30th, 1873.

Williams, William, M.D. Queen's University, Ireland, Bannafawr
Moore, Norman, M.B. Cambridge, St. Bartholomew's Hospital
Hartree, John Penn, M.B. Cambridge, Grosvenor Street

The following gentleman was, at the same time, admitted licentiate.
Clague, John, Castletown, Isle of Man

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, January 30th, 1873.

Cole, William James, Westbourne Villas, Harrow Road
Duke, Maurice Smelt, 321, Clapham Road
Loane, Thomas, 1, Dock Street, E.
Parnell, Gerald Crécy, Sussex Place, Regent's Park
Powell, Evan, Bridgend, South Wales
Wills, Charles, Richmond, Surrey

APOTHECARIES' HALL, DUBLIN.—At the professional examinations held in January 1873, the following gentlemen obtained the licence to practise medicine and pharmacy.

Devany, Patrick Charles
Holmes, William Hubert

Johnston, Henry Maturin
M'Creery, James Osterly

The following passed the preliminary examination in arts.

Corcoran, Thomas Francis
Duncan, George
Falkiner, Ninian McIntyre

Fitzgerald, Michael
Murphy, John
Prior, Henry William

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BISHOPS STORTFORD UNION, Herts—Medical Officer for the Pelham District: £92 per annum.
BRADFORD (Yorkshire) URBAN SANITARY DISTRICT—Medical Officer of Health: £500 per annum.
BRECKNOCK UNION—Medical Officer for the Defynnock District: £90 per annum.
CANNON STREET MALE ADULT PROVIDENT INSTITUTION, Birmingham—Additional Surgeons.
CARMARTHENSHIRE INFIRMARY—Surgeon.
CARMARTHEN TIN WORKS—Surgeon.
CHIPPING NORTON UNION, Oxfordshire—Medical Officer for District No. 1: £73 per annum.
CLOGHER UNION, co. Tyrone—Medical Officer for the Workhouse: £50 per annum.
DEVONSHIRE HOSPITAL, Buxton, Derbyshire—House-Surgeon and Dispenser: £100 per annum, board, and residence.
GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.
GUY'S HOSPITAL—Assistant-Physician.
HALIFAX INFIRMARY—House-Surgeon: £80 per annum, increasing to £100, with board, lodgings, and attendance.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NORTH UIST—Parochial Medical Officer.
NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £100 per annum, rooms, board, and washing.
RADCLIFFE INFIRMARY, Oxford—Dispenser: £80 per annum, board, and washing.
ROTHERHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £600 per annum.
ROYAL INFIRMARY, Dundee—Resident Medical Superintendent: £200 per annum, bed, board, and washing.—Medical Assistant: £50 per annum, bed, board, and washing.
ST. HELEN'S (Isle of Wight) URBAN SANITARY DISTRICT—Medical Officer of Health: £25 per annum.
THIRSK UNION, Yorkshire—Medical Officer and Public Vaccinator for the Knayton District: £21 per annum, and fees.
TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £100 per annum, furnished apartments, coals, gas, and attendance.
UNIVERSITY COLLEGE HOSPITAL—Surgical Registrar.
UNIVERSITY OF LONDON—Assistant Registrar: £500 per annum.
UXBRIDGE RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum.
YORK DISPENSARY—Two Resident Medical Officers: £130 per annum, furnished apartments, coals, and gas.
YORK RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- FRASER, John, M.B., C.M., appointed Medical Superintendent of the Fife and Kinross Asylum, vice *J. Batty Tuke, M.D., resigned.
*HOFFMEISTER, W. C., M.D., appointed Honorary Consulting Physician to the Royal Isle of Wight Infirmary, Ryde, vice H. B. Leeson, M.D., deceased.
HUTCHINSON, George Wright, M.D., appointed Medical Officer to No. 1 District, Chipping Norton, Oxon., vice W. Josiah Smith, Esq., deceased.
PARNEN, Gerald C., Esq., appointed House-Surgeon to the Worcester General Infirmary, vice Mr. Charles E. Hardyman, resigned.
SAMUELS, A., M.D., appointed Physician to the Hospital for Consumption and Diseases of the Chest, Liverpool.
*WILLIAMS, D. M., L.K.Q.C.P.I., appointed Physician to the Hospital for Consumption and Diseases of the Chest, Liverpool.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

- HEWITT.—On February 5th, at Winkfield, near Windsor, the wife of *Tom S. Hewitt, M.D., of a daughter.
HOAR.—On January 30th, at Maidstone, the wife of *Charles E. Hoar, L.R.C.P., of a daughter.

MARRIAGE.

- HEDLEY, John, Esq., Surgeon, Yester House, Middlesborough, to Mary Elizabeth, eldest daughter of Edward Williams, Esq., Cleveland Lodge, Middlesborough-on-Tees, on January 25th.

DEATHS.

- SMITH, W. Josiah, Esq., Surgeon, at Chipping Norton, aged 37, on January 17th.
*WATKINS, David Rees, Esq., Surgeon, at Carmarthen, on February 2nd.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Thomas Bryant, "A Case of Tumour of the Lower Jaw, and a Case of Tumour of the Frontal Sinus and Orbit"; Mr. Henry Smith, "The results of Three Hundred Cases of Hæmorrhoids and Prolapsus treated by the Clamp and Caustery."

TUESDAY.—Royal Medical and Chirurgical Society, 8 P.M.: Ballot. 8.30 P.M.: Mr. Gant, "Case of Excision of the Knee-joint for Disease in a Woman 53 years of age"; Mr. Callender, "Removal of a Needle from the Heart"; Mr. Lawson Tait, "Case of Gastrotomy for Extrauterine Pregnancy."

WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Wm. Squire, "On the Periods of Infection in Epidemic Disease."

FRIDAY.—Clinical Society of London, 8.30 P.M. The President's Address. Mr. Arnott will exhibit a Patient, on whom a Soft Cancer in the Parotid Region has been treated by Caustics: no return of the disease after four years. Mr. Thornton will relate Two Cases of Thyrotomy for the removal of Growths from the Larynx. Dr. Morell Mackenzie, "On the results of Thyrotomy for the removal of Growths from the Larynx."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. KIDD.—We have treated Dr. C. Kidd with infinite patience, and we shall make one more effort to bring him to reason. 1. To say that forty-six deaths are to be found in "Sabarth", is not a reference. A reference is to state the full title of the book or journal, page, and date, where these deaths are recorded; and to make the reference of any value, each of them should be looked up in the original when accessible. 2. To say that a prize has been awarded, of unstated amount, by an unnamed donor, and an unnamed adjudicator, is not to give the particulars of a "prize-essay". We must remind Dr. Kidd that no amount of irritation which he may feel in differing from us in these regards, will excuse the extravagant improprieties of expression and imputation in which his letters abound.

DRIUTT TESTIMONIAL.

MR. HAYNES WALTON, the Treasurer, begs to acknowledge the receipt of the following subscriptions since Wednesday, January 15th.

	£	s.	d.		£	s.	d.
Mr. Alfred Brooks.....	10	10	0	Mr. C. Greig, Clifton	1	1	0
Dr. Andrew Clark.....	5	5	0	Dr. Minter, Southsea	1	1	0
Dr. Marion Sims, New York	5	5	0	Mr. A. B. Squire	1	1	0
Mr. Thorn	5	0	0	Dr. Wilkinson	1	1	0
Dr. G. Buchanan	2	2	0	Dr. A. Wiltshire	1	1	0
Mr. H. Bullock.....	2	2	0	Dr. Fraser	1	1	0
Mr. Wm. Druitt, Winchester	2	2	0	Professor Tuson.....	1	1	0
Rev. C. J. Ackland	2	2	0	Dr. Tidy	1	1	0
Lady E. Cornwallis	2	2	0	Dr. Northcote Vinen	1	1	0
Mr. Greenway, Plymouth ..	1	1	0	Mr. Christopher Buckle	0	10	0

Subscriptions may be sent to the Treasurer, Mr. Haynes Walton, 1, Brook Street, Hanover Square; to the Secretary, Mr. A. Norton, 6, Wimpole Street; or be placed to the account of the "Druitt Testimonial Fund", Union Bank, Argyle Place, Regent Street, W.

Amounts received will be acknowledged in the Medical Journals.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

EXAMINATION OF VOLUNTEER MEDICAL OFFICERS.

SIR,—In the new orders issued from the War Office, and printed in the *Volunteer Service Gazette* of Saturday last, it is stated that medical officers, in order to become efficient and draw the grant of £2 ros., must obtain a certificate of proficiency. I shall be glad if you can inform us the course to be adopted to get that certificate, and, if there be an examination, the nature of it. I am, etc.,

ASSISTANT-SURGEON R.V.

*** We communicated with the War Office to ascertain the date and other particulars regarding the examination last week, but have as yet received no reply. We assume that arrangements have not yet been made by the authorities for holding the examinations. The regulations state that "medical officers will be examined by a board consisting of the principal medical officer of the district and two other army medical officers." They have to certify that the successful candidate is well acquainted with the nature and intended application of the various articles composing the equipment of army hospitals in the field, and with the authorised means for the transport of sick and wounded soldiers, and the proper modes of employing them; that he has a competent knowledge of the treatment of the wounds and injuries to which troops are liable in the field, particularly with regard to the special circumstances of campaigning; and that he is acquainted with the duties to be performed by army medical officers in camps and bivouacs, and during marches, as named in Section 21, Sanitary Regulations for Field Service, pp. 82, etc., of the Official Code of Army Hospital Regulations. The officers about to be examined will proceed to the place appointed at their own expense.

DR. McCULLOCH will, we think, find in the Report all the information which can be readily given, and such as will well afford adequate guidance to any attentive reader.

X. Y. B.—We know of no such register.

THE UNIVERSITY OF LONDON.

SIR,—On reading the very sensible and practical letter of "M.B.Lond." in your JOURNAL of January 11th, with regard to the examinations, etc., of the medical graduates of the London University, it occurred to me that one or two other points might be urged in their favour. In the first place, why should not all the examinations, previous to final or degree examination, be held twice instead of once in each year? and this should relate to all undergraduates, whether in arts, science, law, or medicine. In the second place, why not, after matriculation, require a candidate to pass a certain number of years at a school of medicine (say four years for the M.B.), and attend certain courses of lectures; and having done this, to present himself for preliminary scientific first or second M.B. examinations when he may think fit? At present he has to wait a long interval between each, as well as to attend hospital practice and lectures, so that if a candidate should be unsuccessful at either examination, or begin his university career rather late and with limited means, the probability is that he would have to undertake duties where no school of medicine existed, and consequently must give up all hope of graduating, from not being able to attend further lectures and hospital practice. The graduates in medicine have to pass more examinations than any of the others before taking their degree; besides which, the latter are not required to attend any lectures nor reside in any particular place; consequently the regulations press very heavily on the former class. The University might concede these points and thereby extend its usefulness, which would be hailed as a great boon by many of its undergraduates. I am, etc., MEMBER B.M.A.

January 1873.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Feb. 1st; The Manchester Guardian, Feb. 5th; The Aberdeen Daily Free Press, Feb. 1st; The Bath Express, Feb. 1st; The Birmingham Daily Post, Feb. 3rd; The Glasgow Herald, Feb. 5th; The North Wales Chronicle, Feb. 4th; The Scotsman, Feb. 4th; The Exeter and Plymouth Gazette; The Newcastle Daily Chronicle; The Leicester Advertiser; The Western Times; The Bridgwater Mercury; The British Press and Jersey Times; The Londonderry Standard; The Sunderland Times; The Bedfordshire Times; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

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LECTURES ON THE PATHOLOGY, DIAGNOSIS, AND TREAT- MENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE III.—CHRONIC BRIGHT'S DISEASE.

Small Red Granular Kidney.—Synonyms.—*Outward Appearance of the Kidney in different Stages.*—*General History of the Disease.*—*Chemical and Microscopical Characters of the Urine.*—*Microscopic Appearances in the Kidney.*—*The Structural Changes are essentially tubular and intratubular.*—*Changes in the Blood-vessels of the Kidney.*—*Physiological Explanation of the Structural Changes in the Kidney and of the Condition of the Urine.*

IN my last lecture I gave you some account of acute Bright's disease, and I now proceed to discuss the subject of chronic Bright's disease. Cases of chronic Bright's disease arrange themselves, anatomically and clinically, in two very distinct classes. In one class of cases, the kidney is found small, red, and granular; in the other class, on the contrary, the kidney is large, pale, and usually smooth on the surface. The clinical history of the two classes of cases is as distinct as are their anatomical characters. For various reasons, it will be more convenient to take first in order those cases which are associated with the small red granular kidney. In the Nomenclature of the Royal College of Physicians, the disease is designated "granular kidney"; with the synonyms "contracted granular kidney", "chronic desquamative nephritis", "gouty kidney".

Outward Appearance of the Kidney in different Stages.—I place before you drawings representing kidneys in different stages of degeneration. At no period of the disease is there enlargement of the kidney, but from the commencement a process of wasting occurs. In the early stage, when death has occurred from some other disease, the capsule is found adhering firmly to the surface of the gland, so that it is difficult to tear it off without bringing away some of the adherent glandular tissue. The fine lobular markings are less distinct than in the normal state, and the surface of the kidney is slightly uneven and granular. As the disease advances, there is progressive wasting of the glandular portion of the kidney, with granular unevenness of the surface and diminution of the thickness of the cortex; so that by degrees the bases of the medullary cones approach nearer to the surface of the gland. In extreme cases, the kidney may be reduced to one-half or even one-third of its normal size and weight. The cortical secreting portion of the gland is evidently the part chiefly implicated, while the medullary cones are nearly intact. The contracted kidney is somewhat firmer and tougher than natural. In all stages of the disease, one or more, sometimes numerous, serous cysts may be seen projecting from the surface, and varying in size from a pin's head to a pea, but sometimes as large as a filbert, or even larger. Even in the most advanced stages of atrophy, the organ retains more or less of its normal red colour and its vascularity; hence it is called the *red granular kidney*, to distinguish it from certain cases of chronic Bright's disease to be referred to hereafter, in which the kidneys are granular, but white and anæmic.

General History of the Disease.—Some general facts relating to the disease it may be well to point out now. The disease is essentially chronic from the commencement, and rarely, if ever, a sequel of an acute attack. Its commencement, therefore, is, as a rule, insidious, and in its early stages it is often unsuspected and latent. It is a comparatively rare disease in early life, not uncommon between the ages of twenty and thirty; but the majority of cases occur in persons at and beyond middle age. It is often associated with the gouty diathesis, as one of its synonyms indicates; and it is of common occurrence in persons who eat and drink to excess, or who, not being intemperate in food or drink, suffer from certain forms of dyspepsia, without the complication of gouty paroxysms. In some cases, the disease probably results from habitual exposure to cold and wet, and consequent suppression of the cutaneous secretion. There is reason to believe that chronic poisoning by lead is, at any rate, a concurring cause of the disease amongst painters and others who are exposed to the influence of this pernicious metal. Dr. Garrod was the first to direct attention to the influence of lead in the

causation of gout; and Dr. Dickinson states that, out of forty-two men exposed to lead-poisoning who had died in St. George's Hospital, twenty-six had granular degeneration of the kidneys, which in most cases was so advanced as to have caused death (*On the Pathology and Treatment of Albuminuria*). Allowing, as we must, that the lead had great influence, it is probable that habits of intemperance and other causes may have co-operated with the lead. Granular kidney is occasionally, though rarely, found as a sequence of the albuminuria which is associated with pregnancy. I have seen one well marked instance of this. The atrophy with granulation which results from passive congestion of the kidney consequent on valvular disease of the heart or emphysema with chronic bronchitis, has a different pathological history; and I shall refer to it on a future occasion.

During the progress of the disease which results in the contracted granular kidney, dropsy rarely forms a prominent symptom, and in the majority of cases it is entirely absent. The disease is often associated with hypertrophy of the left ventricle of the heart, even when there is no valvular defect or disease of the walls of the larger arteries to explain the cardiac hypertrophy. In a large proportion of cases, the immediate cause of death is uræmia or cerebral hæmorrhage.

Now, in the course of these lectures, I shall as much as possible avoid all controversial topics; but, in proceeding to give you what I believe to be the true account of the minute anatomy and pathology of this disease, I am bound to tell you that I dissent from the opinions of some pathologists for whom I entertain great respect, but not sufficient to induce me to follow them into what I believe to be an erroneous reading and interpretation of facts. Virchow, in his *Cellular Pathology*, states that there are three anatomical elements in the kidney—namely, tubes, vessels, and interstitial tissue; and, in accordance with this, there are three forms of Bright's disease—what he calls parenchymatous nephritis, having its seat in the tubes; amyloid degeneration in the blood-vessels; and interstitial nephritis, consisting essentially, as he believes, in thickening of intertubular tissue and consequent atrophy and granular contraction of the kidney. Virchow admits that two and sometimes all three of his forms of disease may coexist in the same kidney; and I maintain that in every case of Bright's disease all the tissues are implicated; the various forms of disease depending, not upon the implication of different anatomical elements in the morbid process, but upon the varying nature of the structural changes which these elements undergo in different classes of cases. I will endeavour to make this clear as I proceed. My doctrine with regard to the minute anatomy and pathology of the granular kidney is, that it consists primarily and essentially in a disintegration and destruction of the gland-cells which line the convoluted tubes, the *débris* of the gland-cells appearing in the urine as granular tube-casts; that the destruction of the gland-cells induces atrophy and contraction of the tubes; that this shrinking of the tubes, with some thickening of their membranous walls and of the Malpighian capsules, gives a delusive appearance of interstitial or intertubular formation of fibrous tissue; and that thickening of the walls of the arteries, the nature of which I shall presently describe, forms one of the most constant and conspicuous features of the disease; although this arterial change is entirely ignored by Virchow and his followers, who erroneously assume that the so-called amyloid or waxy degeneration is the only form of Bright's disease constantly and essentially associated with thickening of the blood-vessels.

Chemical and Microscopical Characters of the Urine.—You will find that the minute structural changes in the contracted kidney are rendered easily intelligible if you study them in connexion with the clinical history of the disease, and in particular with the chemical and microscopical characters of the urine. I have told you that the disease, although not exclusively of gouty origin, is often associated with chronic gout. Examine the urine of a man who has had repeated attacks of gout, and you will not unfrequently find in it the earliest indications of incipient renal degeneration. The urine may be of normal colour and specific gravity, and without a trace of albumen; but, after standing for a few hours in a conical glass, it deposits a light cloud, which, on microscopic examination, is found to consist of scattered granular *débris* and of tube-casts such as are represented in Fig. 14. These casts contain epithelial cells in various grades of disintegration, and hence arises their "granular" appearance. Every granular cast is not of necessity composed of disintegrated epithelium. Blood-corpuscles may become disintegrated within the uriniferous tubes, and appear in the urine as granular blood-casts, distinguished from granular epithelial casts by their reddish-brown colour, and often by containing some entire blood-corpuscles; so, disintegrated hyaline casts may assume a granular appearance; but by a comparison with other casts associated with them, and by noting the various grades of change, we trace them to their true source. The presence of granular epithelial casts and of scattered epithelial *débris* is evidence that a process of epithelial de-

squamation and disintegration has commenced in the kidney. In the earlier stages of the renal disease, the granular casts are found only during or immediately after a gouty paroxysm, and, as I have already



Fig. 14.—Granular Casts, composed of more or less completely Disintegrated Epithelium and Fibrine.— $\times 200$.

said, unassociated with albuminuria. In the intervals between the attacks of gout, no tube-casts are visible. At a later stage, granular casts and epithelial *débris* are always present in a greater or less amount; and the urine becomes albuminous, at first only during a fit of gout, the tube-casts also being more abundant during the paroxysm. At a still later period, tube-casts and albumen are more or less constantly present, though both may be absent even in the most advanced stages of this form of disease. Not only is the particular form of renal disease indicated by the microscopic appearance of the urinary sediment, but the number of granular tube-casts and the amount of epithelial *débris* indicate the rate at which the disease is progressing. The more copious the sediment, the more rapid is the destruction of the gland-cells, and the consequent atrophy of the kidney. In the more advanced stages of the disease, large hyaline casts are often found associated with the granular casts. (Fig. 15.) As the disease makes progress, the urine

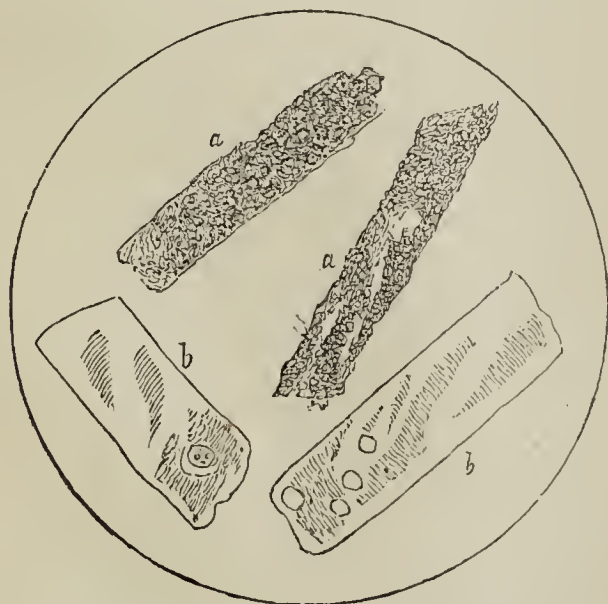


Fig. 15.—*a a*. Granular Casts. *b b*. Large Hyaline Casts.— $\times 200$.

undergoes remarkable physical changes. The quantity secreted is usually in excess of the normal amount; and with the increase of quantity there is commonly associated a loss of the natural colour and a diminution of the specific gravity, which, usually as low as 1010 or 1012, sometimes falls to 1005. The low specific gravity indicates a relative decrease of the normal solid constituents, especially of urea, uric acid, and extractive matters. In one of Dr. Christison's cases, the total solids discharged were reduced to one-fifth, and in another nearly to

one-twelfth, of the healthy average. This defective discharge of solids is partly explained by the rest in bed, the scanty diet, and the general anæmia. The amount of albumen varies considerably. Absent or scanty in the early stage, it may be rather copious in the middle periods, and again scanty or even entirely absent in the stage of extreme degeneration of the kidney.

Microscopic Appearances in the Kidney.—The kidneys should be examined as soon as possible after death, and before the appearance of their tissues has become changed by any antiseptic or hardening process. Thin sections of the cortex, made with a Valentin's knife, may be placed in a solution of common salt and water of specific gravity 1030, and then examined with a magnifying power of not less than 200 diameters. Dilute acetic acid brings out some of the appearances very distinctly. The chief changes will be found in the convoluted tubes, in the arteries, and in the Malpighian capsules and capillaries. In some tubes, the gland-cells have their normal appearance, or they are opaque and granular, with a clear central canal (see *ante*, Fig. 12). Other tubes are filled and rendered opaque with desquamated epithelium more or less disintegrated (see *ante*, Fig. 10). Others, again, present the characteristic appearance represented in Fig. 16. Their epithelial

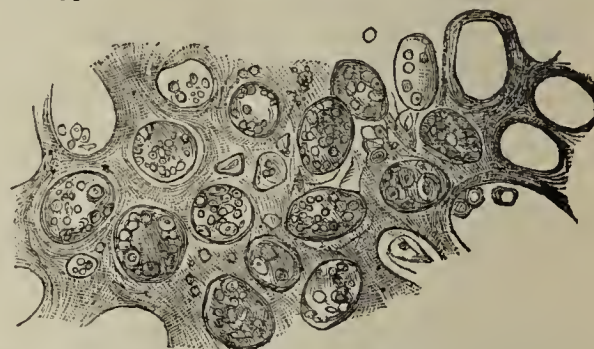


Fig. 16.—Transverse Sections of Tubes, containing only Granular *Débris* of Epithelium held in position by Coagulated Fibrine. At one end of the section, the contents of the tubes have been washed away, and the sections of the basement-membrane form three empty rings.— $\times 200$.

lining has become disintegrated and removed, appearing in the urine in the form of the granular casts before described (Figs. 14 and 15). A few granular particles of epithelium only remain, and these appear to be held together by fibrinous coagula. The transverse sections of tubes in this condition have somewhat the appearance of oval or globular cysts, and many years ago they were described as microscopic cells by a very able observer (see Mr. Simon's paper on Subacute Inflammation of the Kidney, *Med.-Chir. Trans.*, vol. xxx). When, in the same section, some tubes appear transversely divided, while others present themselves lengthwise, as in Fig. 17, all having the same



Fig. 17.—Tubes more or less completely denuded of Epithelium. Some transversely divided and cyst-like; others seen lengthwise.— $\times 200$.

general structure and contents, it is easily seen that the cyst-like appearance is given by transverse sections of partially or completely denuded tubes.

The number of tubes thus denuded of their epithelial lining varies much in different cases. In some kidneys, which to the naked eye present comparatively little deviation from the normal state, the destruction of gland-cells is found to have been very extensive. Other tubes are found, as regards their appearance and contents, in the same condition as those just now described, but apparently shrunken and atro-

phied, with wide interspaces between them—the interspaces being occupied by the remains of other atrophied tubes and capillaries (see Fig. 18). Atrophy of the tubes appears to be the usual result of



Fig. 18.—Tubes in process of Atrophy and Contraction after the Destruction of their Epithelial Lining, a few granular particles only remaining within them.— $\times 200$.

the destruction and removal of their gland-cells. But the opposite condition of dilatation is found in some of the tubes, which may be seen often as large as Malpighian bodies, and even larger (Fig. 19); and

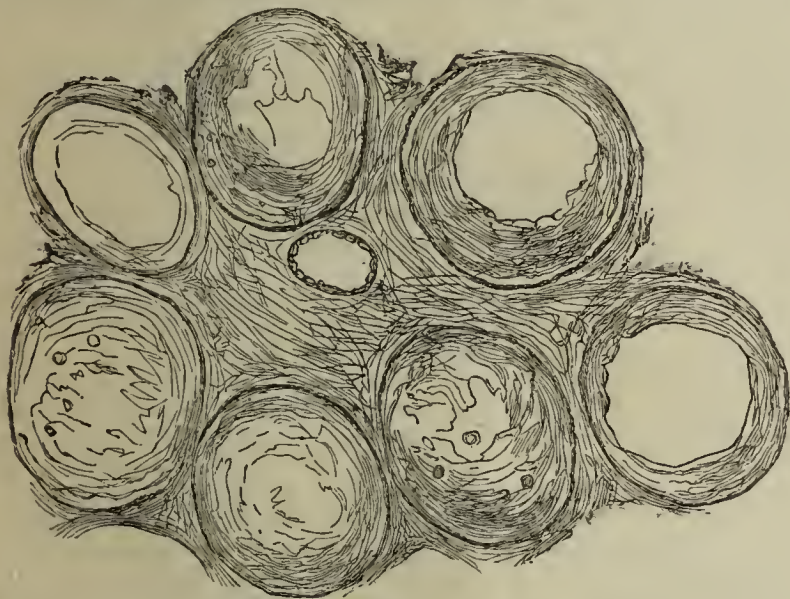


Fig. 19.—Transverse Sections of Dilated Tubes with Thickened Walls. In some sections, the open mouth of the dilated tube is seen—one section of a denuded tube of normal size.— $\times 200$.

there can be no doubt that these dilating tubes at length form the cysts which are visible by the naked eye.

There is yet another appearance of the tubes in the granular kidney, which probably has a close relation with the formation of dilated tubes and cysts. This appearance is represented in Fig. 20.



Fig. 20.—Sections of Tubes, in which a layer of Transparent Cells, each with a single Nucleus, has taken the place of the Normal Epithelial Lining.— $\times 200$.

The tubes are lined by layers of delicate clear-walled cells of a more or less rounded form, and each having a single nucleus. Some tubes in this condition may be found in every granular kidney, but their

number varies considerably. In most contracted kidneys, these round-celled tubes are relatively few in number; in others, they are very numerous; and I believe there is a special relationship between these tubes and the cysts with which they are usually associated. It can scarcely be doubted that renal cysts are dilated tubes; and it is probable that the tubes are dilated by the accumulation of a watery fluid secreted by these delicate cells, which I have described. This at any rate is certain, that the contracted granular kidney is the only form of Bright's disease with which, as a rule, cysts are associated; and it is in these kidneys only that we find tubes lined by the transparent cells in question. (See a remarkable case recorded by Dr. Conway Evans, *Pathological Transactions*, vol. v, p. 183. I examined the kidneys in that case, and can confirm the accuracy of Dr. Evans's description.) It is probable that the dilatation of the tubes, by their accumulated liquid contents, and their conversion into aqueous cysts, is favoured by the obstruction of their outlets through an accumulation and impaction of epithelial and fibrinous debris.

I have yet to mention that here and there in the cortex of the kidney a tube may be seen without gland-cells, and completely filled with disorganised fibrine, which, if it had escaped during life, would have appeared in the urine as a large hyaline cast (see Fig. 15). Sometimes, though rarely in this form of disease, a tube is found injected with blood which has escaped from ruptured Malpighian capillaries. In some few of the tubes the contents have undergone a fatty transformation; and oil-globules may be seen either contained within cells, or free and irregularly accumulated within the tubes.

The basement-membrane of the tubes usually appears to be somewhat thickened; and this thickening, together with the wide spaces between the tubes occupied by the atrophied remains of shrunk tubes and intertubular capillaries (see Fig. 18), has given rise to the doctrine of an excess or of a new formation of connective tissue between the tubes. Now, as I told you in my first lecture, there is in the normal condition no connective tissue between the convoluted tubes. In this statement I am in accord with Ludwig, who says, "No fibrillated connective tissue exists between the tortuous portions of the urinary tubules" (see Stricker's *Human and Comparative Histology*, New Sydenham Society's Translations, vol. ii, p. 106); and I show you thin sections of beautifully injected healthy kidneys, in which you can see that the intertubular capillaries are in immediate contact with the outer surface of the basement membrane, and that if anything intervenes, it is quite homogeneous, gelatinous, and structureless. In fact, the basement-membrane of the tubes constitutes the true and only connective tissue between the intertubular capillaries and the intratubular epithelium; therefore, whatever increase of this tissue there is—and it is much less in the granular kidney than in some large white or amyloid kidneys—is not an intertubular, but a tubular, thickening. It is obvious, however, that if we take into account the wasted tubes which remain in a shrunk condition after the destruction of their epithelial contents, there is in the granular kidney a relative excess of basement-membrane connective tissue.

There is often an appearance of fibrous connective tissue round the Malpighian bodies. I am not prepared to say that no connective tissue is ever formed external to and apart from the fibrous capsule of the Malpighian body; but I am convinced that, when the capsule is somewhat thickened, as it often is in the granular kidney, and then thrown into folds, the fibrous appearance which it presents, as different depths of the globular capsule are being focused into view, may very readily be mistaken for fibrous connective tissue outside and surrounding the capsule (see fig. 21).

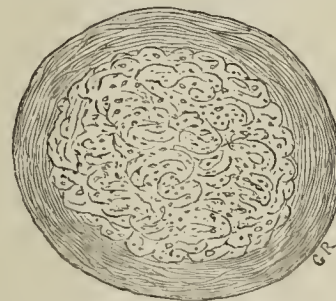


Fig. 21.—Malpighian Body—the Capsule thickened and having a Fibrous Appearance. The capillaries thickened and opaque; the nuclei visible in their walls.— $\times 200$.

In consequence of wasting and contraction of the tubes, some of the Malpighian bodies are brought nearer together, and three or four may sometimes be seen almost in contact with each other. Sections of dilated tubes, such as are represented in fig. 19, may easily be mistaken for Malpighian bodies; but in the sections of tubes the open mouth of

the cut tube may often be seen, and in the Malpighian bodies the capillaries, with the nuclei in their walls, are characteristic.

Now, to recapitulate; we have found the following pathological appearances in the tubes: the epithelium opaque and granular, in a state of cloudy swelling; the tubes crowded and opaque, with degenerated and disintegrated epithelium; some tubes deprived of their epithelium; some contracted; others dilated in various degrees; some lined by transparent uninucleated cells; others filled with unorganised fibrine, rarely with blood, or with oil; lastly, the basement membrane and the Malpighian capsules thickened, this thickening being often more apparent than real. All the changes which I have described, and which you may see in the specimens which I have placed under the microscopes on the table, are essentially tubular and intratubular. You see, then, with how little reason the contracted kidney is spoken of as the result of an essentially intertubular disease.

Changes in the Blood-vessels of the Kidney.—Amongst the most constant and interesting anatomical changes are those which occur in the minute arteries. The walls of the minute renal arteries present in the normal state two layers of fibres, an inner longitudinal and an outer circular layer (see Fig. 22). In the advanced stages of contracted gra-

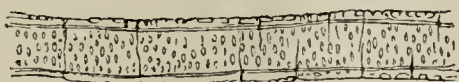


Fig. 22.—Normal Artery from the Kidney.— $\times 200$.

ular kidney, both these layers are much hypertrophied. The two layers remain quite distinct, and sharply defined. There is an excess of normal muscular tissue with no appearance of structural change or degeneration (see Fig. 23). The hypertrophy is usually most conspicuous

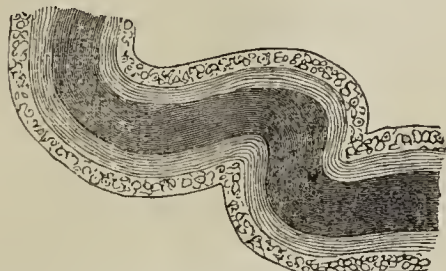


Fig. 23.—Artery, with Hypertrophied Muscular Walls, from the Kidney. An inner longitudinal and an outer circular layer of fibres, of about equal thickness. The canal is injected.— $\times 200$.

in the smallest arterial branches, and a comparison of the afferent artery of the Malpighian body in a healthy kidney with one from a small granular kidney will often show that the arterial walls in the latter are twice or even thrice the normal thickness.

A transverse section of an artery of larger size, such as is represented in Fig. 24, shows the projecting cut ends of the longitudinal layer of



Fig. 24.—Transverse Section of a Renal Artery, with Hypertrophied Muscular Walls. The inner longitudinal and the outer circular layer of fibres clearly seen.— $\times 200$.

hypertrophied muscular fibres surrounded by the outer circular layer. You may see for yourselves that, in the specimens under the microscopes, the appearances described are as distinctly visible as in the diagram.

I discovered this remarkable hypertrophy of the muscular walls of the renal arteries more than twenty years ago, and published the fact in the *Medico-Chirurgical Transactions*, vol. xxxiii. Since that time, I have found arterial hypertrophy in every contracted granular kidney that I have examined. It is not present in the earlier stages of the disease, but it comes on gradually, and proceeds, *pari passu*, with the structural changes within the uriniferous tubes. This thickening of the arterial walls from overgrowth of their normal muscular tissue is quite distinct from that structural change which I shall hereafter show you, and describe as the waxy or lardaceous degeneration of the blood-vessels.

The walls of the Malpighian capillaries are usually thickened and opaque, their surface sometimes smooth and wax-like, more commonly finely granular (fig. 21). The thickening of the capillary walls, together with that of the Malpighian capsule, tends to conceal the blood within the Malpighian capillaries, and gives the Malpighian bodies a dull grey appearance. The intertubular capillaries, and the veins into which they empty themselves, present no appearance of thickening.

Physiological Explanation of the Structural Changes in the Kidney.

—In a paper published long since (*Med.-Chir. Trans.*, vol. xxx), I designated the disease which I am now describing *chronic desquamative nephritis*. The term “chronic desquamative disease” is, I now think, preferable, since it implies no theory as to the inflammatory nature of the disease. The primary and essential structural changes consist in a desquamation, disintegration, and removal of the renal gland-cells; and the pathological process admits of the same physiological explanation as that which, in my last lecture, I gave of the acute desquamative disease. The changes in the glandular epithelium are the result of a modified cell-nutrition consequent on a morbid condition of blood associated with gout or with one or other of those derangements of the general health to which I just now referred as the usual antecedents of this form of renal degeneration. Gland-cells secreting abnormal products are themselves liable to become abnormal; and, when the process is long continued, the cells are apt to undergo decay and destruction. That appears to me to be the explanation of the disintegration and destruction of the renal epithelium. The wasting and contraction of the tubes, with some real and more apparent thickening of their basement-membrane, are results of the destructive changes in the gland-cells. I cannot explain the replacement of the glandular epithelium by the delicate cells which are found lining some of the tubes, and which, apparently, are intimately associated with the conversion of the tubes into serous cysts.

It seems probable that the copious flow of urine of low specific gravity is a result of the secretion of a watery fluid by the tubes deprived of their normal epithelium, and either denuded or lined by the thin-walled cells before described. This explanation is in accordance with the fact that the urine is usually more copious in the intermediate stages of the disease, when the denuded tubes are most numerous, than in the early stage, when the structural changes in the tubes are less extensive, or in the later stages, when many of the tubes are atrophied and obliterated.

The hypertrophy of the muscular walls of the minute renal arteries is best explained by reference to the analogous phenomena of apnoea. A ligature on the trachea of a dog destroys life in a few minutes; and the immediate cause of death is the arrest of the circulation through the lungs. The chest being opened immediately after death, the left cavities of the heart are found nearly empty; the right cavities, the pulmonary artery to its terminal branches, and the systemic veins, are much distended; the pulmonary capillaries are nearly bloodless; and the lungs consequently collapse to an extreme degree as soon as the chest is opened. Now, what is the explanation of this remarkable and abrupt stoppage of the circulation? The theory is that, when the respiratory changes are suspended by the exclusion of air from the lungs, the minute pulmonary arteries, under the influence of the vaso-motor nerves, so contract as to arrest the flow of blood into the capillaries. It is probable that an impression is conveyed by incident nerves from the pulmonary capillaries to the vaso-motor nerve-centre, whence it is reflected through vaso-motor nerves to the walls of the minute pulmonary arteries, which are thereby excited to contract. Similar phenomena may be observed during a fit of spasmodic asthma. Bronchial spasm narrows the tubes and lessens the supply of air to the lungs; then contraction of the minute pulmonary arteries in a corresponding degree checks the circulation. The skin becomes cold and blue, the pulse small and feeble, and the patient is apparently moribund. When the bronchial spasm relaxes, and the air again gets ready access to the pulmonary vesicles, the arterial contraction ceases, and respiration and circulation together again become free.

You will find the proximate cause of death from apnoea very clearly explained by Sir Thomas Watson in the last edition of his lecture on *different modes of dying*. Now phenomena precisely analogous occur in the kidney and probably in all glandular structures. There is the same intimate relation and interdependence between circulation and secretion as there is between circulation and respiration; in fact, the lung may be looked upon as a gas-secreting gland. When the secreting tissue of the kidney is partially destroyed, the gland is reduced to the condition of a lung receiving only a scanty supply of air, the working power of the gland is lessened, and it requires less blood. The minute renal arteries by their contractile power now regulate the blood-supply in accordance with the diminished requirements of the gland. This regulating contraction continues and increases, month after

month, year after year; and the physiological result of this persistent overaction of the minute renal arteries is that their muscular walls become hypertrophied. I will show you, hereafter, that a similar hypertrophy of the renal arteries occurs in other forms of chronic Bright's disease, but it is most constant and most conspicuous in the contracted granular kidney which we are now considering. The comparatively small amount of albumen in the urine, and its occasional absence in cases of contracted kidney, may be explained by the fact that, while there is but little compression of the intertubular capillaries by swollen tubes, and consequently but little passive engorgement of the Malpighian capillaries, the hypertrophied renal arteries, by their powerful contraction, prevent a too forcible influx of blood. Hence, too, it happens, that hæmorrhage into the tubes, which is so common in acute Bright's disease, rarely occurs in this chronic form of the malady.

[To be continued.]

EXTRACT OF AN ADDRESS

ON

UNIVERSITIES IN THEIR RELATION TO PROFESSIONAL EDUCATION.

*Delivered before the St. Andrew's Graduates' Association,
Saturday, February 8th, 1873.*

By LYON PLAYFAIR, LL.D.,

Member of Parliament for the Universities of Edinburgh and St. Andrew's.

IN medicine special schools have grown numerous, because Oxford and Cambridge neglected their duties as liberalisers and cultivators of professions. Though rivers will not flow back to the sources whence they came, yet, in the future, the sources may supply healthier waters to the streams than they have done in past times. So our English Universities, though they have lost their hold on the medical profession, may at least adjust a preparatory curriculum to suit it, and thus secure to medical students a liberal culture bearing on their future life before they begin their purely professional training.

Universities should understand that, if they desire society to uphold their ancient academic rights, they must show themselves willing to extend modern obligations to society.

I do not presume to give detailed schemes for the construction of the various academic roads which might lead through the faculty of arts to the professional faculties. For each of these would be the best adviser how the several roads should be constructed. All I venture to press is, that the roads should be sufficiently numerous not only to lead to recognised academic professions, but also to the great occupations of manufacturing and mercantile industries, which above all require to be mellowed by liberal culture.

As I have now the honour of addressing an audience chiefly composed of the medical profession, allow me to explain the attitude of hesitation, if not of opposition, which the Scotch universities have taken up in reference to a general and popular cry for a "one-portal" system of examination. This demand has risen from a just discontent with the laxity of examination on the part of some of the nineteen licensing bodies in the United Kingdom. It is contended that a single State examination would give better security for the qualifications of medical men than the separate licensing systems. No one can dispute the right of the State to fix its own standard of qualifications for licenses involving civil rights and affecting the health of its citizens. That right, as I have shown, was exercised as early as the thirteenth century, and it now receives full expression in the *Staats Examen* of Germany. But that, both in its former and present state, is a very different thing from the one-portal system which has been proposed for this country. In Germany the State examination was always supplementary to the academic curriculum. It was simply a state door through which the university trained student had to pass before he assumed civil rights of practice. But the one-portal system proposed for this country might be anterior to university or corporate graduation, so that the State license would be, instead of a supplement, a substitute for academic graduation. Any single licensing system must aim at a minimum and not at a maximum standard of qualifications. Suppose it aimed at a maximum, like the University of London, what would follow? Necessarily the ranks of the profession must remain empty. For London University, with its maximum standard, can secure annually only some thirty medical graduates from the whole of the kingdom and the colonies; while the medical register annually requires seven hundred additions. Under such a system the demand for medical men could not be supplied, and the public would suffer. Hence, clearly,

the one-portal system can only prevent a man from passing in under a minimum standard, but it cannot ensure higher qualifications. Yet such a minimum plan of licensing would govern the whole medical schools of the country, as surely as the main motive wheel in a factory governs the motions of a thousand bobbins.

Under such circumstances, the ornamental degrees of universities and corporations would have no more influence on medical education as a whole, than the brightly polished brass-work on the standard of an engine has upon its motive power. The qualifications of medical men would then be exactly what the minimum involved, and, except rarely, would be no higher. For all experience teaches us that the great bulk of students, with a compulsory examination before them, concentrate their vision on that alone, and refuse to look beyond it; so that teaching schools and universities must then teach down to this minimum, and not teach up to their maximum, if they are to preserve their students from mere crammers. It is this that has rendered uniform standards of examination so fatal to intellectual development, in every country where they have been tried. It is this that has made Germany abandon its old centralised system of State examination; for it is now carried on at the seat of each university, chiefly by the professors and partly by assessors appointed by the State. Even in this modified form it has much injured medical graduation, because students work for the essential license, and neglect the mere academic honours. Germany is the typical country of universities, for it counts twenty-four of them, and these contain 20,000 matriculated students. But its principle is to give to each university a separate autonomy and the utmost liberty of teaching and examination. It preserves for the State a right of proof that these functions have been discharged efficiently when civil rights are conferred; but it carefully makes the exercise of this right a mere supplement to a well-ordered university curriculum. This is well illustrated in the Bills now before the Prussian Parliament in respect to theological studies. The State proposes to ensure that every clergyman shall possess liberal culture; and with this view, whether Protestant or Catholic, he must go through a curriculum of classics, literature, philosophy, and natural science in the universities, and not merely in special seminaries. The examination in these subjects is to be in the hands of the State, and not in those of the bishops. The curriculum of study belongs to the university, the evidence of its fruition to the State. Such paternal functions of the State, even though chiefly exercised through university professors, are rather incomprehensible to us. Doubt is expressed in Germany itself, as to whether it is wise for the State to secure its ends by examinations; for Professor Planck, in his recent rectorial address at Munich, counsels the State to seek other means for obtaining good professional men than "its narrow and doubtful" examining system. While no country in the world has benefited so much as Germany by its university system, none, except China, has suffered so much as France by giving a preponderance to examination, and subordinating to that the teaching functions of universities. I have shown fully elsewhere (*Teaching Universities and Examining Boards*, Edmonston and Douglas, Edinburgh, 1872) how France now admits that the poverty of intellect displayed during her recent crisis was the consequence of her having sacrificed the national intellect to an uniform State-examining system.

It is not easy, in the short time at my disposal, to show you how Germany has managed to reconcile free university teaching with a State-examining system, without injurious consequences to intellectual development, but this has been well done by Mathew Arnold. Certainly German ideas of examination are as opposite to those which prevail in our universities as they can well be. With us examination is the end of university life, while in Germany it is the mere test of a well ordered course of study. All *specielle vorstudien* are expressly discouraged, and the examination aims at the proof that the student has attained *das Wesentliche und Dauernde*, or a substantial and enduring result of study. Under our examining systems cram flourishes; in Germany it has little existence, for the examination, which is a subordinate function of their university system, aims at the proof of intellectual development fitted for a future career of usefulness.

Let us apply these national experiences to the satisfaction of a reasonable demand, that the medical practitioners in this country should at least possess a minimum standard of efficiency. While the State has a right to demand that, it is clearly its interest and policy to effect its purpose in such a way as will insure maximum and not minimum qualifications. It is not wise to have uniformity either in teaching or in examination; for differentiation is as important in intellectual as it is in physical life. But a one-portal system is based on uniformity, and it would effect it as surely on the student as the single hole of the wire-drawer does upon the wire drawn through it. To avoid this, we now find the one-portal system abandoned for a three-portal system, one door of entrance being proposed for each section of the United King-

dom. No doubt this is better, for it would secure at least national differentiation, though it would still cramp professional development in each section of the country. The only justification for the interference of the State is the assumed position, that the nineteen licensing bodies, by their competition, have a tendency to lower qualifications. I doubt this as a fact, but I have no doubt whatever that a downward competition would be the inevitable result of a single examining board. Though the corporations, under conjoint schemes of examination, continue to give the licence in name, they will be virtually superseded in testing the fitness of candidates to receive the titles which they confer. It does not require a sage political forecast to know that such a conjoint system possesses neither the condition of permanence nor that of strength. Coherence it cannot have, for the public would soon doubt the wisdom of continuing corporate powers when they are exercised in name and not in reality; and, as soon as the danger becomes patent, the corporations will dissolve a voluntary union which saps their existence. Unless they wake quickly to a sense of their danger, the system may be rivetted by legislative action, as it would not surprise me to find this scheme part of the plan of university reform for Ireland in the present session. The corporations are not teaching, but licensing and examining bodies; and when they resign these powers to a conjoint body of examiners, it becomes very difficult to understand why provincial candidates, at least, should care to belong to them, or why the public should prolong their existence. I should regret their extinction, because I value them as productive of professional strength and of *esprit de corps*. It is by such unions that the medical profession possesses political power and influence. The effect of their absence may be seen in such incoherent professions as the merchant navy, which contains men of high qualifications, but possessing small power, from want of bonds of union such as the medical corporations afford. The only bodies which are likely to be long survivors of a conjoint examining system are the universities, for they have specific teaching functions, which would still remain after the corporations have been swallowed by the ogre of conjoint examinations. Should the State, under the influence of the popular cry, assume the function of examination, it would be productive of the least evil, if it limited that to strictly clinical subjects. The teaching bodies would then occupy themselves with laying down a sound scientific and systematic basis of professional knowledge; while the State would gain assurance that the practitioner could apply his science to the actual practice of his profession. A second contingency is possible, for present State interference may be the future forerunner of free trade in medicine; because, when the corporations succumb to the feeling of their inutility, and the State becomes disappointed with the results of a minimum examination, medical men as individuals may have to submit to whatever relations the State cares to establish with them. When legal recognition is asked by medical men from the State, it has a right to fix their qualifications in the interest of the public. That right follows legal recognition, and the bestowal of civil rights, but the State is not bound to repress irregular practitioners who demand no recognition; and the time may come, when the profession has yielded itself to the influence of the State, that the latter may look upon regular and irregular practitioners as outside its functions altogether. In other regions of politics—as, for instance, in regard to religion—there is a tendency for the State to cut itself adrift from complications of this sort. Under the present system the medical profession is in no danger, for it regulates its own affairs, and has little connection with the State. The less it has to do with it the better, if the dignity and independence of the profession be consulted. The Medical Council is not supported by imperial taxation, but by professional contributions. Though it is not constituted with that popular representation which ought to be the basis of such an assembly, it is in theory and in fact a representative body. Into this the State also sends members of the profession, always men of a representative character; and as long as it continues to do so, its right is not likely to be questioned, though it is doubtful in principle. The Medical Council needs reform, but this may be effected without subverting the teaching and examining functions of universities and corporations. I am sure, when the medical profession realises the disastrous effects which uniform examining systems have produced in other countries on national intellectual development, that it will be slow to introduce them into this kingdom, or to relinquish the independence of the profession for the doubtful advantages of direct State recognition. No doubt the Medical Council ought to take ample securities, either by efficient inspection or by participation in examinations, that every separate examining board never descends below a minimum standard of qualifications; but, in doing this, so far from seeking uniformity in examinations, they should encourage variety, and should welcome all aims at higher qualifications on the part of the examining bodies, stimulated to differentiation by whatever methods or

subjects their teaching staffs choose to introduce. It would, of course, be possible in a central examining system to have degrees of qualifications; but such a plan would assuredly destroy variety in teaching, still more effectually than a minimum test, because it would suppress university degrees and corporation honours, and substitute State uniformity in honours and in the means of attaining them.

After what I have said, you will see how impossible it is for me, as representing two Scotch universities, to yield to a popular cry of a one-portal system. It is a matter of indifference to Oxford, Cambridge, and the London University, whether they accept or refuse such a system. Their medical degrees, taken altogether, do not equal one of the universities which I have the honour to represent. The teaching functions of the English universities, as regards the professions, have little more than a nominal existence. The Scotch universities, both as to teaching and graduation, are in most intimate connection with the people of Scotland, and derive their whole strength from them. You recollect that even Hercules was not a match for the Libyan giant Antæus, as long as he was in contact with his mother earth, whence all his strength was derived; but when Hercules lifted the giant from the earth he lost his power, and was easily squeezed to death. The Scotch universities feel that a conjoint scheme of examination would part them from the people, and turn their strength into weakness. In Scotland there is one university student to every 860 of the population; but in England there is only one to 4020. The Scotch professional students are not unfrequently poor, yet they struggle to obtain a high education through their universities; for these are little more costly to them than the extra-academical schools. But, if you raise a conjoint examining scheme, to provide a minimum qualification, leaving to the universities the mere ornamental position of offering a more extended curriculum and higher qualifications, you expose the poor students to an irresistible temptation to be satisfied with the minimum, and to neglect the maximum. Academical teaching and honours in Scotland would then pass from the poor to the rich, as they have done in England, and the Scotch universities would be severed from the people, the sole source of their strength. With the remembrance of what happened to Antæus of old, are you surprised that they cling with all their force to the people, and decline to be severed from them, lest they receive the embrace of death from some Hercules in the guise of a medical officer of the Privy Council or Local Government Board? The Scotch universities will cordially welcome any system of thorough inspection of their examinations, on the part of the Medical Council, or they will willingly receive accessory examiners, who may be appointed by the Council; but they resolutely oppose a concentration of examinations, which all experience has shown to be most detrimental to higher intellectual culture.

I have now finished, and I trust I have convinced you that it is not only possible, but easy, to put our universities into harmony with active professional training. To do so, is only to bring them back to their original purpose of liberalising the professions. But liberal culture must have a wider meaning than it has now, if this harmony be re-established. Each profession has its own foundation of liberal culture. At present the universities try to build all professions on one uniform foundation, though this is as foolish as it would be to build a palace, a gaol, or an infirmary, on a single ground-plan common to all. The professions have indicated, by their special literary examinations, what their several foundations should be; and if the universities know how to extend their obligations to modern society, they should have little difficulty in again assuming their original purpose of affording a liberal culture to the professions. The universities would thus gain in strength, and the professions in dignity and in efficiency.

ON DILATATION OF THE CERVIX UTERI.

By HEYWOOD SMITH, M.D. Oxon.,

Physician to the Hospital for Women and the British Lying-in Hospital.

THE subject of the mechanical dilatation of the cervix uteri is of such importance, that its free ventilation in this JOURNAL should be welcomed by all gynæcologists; for, in treatment requiring special manipulation, improvement is to be looked for in proportion as the various workers discuss their various methods of procedure, and the details of their several mechanical appliances. Dr. Matthews Duncan's paper was characterised by his usual exactitude and method, and in his conclusion the following sentence contains the summary of his observations:—"It will be admitted that dilatation quickly, or by instruments which are not allowed to remain, is safer than, and, therefore, preferable to, dilatation slowly, or by instruments which are left for hours or a day in the passages."

My object in the present communication is partly to uphold the wisdom of this sentence, and partly to answer some objections which

Dr. Aveling has made to Dr. Matthews Duncan's teaching. I would, however, first remark, that the outline Dr. Duncan gives of the point of an "ordinary uterine probe" shows a far different instrument to that which we are accustomed to use "down south." His, as he says, "has a wedge-shape of so large an angle as to destroy almost entirely any wedge-like action which it otherwise might possess;" whereas our ordinary uterine sound has an olive-shaped point, which presents even a far better wedge-shape than the outline Dr. M. Duncan has given "of an urethral bougie." Dr. Aveling has arranged his objections under five heads, so that their consideration will be facilitated by quoting them.

"1. The uterus is not a body rigidly fixed, but one which, under very slight mechanical influences, tumbles about hither and thither; and this extreme mobility renders it utterly impossible for an operator to be certain that he is applying the wedge-force of the bougie in a proper direction."

Doubtless, the uterus is a movable organ, but not in all directions equally so. There is a restraint in one direction which makes it *quite possible* for an operator to know whether he is applying force in the right direction. Though some of the ligaments of the uterus, as, e.g., the utero-sacral and the utero-vesical ligaments, may be comparatively weak, yet the vagina itself holds the uterus steady for us in the very direction we want, viz., opposite to the force applied. The way to force a sound without having the uterus tumbling "about hither and thither" is, when the point is passed into the uterine canal as far as the obstruction, to let the sound lie in the interspace between the knuckles of the first and second fingers, using it as a fulcrum, the point of the first finger resting simultaneously upon the lips of the uterus and the staff of the sound, so as to detect any real onward advance of the instrument, while the second finger is pressed backwards and downwards, rendering part of the posterior wall of the vagina tense, and so keeping the uterus steady. Of course we must premise that the operator *does* know the direction in which he is to push the dilator along the canal; for no one should try to forcibly extend the canal until he has first introduced a fine sound that he may learn the direction.

"2. The dilating action of a metal grazing along the mucous lining of the canal is objectionable and unnecessary, as it may be avoided by using tents and other dilating instruments."

We want to avoid using tents where not actually necessary, as their retention renders septicæmia possible. I doubt whether the word "grazing" is quite the right term by which to describe the passage of a perfectly smooth well-oiled metallic stem, however tightly it may fit.

"3. The uterus may be in a spongy and flaccid condition, capable of being bent upon itself by the pressure of the point of a bougie acting on either side. In such a case, the extreme liability of the bougie penetrating the side upon which it impinges is obvious."

In the condition thus described, it surely would not be advisable to attempt *forcible* dilatation. A "spongy" uterus would need local bleeding and otherwise bracing up before it would be fit for such an operation.

"4. The cavity of the uterus varies in length, so as to make it difficult to determine whether the point of the bougie have arrived at the internal cervix or the fundus uteri. If it, by mistake, be 'urged through' the latter, serious consequences might follow."

I suppose here "cervix" is a misprint for "os." Let us consider this case. The sound is arrested, say, at two inches and a quarter, is it stopped by narrowing of the internal os, or by the fundus uteri? If by the former, a careful examination would reveal a very large and doubtless thickened cervix, with a long and probably indurated vaginal portion, and the rest of the uterus would be felt either *per abdomen* or be found *per vaginam* to be flexed. Should we, however, meet with umbilical pain, a small thin or conical cervix, and perhaps be able to feel but little tissue between the point of the sound and the hand outside, we may conclude that we have reached the fundus, and that it would be unwise to proceed farther. Besides, if the uterus is so very movable, perhaps we might move it until one could feel the whole organ.

"5. In narrow strictures a thin bougie must be used; and the more resisting the stricture and the thinner the bougie, the greater is the risk of the uterine walls being penetrated."

In these three last *objections*, reference has been made to perforation of the uterus. I should have almost thought that all were agreed that the uterine sound or probe should be held as lightly as any other probe, and nearly allowed to find its own way into the uterus. There is a great advantage in making the sound with a very small handle like a catheter, in order that it should not be held like an "uterine poker," as some have slightly called it. I am aware that an uterus may be so diseased as to allow the passage of a sound through its walls with facility and without any bad result, but such a case would not be a subject for forcible dilatation.

The reason why dilatation of the cervix often fails and produces mischief is, that tents are used when the cervix is not in a fit state to receive them; sufficient care not being taken to try to find out whether there is the least trace of deposit from any former inflammation, for such deposit is ever apt to become the seat of subsequent mischief.

Provided these precautions are taken, the method of dilatation usually pursued by my father (Dr. Protheroe Smith) seems to commend itself as rational. He commences by slightly incising, with a single knife per speculum, the external os bilaterally, and this chiefly with the view to the relief gained by the loss of blood, the uterus being thereby rendered less liable to take on inflammation. Then, after a few days, when the uterus has been gradually accustomed to the introduction of the sound, he introduces his uterine dilator, which is like a lithotrite, and rather pointed, the blades being separable by a screw having an index to mark the degree of dilatation. This is to be used gradually—the separation of the blades being regulated by the pain experienced; on pain being indicated, the blades are closed and the instrument withdrawn. This should be repeated, as it can be borne, until at last it will be found that the cervical canal has been well dilated. If desired, a small knife can now be passed up and the constriction of the internal os divided. After such dilatation, a metallic expanding intrauterine stem may be worn with but little inconvenience. The great object to be aimed at in the dilatation of the cervix uteri is that, the requisite dilatation once attained, the uterus should not easily return to its constricted state.

POISONING BY CARBOLIC ACID.

By DAVID FERRIER, M.D.,

Professor of Forensic Medicine in King's College.

ON Friday, January 31st, I was asked by my friend Dr. Saltern G. Litteljohn, to examine with him the body of a boy named John Winter, aged 7, who was found, early the previous morning, lying on the floor of his dormitory in the Central London District School, Hanwell, in a moribund condition, and who died in the course of a few hours under what were considered very obscure nervous symptoms. The lad was of the strumous diathesis, with enlarged head, and had been occasionally ailing some time previously. These circumstances, with the state of coma in which he was found, led, in the absence of any other positive fact, to the supposition that the case was one of obscure cerebral disease suddenly manifesting itself. The results of the *post mortem* examination detailed below led me to inquire more fully into the circumstances under which he was found; and the following notes were furnished me by Dr. Litteljohn.

About four o'clock in the morning of Thursday, January 30th, the nurse in the ward was awakened by loud stertorous breathing; and, on rising to inquire into the cause, she found the lad John Winter lying in an unconscious state on the floor of the dormitory, half way between his bed and the cupboard at the end of the ward. The nurse thought he had been seized with a fit, and at once put him to bed. Dr. Litteljohn arrived in the course of a few minutes, and found the boy in a state of complete stupor, with total muscular relaxation and anæsthesia. The breathing was stertorous; the pulse feeble and rapid, 160 in the minute. The temperature was greatly lowered; the pupils were strongly contracted; saliva flowed from the mouth. Without knowing anything further of the case, Dr. Litteljohn first administered an emetic of sulphate of zinc, and endeavoured to induce vomiting, but without success. Hot blankets were applied to the feet and abdomen to raise the temperature, and an injection containing brandy was given *per anum*, as the power of swallowing became lost. All efforts to rouse the boy proved unavailing. The respiration failed, the pulse became imperceptible, and death took place at 10.45 A.M., about seven hours after the symptoms were first observed.

On Friday, twenty-four hours after death, we made the *post mortem* examination. Cadaveric rigidity existed, but not to any marked degree. No traces of injury could be seen, nor were any marks about the mouth and lips perceptible at the time. On opening the head, the cerebral sinuses were found greatly distended with dark fluid blood, with here and there small soft coagula. All the cerebral vessels were in a similar state of congestion. There was a comparatively small amount of fluid in the subarachnoid space, and in both lateral ventricles; but, with the exception of slight thickening of the membranes at the base of the brain, nothing otherwise abnormal could be detected in the brain itself or in the medulla oblongata. During careful scrutiny, we perceived a faint but unusual odour; but it was not till the thorax and abdomen had been opened, when the same odour was intensified, that we at once identified it as the odour of the ordinary impure com-

mercial carbolic acid. Our attention being drawn to this more particularly, we had no difficulty in detecting the odour, especially in the ventricles, and the nature of the case before us became manifest. There was general venous congestion in the thorax and abdomen, the blood being very dark and fluid. The lungs were congested and oedematous; and emphysema, both vesicular and intercellular, was well marked; the visceral pleura being raised in bullæ in several places over both lungs. The heart was quite empty; the left ventricle strongly contracted; the right more flaccid, but also empty. No coagula existed in the great vessels. The lungs, and the blood and fluid which escaped from them on section, exhaled the carbolic acid odour. Through a slight accident in removing the stomach, a small portion of its contents escaped into the pleural cavity. In these the odour of carbolic acid was most distinct. The mucous membrane of the mouth, throat, and œsophagus, was white, sodden, and corrugated, but not detached. The mucous membrane of the stomach, examined afterwards, was of the same character; at the cardiac end there was some injection, but no capillary hæmorrhage was observed. These membranes smelt distinctly of carbolic acid. The smell could also be perceived as far as the upper part of the jejunum, but not in the rest of the alimentary canal. The liver, spleen, and kidneys, were hyperæmic—all having a slight odour of carbolic acid—but the kidneys had a mixed odour of urine and carbolic acid. The bladder contained about eight ounces of urine, which when drawn off was observed to have a slight olive-greenish tint, and a peculiar mixed odour. It contained no albumen.

The appearances described, combined with the odour, were of themselves quite diagnostic of poisoning by carbolic acid; but, as confirmatory evidence, I applied, with the materials at my disposal, some tests to the urine and contents of the stomach, in a rough manner, reserving the rest for further analysis if necessary.

Bromine water (Landolt's test), applicable to the urine directly, was used, and a copious yellowish precipitate of tribromophenol was yielded by about a cubic *centimètre* of the urine. The amount of the precipitate was such as to indicate, without doubt, the abnormal existence of carbolic acid in the urine. Aware, however, of the statements of Städeler, Landolt, etc., that carbolic acid is a normal constituent of urine, and that in normal urine, in quantity about 500 cubic *centimètres*, a precipitate may be obtained of tribromophenol, or at least a substance which yields phenol when treated with sodium-amalgam, I reserved the urine for further investigation, more on chemical and physiological grounds than for confirmation of the fact of poisoning by carbolic acid. On examining the urine seven days afterwards (it having been kept in a corked bottle half full), I found that it had changed into a dark brown liquid, like the urine frequently observed when carbolic acid has been administered in small doses internally, or when carbolic acid lotions have been long applied externally. It had suffered little or no decomposition. This was a strong confirmation, if not demonstration, of the view that the dark colour of the urine observed under the conditions mentioned is due to oxidation-products of carbolic acid, and not to altered blood-colouring matter, as has been supposed by some. The oxidation had taken place outside the body, no doubt under the same conditions as lead to the urine being passed of that colour. This was interesting, as showing the passage of carbolic acid unchanged through the organism—a subject which has been investigated by Salkowski and others, and of interest in a therapeutical point of view.

In order to determine if any free carbolic acid still existed, I distilled the urine by itself, without the addition of sulphuric acid, in order to avoid such a fallacy as Hoppe-Seyler has pointed out—viz., that the action of sulphuric acid may develop phenol from indican, or some allied substance, existing normally in urine. The distillate yielded a distinct reaction with bromine water; thus indicating that the carbolic acid had passed into the urine unchanged, or at least partly so, and that the process of oxidation had gone on outside the body.

By distilling the liver and contents of the stomach with sulphuric acid, I obtained a distillate in each case giving the reaction, with Landolt's test applied to about a cubic *centimètre* of the liquid. Landolt's test is by far the most delicate for carbolic acid, in such small amount as can be obtained by distilling substances containing it themselves in such minute quantity. I could not obtain the reaction with perchloride of iron, or ammonia and chloride of lime, with such portions of the unconcentrated distillate as yielded Landolt's reaction distinctly. I may mention here, that the blue-colour reaction which is developed in very dilute solutions of carbolic acid by the successive action of ammonia and chloride of lime is one which requires considerable care in its application, and does not manifest itself speedily when performed in the ordinary manner; it may be obtained readily, in a short time, by placing a few drops of the solution on a porcelain lid, adding a drop of ammonia, and the placing on the surface a small

clot of chloride of lime. The blue colour rapidly appears round the particle of chloride of lime, and soon becomes intense and characteristic.

Dr. Litteljohn informs me that, in the course of another day after the *post mortem* examination, a roundish parched-like spot, different in colour from the surrounding skin, had developed itself on the lips. This was valuable evidence of the source of the poison. It seems that the boy had been given to pilfering from the cupboard in which the nurse kept some of her own things. At the time she had in this cupboard a pint bottle, containing a strong solution of commercial carbolic acid for scrubbing purposes. The mark on the lips indicated that the boy had put this bottle to his mouth, thinking it contained something to drink, and that, having discovered his mistake, he had endeavoured to make his way back to bed, but had fallen down before he had got more than half way. Without having made any quantitative analysis, I judged that the quantity swallowed could not have been large, but it would be impossible to state anything definite regarding it. Death must have taken place within eight hours.

NOTES TOWARDS THE HISTORY OF THE MEDICAL STAFF OF THE ENGLISH ARMY PRIOR TO THE ACCESSION OF THE TUDORS.*

By W. R. E. SMART, C.B., M.D.,
Inspector-General, R.N.

[Concluded from page 141 of last number.]

THE next page of the history of the English army lies in the reign of Edward III, the glorious grandson of Edward I. It embraces the wars of that monarch for the crown of France, by claim through his mother as daughter of Philip IV, and is filled with the records of Crecy, Calais, and Poitiers, and of the great naval victories of Sluys and Winchelsea, but it closes with the surrender of all the hereditary possessions of the Plantagenets in France. In these wars the very principle of feudal service was undermined, and the army and navy of England first became "royal services" in the pay of the king, as it was not possible to carry on such wars on the feudal principle of forty days' service in the field.

The muster-roll of the great army with which King Edward invaded France in 1346 is extant; but with regard to its medical staff it is silent, except that the "Welsh," or British, who appear therein for the first time as a distinct body of troops in the continental wars, under the banner of the Black Prince, had an attendant physician of their own race.

Froissart makes no mention of any distinguished surgeons, nor does he allude to any services of members of the medical profession. It is inconceivable, however, that so large an army, whose stay in France was protracted, and which was greatly harassed by sickness, could have been less considered and provided for in this particular than was the army of the king's grandfather in the invasion of Scotland, A.D. 1300. It is more probable that the great barons who brought their contingents for the king's service, receiving the pay for their followers, had the engagement of surgeons, among others, in their own hands; and thus, as we know nothing of the economy of those separate contingents, we must ever remain in the dark concerning the medical affairs of the great army that won Crecy.

The age was one of general progress and of consolidation of Normans and British into the English nation, and yet there are no tangible proofs of progress in the manner in which the fighting men were cared for when wounded or sick. Our national records prove that the king esteemed very highly the medical services rendered to himself in England, and was bountiful in rewarding those who performed them, and this makes the silence of chroniclers on this point the more unaccountable.

The first half of the fourteenth century was the era of the moulding of our profession into its present form. Our universities were established and granting degrees in medicine. Physicians were men of such education as to make them masters of colleges and teachers of the natural sciences, and to lead to their employment on diplomatic missions which had been mainly the province of churchmen.

Gilbertus Anglicus had written his work on medicine, that proves him acquainted with the writings of the Greek and Arabian physicians, which he condensed before A.D. 1220.

John Arden, the first English writer on surgery, lived at Newark 1349 to 1370, when he settled in London, obtaining celebrity in both

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

places by his treatment of fistulous tracks. His work is entitled "A Treatise on Fistula in the Fundament and other places, and Impostumes causing Fistulæ." He was a self-taught man, like Frere Jacques.

Anatomy was taught at Bologna, 1315 (under prohibition from Rome), and soon afterwards at Montpellier and Paris. The father of modern surgery, Guy de Chauliac, laid its foundations in France, and a college of barber-surgeons was instituted, 1371. In England the barbers were obtaining corporate strength in the city of London, where supervision by one of their order was instituted in 1308 A.D. Another step in advance was recorded in 1354, when, by order of the municipal council, a prior and three surgeons of the city were directed to make inquest of the results of treatment, by John le Spicer, of Cornhill, of a severe wound of the jaw, and they reported that it had become "apparently incurable through want of skill" on the part of that practitioner, whose name is suggestive of his being an apothecary and not a surgeon.

In A.D. 1369 three master surgeons of the city were sworn at Guildhall to inspect and superintend the practice of barbers; and in consequence of surgery (minor) being pursued as a calling by unknown barbers from the country, and by women, an order was given, A.D. 1376, that two master barbers of the city should examine barbers, and that none not possessing their licence should be admitted to the freedom of the city. Thus we see that in England surgery was fostered in its infancy by municipal rules rather than by state laws or charters. The facts concerning the *master surgeons* of the city of London point out emphatically that there were then professors of the art who were not mere barbers, and there is a military instance proving that these were in high repute.

In the year 1344 Robert, Count of Artois, conducted an English army in Brittany, and took the fortress of Vannes, which was shortly after retaken. Froissart relates—"Sir Robert was sore hurte, and scapped hardly untaken. He taryed a season in Hennebon, and at last he was counsayled to go into England to seke helpe for his hurtes; but he was so sore handled on the sea, that his soores rankeled, and at last landed, and was brought to London, and within a short time after he dyed of the same hurtes and was buried in London in the church of Saynt Paule, with great honour." This instance shews that in 1344 the skill of the master surgeons of London was famed.

Guy de Chauliac, who flourished at Avignon and Lyons in the reign of our Edward III, in classifying the surgeons of his day, states that those who attended the armies were chiefly Germans, who used charms, potions, oils, and wool in their practice; and we have no means of judging whether the English army surgeons were more enlightened or not. It is not likely that they were, as such practice with boiling oil for gun-shot wounds, under the belief of their being poisoned wounds, continued until Ambrose Paré demonstrated the fallacy which had so long occupied the mind of all army surgeons.

There is another military incident of this period, the record of which will be found in Rymer's *Fœdera*, which may be adduced as the first known instance of a medical board to decide the question of capability to serve. It happened after the battle of Poitiers, A.D. 1356, that a question arose between Sir Denys Morbek, Knight, and Bernard de Froyes, Esquire, as to which of them King John of France had surrendered. The issue was left to the ordeal of battle; and before King Edward III departed for France, in 1359, he directed that the disputants should appear before him wherever he might be on the next Candlemas, to fight their duel. Before that arrived, Sir Denys declared himself unable to proceed, and thereon the King's Council ordered a survey of his person, the particulars of which are very clearly reported in the official document, a letter patent bearing the sign manual. Sir Denys was visited by a knight, the Dean of Lichfield, and two clerks of the chancery, who recited to him the circumstances of the appeal to arms made by Bernard de Troyes at Sandwich prior to the king's departure into France. To this he replied stating his incapability of following the king, through his illness, which confined him to bed. "And in order to know better the truth that the said Denys did not feign, they caused him to expose his body, arms, hands, and feet, and after seeing these it was the opinion of the surveyors, and also of the notaries, physicians, surgeons, and all others present, that on this account the said Denys was, by his disease in body and limbs, so wasted, broken down, dried up, and debilitated that he could scarcely recover, unless God wrought on him a miracle.

"And the said Denys made oath to the same on the Holy Gospels, and also Master John Paladyn, Mire, and John of Cornhill, Surgeon, examined thereon, swore on their oath on the Holy Gospels, and on their honor, and on peril of their souls, that the said Denys was so enfeebled by the said disease that he could not help himself, nor move foot, leg, arm, or hand without aid."

During the next five years Sir Denys received small sums from the

Exchequer, and after his death the widow* who had nursed him made application to it for the expenses of his last days and burial. Such was the end of a brave soldier, to whom a King of France was said to have given his glove in token of surrender.

The part of the medical profession in this business is interesting to us, as it shews most clearly that about the era of Crecy and Poitiers professional opinion was made the turning point for decision of a question of military honour and discipline, and that the process was guarded by very strict forms.

With regard to Master John Paladyn, Mire, and John of Cornhill, Surgeon, it may be asked—Were they, or had they been, army surgeons, as they were engaged on this essentially military decision?

Master John Paladyn was styled "our physician" by the king.

John, of Cornhill, was probably a master surgeon of the City of London, like Master Paschal, Master Adam de la Poleterie, and Master Davidde Westmorland, whose names appear in 1354 A.D. I consider it possible that men of that class may have derived their eminence from service with the king's army, just as we know that the great Ambrose Paré—who made for himself, two centuries later, the reputation of Master Surgeon of Europe—divided his time between service in the field and his barber-surgeon's shop in Paris.

Of the state of medical practitioners in London in the reign of Edward III we have the direct evidence of Chaucer, father of English poetry, in his *Canterbury Tales*.

"With us ther was a Doctour of Phisike,
In all this world ne was ther non him like
To speke of phisike, and of surgerie:
For he was grounded in astronomie.
He kept his patient a ful gret del
In houres by his magike naturel.
Wel coude he fortunen the ascendent
Of his images for his patient.
He knew the cause of every maladie,
Were it of cold, or hote, or moist, or drie,
And wher engendred, and of what humour,
He was a veray parfaite practisour.
The cause yknowe, and of his arm the rote,
Anon he gave to the sike man his bote."

In this there is the combination of physician, surgeon, and astrologer, who was also a good linguist, skilled in the writings of the ancient Greek and Arabians—a master in the science and literature, as well as in medicine and surgery. The moral grandeur of his character, when surrounded by much that was degrading to that of his companions on the pilgrimage, is delicately wrought out in the purport of his exquisitely told tale, where "men may see how sin hath his merite."

"The worm of conscience may arise
Of wicked lif, though it so privee be,
That no man wote thereof sauf God and he."

Whether Chaucer formed this flattering ideal at court or in camp, or in both, we may not find. At the former, Master John Paladyn, the king's physician, was before him; and in the camp he, as a man of letters, would have associated among such as "speke of physike and of surgerie" from their equality of rank, as "vassaletti." His military service seems to have been rendered in 1360 A.D., at the age of thirty-two, when ardent minds are most open to receive lasting impressions, and to form types of character with mental record for later use. The pilgrimage took place in 1383 A.D., and these inimitable types of English mediæval personages were given to the world at a later date. Certainly our profession may take pride in Chaucer's ideal attributes, as they show, at least, the respect in which its professors stood in his day; and military surgeons may assume that men of that stamp then served in war, and that Chaucer may have discovered his type among them when he was serving in France in 1360.

The next names that come prominently forward in the medical history of our army are those of Master Nichol Colnet, Physician, and Master Thomas Morestede, Surgeon, to King Henry V, who were both present with the king in the great battle of Agincourt. Their engagement to serve marks a grand epoch in military medical affairs, in the formation of a surgical staff entirely under the control of Thomas Morestede.

In preparation for the expedition to France, a new system was inaugurated by indentures or legal instruments drawn up between the king on the one part, and the Dukes of Clarence and York, the Earl of Salisbury, Lord Scrope, and Sir Thomas Tunstal, severally, on the other part, to attend the king with contingents of their vassals and freemen in the war on king's pay. And similar instruments were drawn up between the king and his physician and surgeon to afford

+ *Calendar of State Papers*, Issue Roll of reign of Edward III, an. 37, 3rd March (1364): "To Mary Rous prosecuting at the King's Council the claim of Denys de Morbek, who asserted that whilst he lived that he took John of France in the war at the battle of Poitiers. In money paid to her of the king's gift in aid of her expenses, £3 6s. 8d." N.B.—There are other payments on these rolls relating to this affair.

him their professional services for one year; the physician to take with him three mounted archers or men-at-arms in his suite; and the surgeon, twelve men of his own profession and three men-at-arms likewise. The scale of pay of the army was fixed—

	£	s.	d.		£	s.	d.
For a Duke..... <i>per diem</i> ...	0	13	4	<i>per annum</i>	243	16	8
„ Count or Earl „ ...	0	6	8	„	121	3	4
„ A Banneret	0	4	0	„	73	0	0
„ A Knight	0	2	0	„	36	10	0
„ A Scutifer (esquire) „ ...	0	1	0	„	18	5	0
„ A Mounted Archer „ ...	0	0	6	„	9	2	6

But for the last two grades the scale differed for services in Gascony or France; the above being received, together with rations and forage, whilst in the adversary's territory; and increased pay, without rations or forage, while in the king's dominions in England or Gascony, where a scutifer with four horses received gross pay of forty marks, or £26 : 13 : 4 *per annum*; and a man-at-arms with one horse, £13 : 6 : 8 *per annum, pro ratō*. By comparison of these scales, it may be inferred that the net personal pay for the military services of a scutifer when Agincourt was fought was one shilling, and that of a man-at-arms 6d. a day, that the daily rations of a man were valued at 2d., and the forage of a horse at 1d. a day; but it must be borne in mind that in actual weight of silver the shilling of that time was equal to 2s. 9d. and the penny to 2½d. of ours, and that twelve shillings was the price of a pipe of French wine. The physician Colnet, and the surgeon Morestede covenanted for the pay and allowances of "scutifers" for themselves, and for those of "mounted men-at-arms" for their followers. They all participated likewise in a monetary allowance of 100 marks, or £66 : 13 : 4 a year to every thirty men from the dukes downwards, or £2 : 4 : 4½d. per man whilst serving in the enemy's territory. This was termed a reward or gratuity given in the field.

For the gains of war in booty and ransom, their covenants were the same as those of all the leaders, excepting the Duke of Clarence, in whose indenture ransoms are not mentioned. Of all booty, one-third was the king's, together with all gold, silver, or jewels exceeding the value of ten marks—£6 : 13 : 4; and should the physician or surgeon or any of their suite capture a king or any princes, or chiefs, they were to be given up to the king, who should make reasonable satisfaction to the captors. With regard to this point, reference must be made to the capture of King John and the Dauphin of France at the battle of Poitiers sixty years earlier, out of which a great difficulty arose. Froissart tells us in Chapter 116—"That day whosoever took any prisoner, he was clere his, and might quyte him or ransom him at his pleasure." We may, therefore, infer that the dispute between Sir Denys Morbeck and Bernard de Troyes was based on their hopes of receiving a king's ransom. This was fixed by the treaty of Bretigny, A.D. 1360, at three millions of French crowns, equal to half a million sterling, of which neither of the claimants would appear to have received anything beyond an occasional dole, one of them dying in distress after great sufferings.

It is worthy of point that these covenants for military services were made only with the great leaders and the chiefs of the medical staff, who were made the receivers of the wages of all their followers for distribution, and each held a deposit of the king's jewels as security for pay. This was not acquitted so punctually by our Plantagenet kings as it is in our day, as we read in Sir E. Ellis's *Historical Letters* (vol. i, 2nd ser., Letter xxxi) that in 1423, a year after the death of Henry V, Sir Thomas Rokeby petitioned the Duke of Gloucester, Protector, and the King's Council, "that by indenture, he went to France with his retinue in the 4th year of the reign of Henry V (A.D. 1417) for a yere, and was detained there from yere to yere until four yeres were spent and passed, for the while time a great part of the wages is behind and nowth paid him to his great hindering and annentifying." His petition was granted. Let us hope that, if Thomas Morestede's men of his calling were detained thus from their barber-chirurgeons' shops in the City of London, they were treated better than Sir Thomas Rokeby was.

Morestede was an eminent member of our profession; he was Surgeon to three of our kings—Henry IV, V, and VI—and, as Henry V died of some surgical malady, it is probable that he was then in attendance on him at Vincennes, A.D. 1422.

Morestede retained his influence at court after the restoration of the House of York, as we find that in the first year of the reign of Edward IV, A.D. 1461, a charter of incorporation was granted to the barber-surgeons of London, securing to them corporate rights under the protection of the medical Saints Cosmo and Damien; and this was effected through the influence of Thomas Morestede, surgeon, and Jaques Fries and John Hobbes, physicians.

Now, as this charter of incorporation of the barbers of London was

the progenitor of all subsequent charters to the companies of Barber-Surgeons (Henry VIII), Surgeons (George II), and College of Surgeons (George III), it may be asserted that Thomas Morestede, chief of the surgical staff at Agincourt, used his influence at court beneficially to the profession in its surgical branch.

To complete the main object of this paper, I recapitulate the names of military medical men that have appeared on the pages of the history of our country prior to the accession of the House of Tudor.

A.D. 43.—Scribomanus Largus, who attended on the Emperor Claudius in his campaign in Britain.

A.D.—Anicius Ingenius, surgeon of the 1st Cohort of the Tungrian Legion, who died at Chester-in-the-Wall.

A.D. 1066.—Nigellus, medicus, who came over with William the Conqueror.

A.D. 1299-1300.—Kenlc, John de, physicus; Belvaco, Philip de, chirurgicus; Shireburn, John de, Rigethorne, William de, physici-adjutores; Baunton, Edmund de, and another, cirurgici-adjutores; who composed the medical staff in the invasion of Scotland under Edward I.

A.D. 1415.—Colnet, Nicol, physicus; Morestede, Thomas, chirurgicus, with twelve coadjutors—names unknown—who composed the surgical staff present at the battle of Agincourt, A.D. 1415.

THE VARIETIES OF PHTHISIS.

By R. DOUGLAS POWELL, M.D.,

Assistant-Physician to the Hospital for Consumption, Brompton.

I WOULD ask to be allowed a little space briefly to comment on a lecture by Dr. Reginald Southey, on the Varieties of Phthisis, which appears in the JOURNAL of last week, and in which he incorrectly states my views, elsewhere expressed, in his attempt to bring into discredit the classification of the disease on a pathological basis. To criticise Dr. Southey's criticism of my book would be very easy, but would take up much space, since it would require several comparative quotations. To give a striking instance, however, of his misunderstanding of my views, he observes that, in speaking of hæmorrhagic phthisis, I do not specify whether the blood comes from the capillaries of the bronchi or alveoli, and presumes, therefore, that I regard this variety as *phthisis ab hæmoptoe*, in the same sense in which Niemeyer employed that term. In fact, however, at page 61 of my book, I deny that the hæmorrhage is from the bronchi, and at page 66 give reasons for assuming that it is from the lung—the result of active pulmonary congestion. On other points, particularly respecting fibroid phthisis and recurrent hæmoptysis, he represents my opinions as being nearly the reverse of those I have really and clearly enough, I think, expressed. For the rest, I must leave it to those who think it worth while to look through the few chapters in the work referred to and judge for themselves. It can scarcely be expected, however, that the students—before whom I assume that the lecture was delivered—will take the trouble to do so.

Dr. Southey incidentally accuses me of want of "lucidity," compared with that of the great German Professor, Niemeyer. Such a comparison dazzled me, and I preferred to look to Dr. Southey himself for an example of lucidity of expression, for my instruction, and naturally turned to his definition of phthisis—for Dr. Southey, like the rest of us, is not content with any one of the many definitions extant, but must have one of his own—as illustrating his best style in this respect. Dr. Southey understands phthisis to be "a progressive lung-degeneration, beginning differently, but about whose modes of origin little is known certainly—in its progress limited to no one lung-element, and attended by febrile disturbance and general constitutional complications." Surely, I thought on reading this, Dr. Southey might have more briefly and lucidly expressed his notion of phthisis, as being "a highly complex disease, and one entirely beyond human comprehension." Dr. Southey proceeds to contrast, among others, the terms *catarrhal* and *epithelial*, *broncho-pneumonic* and *lobular-pneumonic*, as applied to phthisis, and suggests a somewhat complicated "touchstone" by which they cannot be distinguished. I fancy most people had already regarded them as synonyms before Dr. Southey subjected their relationship to so severe a test. I cannot, of course, fully appreciate Dr. Southey's difficulty in distinguishing between the other varieties of phthisis he refers to, until I have learned from his next lecture what he means by a "scrofulous" phthisis, and what "clinical evidence" he can adduce in favour of the separate existence of a "syphilitic" and a "drunkard's" phthisis.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

UNIVERSITY COLLEGE HOSPITAL.

OPERATIONS AND CLINICAL REMARKS BY MR. ERICHSEN,
WEDNESDAY, JANUARY 29TH.

Cancer of the Tongue: Removal by Galvanic Ecraseur.—The patient, aged 46, three months ago ran against a door in the dark with a pipe in his mouth. An indolent sore was the result, and this finally developed malignant tendencies. His previous health had been good, and he had never had any venereal disease. Mr. Erichsen observed that this last fact was most important; it was sometimes very difficult to distinguish between a syphilitic and a cancerous ulcer of the tongue, and the organ had certainly been excised before now under the idea that what was only a specific ulcer was malignant disease. This difficulty was increased by the fact that there was sometimes a direct connection between them. Just in the same way as a simple sore produced by the irritation of a carious tooth might develop malignant characters, so also he had met with several cases in which a syphilitic sore had, after remaining chronic for years, at last taken on a distinctly cancerous action. He might mention one instance which had come under his notice quite recently. He had attended a gentleman at intervals for some years for severe constitutional syphilis. This patient had an indolent indurated sore on the edge of the tongue, which was readily influenced by mercurial treatment, though the induration never entirely disappeared. On returning from the continent last autumn, he came to Mr. Erichsen, complaining that the sore was spreading, was more painful, etc. Both Sir James Paget and Mr. Erichsen agreed that it was then malignant, and the tongue was excised. The practical point was, "if there be a history of syphilis, watch the case a little, and try the effect of antisyphilitic remedies before operating; unless, indeed, the disease be rapidly spreading, and there be need of immediate interference."

In this patient the disease was on the edge of the tongue, and rather far back. The tendency of cancer in the tongue was to spread backwards along the course of the intermuscular septa; it was important, therefore, in order to lessen the chance of a recurrence of the disease, to cut through the organ at some distance behind the apparent disease—in fact, almost as far back as possible. The central raphe, on the other hand, certainly withstood and delayed the spread of the disease laterally. In this present case, the disease was entirely confined to one lateral half of the organ, and he proposed to perform an operation which had, he believed, been first suggested by Mr. Furneaux Jordan of Birmingham; this he proceeded to do as follows. He first divided the cheek for about two inches horizontally backwards from the angle of the mouth; a few vessels bled freely, and had to be ligatured; he then divided the sublingual folds, and, having passed the wire of the galvanic *écraseur* through the centre of the tongue well behind the diseased part, cut slowly through the organ from behind forwards close to the raphe; he then cut across the base of the diseased half from within outwards in the same manner, thus removing one lateral half of the tongue. The cut through the cheek greatly facilitated the later stages of the operation; there was not the smallest hæmorrhage, but, had there been any, the arteries could have been secured with perfect ease. Mr. Erichsen remarked that it was sometimes most difficult to pick up the bleeding lingual vessels at the back of the mouth in the ordinary operation. Finally, the cheek was brought together with hare-lip pins. Mr. Erichsen added that he had now used the galvanic *écraseur* a considerable number of times for operations like the present, and considered it one of the most valuable of the modern applications of physical science to medicine. The only point was to avoid undue haste, and to screw up the instrument slowly in proportion to the vascularity of the part operated on; hæmorrhage could thus be most effectually prevented.

Troublesome Recurrent Stricture of the Urethra after Perineal Section.—Mr. Erichsen observed that, as was the case with some other operations, a good deal had been heard about the immediate effects of perineal section, but very little about its ultimate results. This case was therefore an interesting and instructive one. The operation had been performed sixteen years ago; the patient had instruments passed for some months afterwards. Since then there had been a complete relapse, and the stricture had now acquired to some extent a traumatic character. For some time past, small catheters had been occasionally passed with

great difficulty. He now proposed to split the stricture with Holt's dilator.

Fibroid Tumour over the Patella.—In removing this, Mr. Erichsen said that the important practical point to remember was to keep the edge of the knife well against the tumour in separating it from its attachments over the patella, so as to avoid dividing the layer of fascia which was prolonged over that bone from the flexor tendons; if that were cut through, there was great danger of purulent infiltration in the ham. The tumour, which was of the size of a large chestnut, presented the usual laminated appearance on section.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, SATURDAY, FEBRUARY 9TH, 1873.

Exostosis on Inner and Lower Side of Femur.—Mr. Holden removed a small exostosis near the knee. The patient felt no inconvenience from its growth in walking or otherwise; but it was growing very fast, being only three months old, and threatened to involve the joint. In shape, it resembled the coracoid process of the scapula, growing towards the joint, and then turning upwards like a hook. It was covered with a crust of ossifying cartilage. The operator took the precaution to bend the knee fully, so as to stretch the synovial fold as much as possible, and avoid entering the joint. The patient could not trace the growth to a blow or fall, but he had recently had a severe attack of rheumatic fever, and the swelling appeared on his recovery. Mr. Holden had no hope that the wound made by the operation would heal by the first intention, and therefore he left it open to allow a free discharge.

Nævus involving the whole of the Left Cheek.—This nævus had been growing for the last nine years, and at length involved the whole cheek. There was much swelling both inside the mouth and outside. Mr. Holden proposed to attack it by degrees, passing threads charged with strong perchloride of iron through portions of it at intervals, setting up as much inflammation as would obliterate the parts enclosed. The threads he left long—putting in two meanwhile—to allow of their being recharged with the perchloride, and again drawn through their channels. This proceeding he characterised as a very long one—requiring at least six months to effect a cure—but a very safe one, and he hoped to see the lad's face equal in size and appearance on both sides. Care was taken not to involve the parotid duct in passing the threads.

Epithelioma of the Penis: Amputation.—Mr. Savory amputated the penis above the glans in a case of cancer. The disease had existed only two months; but in that time it involved the whole of the glans. Mr. Savory did not stitch the urethra to the edges of the penis after amputation, as he did not think that any troublesome contraction of the urethra would take place. He had seen such contraction ensue after the most careful stitching, and he meant to try whether it were really necessary after amputation.

Tumour of the Long Finger of the Left Hand: Removal.—This was a well-marked specimen of a solitary cartilaginous tumour growing on the proximal phalanx of the middle finger. Though the tumour was as large as a walnut, Mr. Savory was able to save both joints, and left a shell of bone, in the substance of which the growth had its root.

GUY'S HOSPITAL.

OPERATIONS, FEBRUARY 12TH, 1873.

Necrosis of the Lower End of the Femur.—Mr. Bryant removed a large piece of dead bone from the end of the femur of a young woman aged 18. The bone was injured by a fall six years ago. A hard swelling followed, which was suppurated, and was opened by a surgeon. No dead bone was then discovered, but afterwards a small piece came out of the wound, which then healed up. Another abscess formed, and at its bottom dead bone could clearly be detected. This Mr. Bryant removed by an incision at the outer side of the thigh above the knee; but he found that the femur had had its natural thickness doubled by deposit of new bone, which required to be cut through. The portion removed was part of the old shell of the femur.

Excision of the Head of the Femur.—Mr. Howse excised the head of the femur of a little girl to make her right leg a little straighter. He had on three previous occasions removed portions of dead femur, and the leg was now much inclined inwards, but still she could rest on the limb when standing. The operation was purely one of expediency, as there was not the slightest irritation about the joint, and apparently no reason for the operation. Mr. Howse had considerable difficulty in removing the head of the bone from the acetabulum, as it was firmly fixed by bony adhesion.

GREAT NORTHERN HOSPITAL.

SYPHILITIC PARALYSIS WITH MARKED LOCAL MUSCULAR WASTING.

(Under the care of Dr. CHOLMELEY.)

AN excavator or labourer, aged 28, was admitted under Dr. Cholmeley on January 13th, 1871. The patient had been married four years, and had two children, both, he said, healthy. The patient himself had suffered from fever, small-pox, and ague. Six years previously, he had a sore on his penis, and an enlarged suppurating gland, followed by a scaly eruption. In 1868, he was admitted into St. Bartholomew's Hospital, suffering from severe pains in his head and obstinate constipation. At the same time, he lost the sense of taste. He was discharged at the end of two months, relieved. Soon after his discharge, the pains returned, and continued for twelve months. Then (1869) he became nearly blind, the right eye being most affected. The left eye a few days afterwards became suddenly better; and the sight of that eye remained good up to the time of his admission. In April 1869, he was again admitted into St. Bartholomew's Hospital. In three months, he was discharged better, but remained blind in the right eye. In July, the right leg was affected with stiffness and pain below the knee; and he had felt for some time "pins and needles" in his arm, which began to waste. In September, the right shoulder was affected, and continued so to the present time. In December, he quite lost the power of his right arm. About the same time, he had pain in the nape of the neck, followed by swelling of the right side of the neck.

On admission in January 1871, the heart-sounds were clear, and the præcordial dulness normal. There was no abnormal dulness in front of the lungs; the breathing was healthy. At the base of the left lung posteriorly, there were dulness and feeble breathing. The spleen was enlarged. His urine was normal. On ophthalmoscopic examination, there was seen to be atrophy of the right optic nerve, with general paleness of the retinae in both eyes. The pupils were normal, and sensitive to light. There was no loss of power of the left side, nor in the right leg. The right arm was much wasted, especially the upper arm. The loss of power was so great that he was quite unable to work. There was a swelling, of about the size of a walnut, on the inner border of the left tibia, evidently periosteal. There were enlarged glands on both sides of his neck; also in both groins. He had a marked swelling, with induration of the tissues over the centre, and especially on the right side of the neck (posteriorly), about one inch and a half broad, and extending the whole length of the cervical region; the spinous processes of the vertebrae also feeling enlarged and thickened. On testing the irritability of the muscles by faradisation, it was found that the biceps of the affected arm was not excited to contraction when one pole was at the nape of the neck, the other on the muscle; but when both poles were placed on the muscle, it was visibly affected. The deltoid was excited either when one pole was on the centre of the neck, or when both were on the muscle.

He was ordered iodide of potassium, three grains three times a day, with ammonia and gentian; and faradisation was applied to the right arm daily for ten minutes, one pole being placed on the nape of the neck, and the other in a basin of water, in which the right hand was placed.

On January 20th, it was noted that the node on the tibia was smaller; he had less pain; the swelling on the nape of the neck was less; and he had more power in the right arm. The iodide was increased to five-grain doses, the faradisation was continued, and the neck ordered to be painted with tincture of iodine.

February 3rd. He was improving, and could see dimly with the right eye. The iodide was increased to ten grains three times a day. On February 12th, he was not so well; the sight of the right eye was not so good; and he complained much of pain in the neck and in the temples. The iodide was reduced to five-grain doses, and a blister was applied to the nape of the neck. On the 15th, the medicine was changed for a mixture containing one-sixteenth of a grain of bichloride of mercury and three grains of iodide of potassium in an ounce of infusion of cinchona three times daily; the faradisation being continued. On the 17th, the blister was repeated. Under this treatment, he improved in a marked degree; but on the 19th he was feverish. On the 20th, his temperature (in the axilla) was 105 deg. F., and erysipelas of the head and face declared itself; and he was put on carbonate of ammonia. On the 27th, the former treatment was resumed (the biniodide of mercury); and cod-liver oil was given. Faradisation was also employed, and the iodide of potassium ointment was rubbed into the nape of the neck. He steadily improved in every respect; and on March 15th he was discharged, feeling able to go to work. He was free from pain;

he could see dimly with the right eye; the swelling of the glands, the stiffness of the neck, and the swelling of the tissues about the nape of the neck and of the spinous processes of the vertebrae, had disappeared; the muscles of the right arm had regained their natural size; and he had full use of the limb. He came two or three times afterwards to have the arm faradised, and then ceased attendance.

REVIEWS AND NOTICES.

A TREATISE ON DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System and of Clinical Medicine in the Bellevue Hospital Medical College, etc. 8vo, pp. 754. New York: D. Appleton and Company. 1871.

THIS is a valuable and comprehensive book; it embraces many topics, and extends over a wide sphere. One of the most valuable parts of it relates to the Diseases of the Brain; while the remaining portion of the volume treats of the Diseases of the Spinal Cord, the Cerebro-spinal System, the Nerve-Cells, and the Peripheral Nerves. We shall, almost perforce, limit ourselves to the first part.

Passing over the introduction, which contains descriptions of the instruments and apparatus employed in the diagnosis and treatment of these diseases, and the first chapter, which treats of Cerebral Congestion, and is based on six hundred and twenty-two cases recorded in Dr. HAMMOND's note-book, we shall commence our review with a notice of the chapter on Cerebral Anæmia. After mentioning, as symptoms, vertigo, headache, dilatation of the pupils, etc., he adds that "The mind, of course, participates in the general disorder. In extreme cases, due to active hæmorrhage, the patient is completely insensible. In less severe forms, there may be all the gradations from low delirium to great mental irritability, or a condition of intellectual lassitude approaching dementia.

"Hallucinations and illusions are common in the slowly developed forms of cerebral anæmia, and may affect any one or all of the senses. Those of sight and hearing are, however, more prominent. In the case of a young lady now under my care, and whose only marked disorder is that under consideration, the hallucination that she sees a black man is almost constantly present. At times, she converses with this imaginary being, tells him not to trouble her, that she no longer fears him, etc. She believes firmly in his presence, and hence has a delusion.

"In all cases of cerebral anæmia, there is more or less drowsiness, from the profound syncope of the rapid form to the rather agreeable languor present in slight cases. In instances of medium severity, the patient readily falls asleep in the sitting posture; but recumbency induces wakefulness, from the fact that the quantity of blood in the brain is thereby suddenly increased above the habitual standard, and a state of comparative hyperæmia is thus induced." (P. 62.)

The importance of searching for the existence of bellows-murmur in the heart, and for venous murmur in the jugular veins, is then shown; and the remarks on the symptoms of this disease conclude with a warning—necessary only for "the most ignorant or superficial observers"—not to mistake the hydrocephaloid of Marshall Hall for hydrocephalus.

After mentioning, as causes of cerebral anæmia, hæmorrhage, chronic dysentery, diarrhoea, etc., he adds that he has several times seen the affection apparently caused by congestion of internal organs; and, like Niemeyer, he has seen it caused by the abuse of Jounod's boot.

Excessive mental exertion is, as all our readers well know, a common cause of cerebral congestion. Sometimes, however, it gives rise to anæmia; and in these instances it is found that the brain has been over-tasked to an extreme degree. Dr. Hammond has had several such cases, which he explains as follows. "They are," he observes, "strictly in accordance with what takes place in other parts of the body. Thus we see the moderate use of a muscle or set of muscles increase their size and strength. Inordinate exercise induces hypertrophy; but, if the power of the muscles be still more severely tried, atrophy results. One of the worst cases of progressive muscular atrophy I ever saw occurred in the person of a ballet-dancer, whose gastrocnemii muscles were the apparent starting-points of the disease. Excessive cerebral action produces exhaustion; and exhaustion causes anæmia, as surely as anæmia causes exhaustion." (P. 65.)

Amongst the medicines which may cause cerebral anæmia, Dr. Hammond mentions tobacco, tartarised anatomy, calomel, oxide of zinc, and the bromides of potassium, sodium, and lithium; and he claims the discovery that the bromides possess this influence. His views on this point appeared in a memoir "On some of the Effects of Bromide

of Potassium when administered in Large Doses," which appeared in January 1869, in his *Quarterly Journal of Psychological Medicine*. Recent observations have convinced him of the similar action of oxide of zinc.

His remarks on the treatment of this disease are sound and judicious. After pointing out the necessity of stopping any possible form of hæmorrhage that may be existing, and of putting the digestive organs in good condition, he commences with a strong recommendation of alcohol in some form or other, and given in sufficiently large doses as materially to increase the force of the heart. Next in value to alcohol, and in the rare cases where it cannot be borne, he recommends carbonate of ammonia; while, "in very extreme cases, either is preferable, for the time being, to any other remedy, on account of its diffusive nature; and transfusion may be necessary to save life." Knowing what we do regarding his views of the action of bromide of potassium, it is not surprising that he warns physicians from using it in this disease.

Under the designation of "cerebral hæmorrhage", he considers the disease commonly known as "apoplexy or hemiplegia"; and he divides the affection into the *apoplectic* and *paralytic* forms. The symptoms are very clearly described. Beginning with those of a premonitory nature, which may be in part or even totally absent, he gives those which occur (1) when the attack occurs with great suddenness, and (2) when the course of the disease is not so rapid and hopeless as in the preceding form. The value of the facial paralysis in a diagnostic point is lucidly described; and the symptoms are pointed out which show when the fifth pair and the hypoglossal are involved.

"It is rarely the case that the third nerve is affected. When it is, there is external strabismus from paralysis of the internal rectus muscle, and ptosis from paralysis of the elevator of the upper eyelid. The pupil is dilated, and is insensible to light.

"Another phenomenon is sometimes observed, and that is the rotation of both eyes toward the sound side. This is accompanied by a like movement in the head; so that, if the patient is paralysed on the left side, the eyes and head are turned to the right; and consequently, as the patient lies in bed, the right side of the face rests on the pillow. I have observed these symptoms in about one-third of the cases of cerebral hæmorrhage which have come under my observation. They were present from the very beginning, and disappeared in a few days.

"Slight convulsive or involuntary movements are occasionally noticed. The most frequent of these is yawning—a symptom which Dr. Todd regards as troublesome, and even unfavourable, but which, in my experience, is not very annoying or dangerous. The other convulsive actions may be on the whole of either side of the body, or on both sides, or may be restricted to a single limb or even a group of muscles.

"When consciousness begins to return, the mental characteristics of the patient will be found to have undergone a radical change. He is irritable, unreasonable, and fretful. His sense of the proprieties of life, which may in health have been very delicate, becomes obtuse; his memory is notably impaired, and his reasoning power greatly diminished. The greatest change, however, is perceived in the emotional faculties. He laughs at the veriest trifles, and sheds tears profusely at the least circumstance calculated to annoy him. Even for years afterward, this peculiarity is noticed." (Pp. 79-80.)

Having furnished his sketch of the symptoms that characterise the first stage of an attack of cerebral hæmorrhage, marked by epilepsy and paralysis, he proceeds to give those which characterise the second and third stages, and correspond to the periods of inflammation and resolution.

With the cessation of the inflammatory stage (which begins at a variable time after the occurrence of the extravasation, but seldom later than the eighth day, and may last for three, at most six days), the improvement of the patient becomes very marked.

"His speech," says Dr. Hammond, "is every day more distinct, his mind more active, his paralysed limbs more capable of motion. Usually the leg recovers power with much greater rapidity than the arm; and thus the patient is able to walk tolerably well before he can raise his arm from his side, bend the elbows, or extend the fingers. The paralysis in the leg is most marked in those muscles whose office it is to elevate the foot; and this necessitates a peculiar gait, in order to avoid dragging the toes along the ground. The abductors are rarely affected to any great extent. The patient in walking, therefore, throws the leg out from the body, and then, swinging it around, clears the ground in this manner.

"In the upper extremity, there is almost invariably a disposition toward contraction of the pectoralis major and minor muscles, by which the arm is drawn across the front of the thorax. At the same time, the latissimus dorsi, the trapezius, the rhomboidei, the teres

major and minor, are generally in a state of relaxation, and eventually tend to atrophy. The elbow is slightly flexed, the wrist bent upon the forearm, and the fingers drawn toward the palm of the hand. These actions may, in a great measure, be prevented by appropriate treatment; and they may vary in extent according to the gravity of the attack. It is a curious fact, that the muscles of respiration are never paralysed in cerebral hæmorrhage, unless the medulla oblongata be involved.

"Trousseau has insisted with great force on the fact that, when the arm regains power before the leg, the termination is always fatal. That this is the general result, I am very sure from my own experience; but it is not invariable, for there are now in the New York State Hospital for Diseases of the Nervous System two patients affected with cerebral hæmorrhage, whose arms have improved to a very great extent, while the legs are still as much paralysed as ever." (P. 52.)

Amongst the *predisposing* causes of cerebral hæmorrhage, advanced age stands foremost. Of 229 cases which have been under the care of Dr. Hammond during the last five years, 204 occurred to persons over forty years of age. Of these, 170 were between forty and sixty, 24 between sixty and seventy, 5 between seventy and eighty, and 3 over eighty. Of the 25 cases in persons under forty, 17 were between forty and thirty, 7 between thirty and twenty, and 1 (a boy of seventeen) under twenty. With regard to sex, 153 of his patients were males, and 76 females. The predisposing influence of temperament and organisation, of hereditariness, and of cardiac diseases, are then noticed; after which we come to the consideration of seasons, which he regards in some degree as belonging to this category—our author's experience showing him that, in opposition to the commonly received view, this and almost all other affections attended with loss of consciousness are most common in winter. Of his 229 cases, 85 occurred in winter, 41 in spring, 56 in summer, and 47 in autumn. Sudden changes from mild to cold weather increase the number of cases of cerebral hæmorrhage. In regard to some of the *exciting* causes, of which he gives a long and miscellaneous list, several very interesting cases have occurred in his own practice. In one, a lady was attacked on hearing that her cook had left her; in another, the emotion excited by the fall of a picture from the wall caused a seizure. He has known four cases produced by straining at stool; and in one of them the patient retained sufficient consciousness and intelligence to take a large key out of his pocket with the non-paralysed hand, and to rap on the floor for assistance. Two of his cases were seized during sexual intercourse, one a man, and the other a woman; and in one of these (it is not stated which) there was subsequently a great increase of venereal desire. In the boy, aged 17, the seizure was induced by his stooping to tie his shoe. In 153 out of the 229 cases, no exciting cause was noted.

We have already quoted so freely from this chapter, that we must pass over the remainder of it with the simple remark that the section on Diagnosis throws much light on many cases that are very apt to puzzle a young physician. If, for example, an individual be found in a state of profound insensibility, the condition may be due to compression from injury of the skull, to concussion from a fall or blow, to asphyxia, to syncope, to a recent epileptic fit, to uræmic poisoning, to hysteria, to narcotism, or to drunkenness; but to which of these causes it really is due, it is not always easy to decide at the spur of the moment. Yet, if any one of these states were mistaken for cerebral hæmorrhage, the result would be assuredly embarrassing and discreditable to the physician, and very probably injurious to the patient.

Two chapters on Diffused and on Multiple Cerebral Sclerosis occupy forty pages, and contain a large amount of curious matter not to be found in any other work in the English language with which we are acquainted, and gleaned, for the most part, from the latest contributions to cerebral pathology by the French and German schools.

"By diffused cerebral sclerosis is to be understood a morbid condition of some part of the brain characterised by induration and atrophy of the tissue, and not distinctly circumscribed, except by the anatomical limits of the region affected. It is not a disease with any degree of certainty or even of probability during life. It is, however, a well-marked pathological condition, giving rise to very prominent symptoms." (P. 260.)

While we are by no means inclined to dispute the existence of the "well-marked pathological condition", we must add that, as even Dr. Hammond himself admits that "the symptoms by which it is characterised are by no means peculiar to it", we doubt whether the time has yet come for giving this doubtful disease a special place in our nosology. And the same doubt (to a less extent, perhaps) exists as to "multiple cerebral sclerosis", of which we are told that "it is only of late years that the affection in question has been partially recognised as a distinct pathological condition associated with certain symptoms" which "were formerly, and still are, to a great extent confounded with

other groups similar in several prominent features, but different altogether in anatomical relations." We are, however, bound to state that, whatever objection we may have to the titles, the chapters themselves contain a large number of very interesting cases.

The chapter on Tumours of the Brain contains several very interesting cases; and, as the number of illustrative cases which Dr. Hammond disperses through his volume is very great, and as, further, they are generally very well described, we shall, as a specimen, select one from this part of his work.

"J. H., male, aged 37, came under my observation January 15th, 1856, at Fort Riley, in Kansas. A few months before, he had received an injury of the left hip by being thrown from his horse, and was stunned for a few minutes. A few days afterwards, as he was lying in bed, he suddenly became vertiginous, and at the same time had noises in his ears, and some pain not very definitely located. He never had vertigo again; but the pain never left him, night or day, for several weeks. It then suddenly ceased, and did not recur till the morning of December 31st, when a sharp twinge was experienced in the front of the head, and he immediately saw everything double. Ptosis and dilated pupil of the left eye soon supervened, and the arm of the right side became weaker. When I saw him, the grasp of his hand was very feeble, and the ocular troubles very noticeable. The pain was almost constantly present, and was of the most intense character. He said it seemed as if a red-hot iron were being thrust through his brain.

"He had come several miles to see me, and went home after I had given him a palliative medicine. A few days afterwards, a messenger came for me in great haste, with the information that the patient was dying, and requesting my attendance. On my arrival, I found that he had been dead several hours, having had repeated severe convulsions. On *post mortem* examination, a tumour, spheroid in shape, with an average diameter of an inch and a quarter, was found occupying the middle third of the inner surface of the left middle lobe, so as to press on the left crus and third nerve.

"The points of interest in this case are the sudden cessation of the pain and its recurrence simultaneously with the paralysis of the third nerve, the slight paralysis of the body, and the absence of convulsions till just before the fatal termination. The ptosis, diplopia, and dilatation of the pupil, doubtless occurred at the very instant that the tumour encroached on the crus." (P. 304-5.)

In his observations on the Diagnosis of Cerebral Tumours, he remarks that "the occurrence of very limited paralysis points to the existence of a tumour, rather than any other affection. A gentleman is now under my care who, several years ago, had a cerebral hæmorrhage, from which he was rendered hemiplegic. He regained to a great extent his mental and physical powers, but a few days ago suddenly had diplopia from paralysis of the external rectus muscle of the left eye, by which internal strabismus was produced. As yet there have been no other head-symptoms except vertigo, with which he has suffered a great deal in the last two years, and which was excessive when the diplopia appeared. In other respects, the health is good, and the mind gives no evidence of being affected. The paralysis of the external rectus is on the same side with the general hemiplegia.

"In my opinion, though I express it, of course, without positiveness, there is an aneurismal tumour pressing upon the sixth nerve after its emergence from the medulla oblongata, and probably affecting the left internal carotid artery. If this view be correct, other symptoms will certainly arise ere long. These will probably consist in the more extensive implication of cranial nerves, and in the supervention of hemiplegia." (P. 314.)

Although this limitation of the paralysis as an indication of tumour is not definitely noticed by English writers, Drs. Reynolds and Bastian, in the chapter on "Adventitious Products in the Brain", incidentally remark that "paralysis is sometimes observed in one muscle of one eyeball, such, for example, as the external rectus, leading to convergent strabismus." After quoting other similar cases of limited paralysis, they add, however, that "the paralysis may be more widely distributed."

The graphic style in which the cases are described renders this volume very pleasant reading; and, as an illustration, we may take the following quotation from the chapter on Insanity as illustrative of eccentricity.

"Eccentric persons stand upon the verge of insanity, with a decided predisposition to mental disease, and ordinarily do not pass the limit, merely for want of a sufficient exciting cause. Several instances of eccentricity passing into undoubted insanity have come under my observation. In one of these, a lady had since her childhood shown a singularity of conduct as regarded her table-furniture, which she would have of no other material than copper. She carried this fancy to such an extent that even the knives were made of copper. People laughed

at her, and tried to reason her out of her whim, but in vain. In no other respect was there any evidence of mental aberration. She was intelligent, by no means excitable, and in the enjoyment of excellent health. An uncle had, however, died insane. A trifling circumstance started in her a new train of thought, and excited emotions which she could not control. She read in the morning paper that a Mr. Kopperman had arrived at one of the hotels, and she announced her determination to call on him. Her friends endeavoured to dissuade her, but without avail. She went to the hotel, and was told he had just left for Chicago. Without returning to her home, she bought a ticket for Chicago, and actually started on the next train for that city. The telegraph, however, overtook her; and she was brought back from Rochester, raving of her love for a man she had never seen, and whose name alone had been associated in her mind with her fancy for copper table-furniture. She died of acute mania within a month." (P. 331.)

We have thought it better to restrict our attention in this article to Dr. Hammond's views on two or three important disorders, than to make an attempt to give an abstract of all the chapters treating of disease of the brain, as, by the course we have adopted, we are able to do the greater justice to the author.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ETHER-INHALERS.

IN reviewing the history of ether inhalation in a recent issue, we had occasion to allude to some of the early methods of producing anæsthesia by its means. On referring to the literature of the subject, we find quite a multitude of inhalers figured and described. Some of these are very ingenious, and afford many good hints to aspirants to inhaler invention; others are radically bad and impractical. Amongst the very first administrators of ether in this country, was Mr. P. Squire, of Oxford Street, who successfully demonstrated the value of the anæsthetic during several capital operations performed by Mr. Liston. He

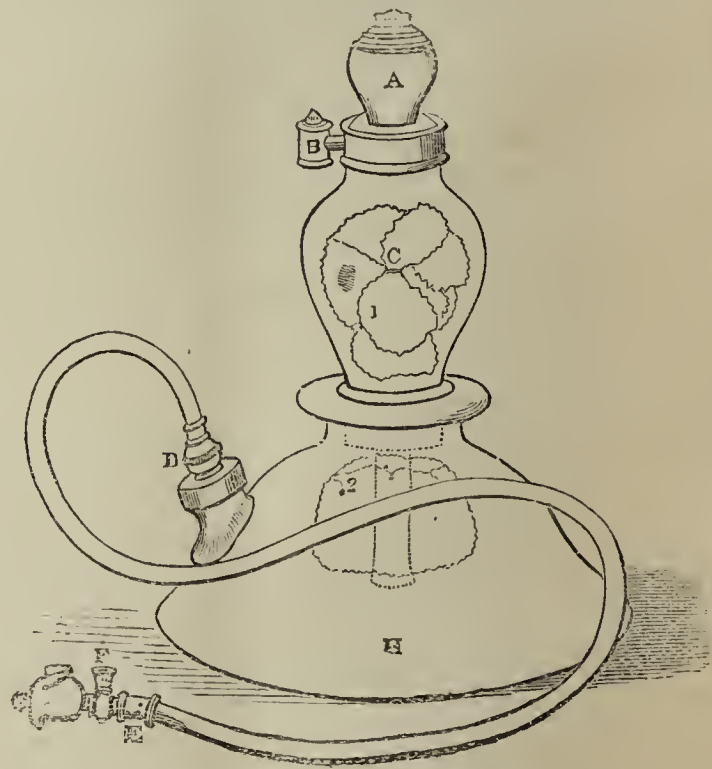


Fig. 1.—A. The urn with its stopper, into which the ether is poured. B. Valve which admits the air. C. Contains sponge saturated with ether. D. Valve which opens at each inspiration, and closes at each expiration. E. Ferrule for regulating the quantity of atmospheric air admitted. F. Valve for the escape of expired air. G. Mouth-piece constructed to close the nose. H. Lower vase.

brought out two of the best ether-inhalers at that time. These we have had an opportunity of inspecting, and now describe shortly. They are, in many respects, really very good inhalers, and we believe they will be found very serviceable. The smaller is more likely to

meet the requirements of the practitioner. Both would be improved by the substitution of a mouth-piece of softer material.

The larger apparatus is for the table. It is made of glass, and consists of two compartments containing sponges and a flexible tube fitted with a mouth-piece. The upper compartment has a stopper, so contrived that the ether may be introduced from time to time without deranging the apparatus. It has a valve, which, when in action, admits the necessary quantity of air; and, when at rest, entirely prevents the escape of ether. The lower compartment is vase-shaped, and from it rises a flexible tube fitted with a mouth-piece; this closes the nose also whilst inhalation is proceeding. There is an adjusting ferrule near to the mouth-piece, for the admission of a small quantity of air at the commencement of inhalation. This arrangement prevents

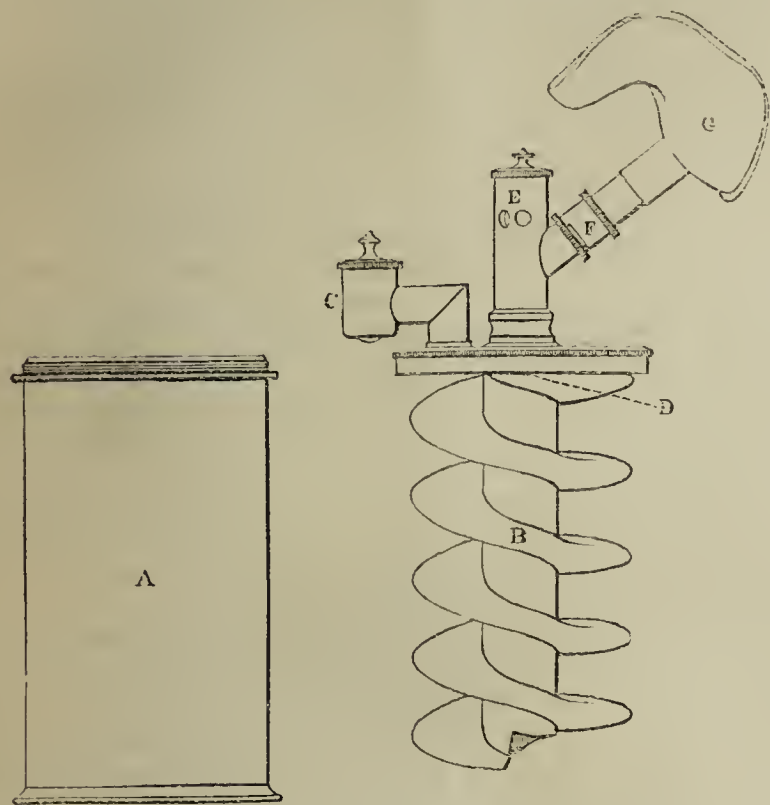


Fig. 2.—A. The cylinder. B. The coil covered with flannel. C. The valve for admitting the air. D. Valve for allowing ether to be inspired. E. Valve for allowing air to be expired. F. Ferrule for regulating the quantity of atmospheric air necessary to prevent coughing. G. The mouth-piece.

the troublesome coughing often experienced when the patient is forced to breathe the vapour of ether in a pure state. The mouth-piece is also fitted with spherical valves to prevent the air expired entering the apparatus. (Fig. 1.)

The smaller or more portable apparatus consists of a metal cylinder, filled with a spiral arrangement of flannel to absorb the ether, and over the entire surface of which the air has to pass before it is inhaled. (Fig. 2.) The principle of the large inhaler is retained as regards the arrangement of the valves, but in a more compact form.

MORTALITY IN THE LISBON HOSPITALS.—A statistical return of the Lisbon hospitals, published in *O Correio Medico de Lisboa* for January 15th states that the mortality in the St. Joseph Hospital during 1872 was 1,261 in 8,218, or 14.7 per cent. In the Santa Barbara Lying-in Infirmary, attached to the above-named hospital, 5 deaths only occurred among 384 patients, or 1.3 per cent. Of 339 children born, 55 died. In the Desterro Hospital, there were 116 deaths among 1,071 patients, or 10.8 per cent. In the lock department of the same hospital, there were 1,394 patients, none of whom died. The St. Lazarus Hospital after April 1872 received a number of small-pox cases from St. Joseph and Desterro. The number of cases of this disease admitted was 514, of whom 155 died—a mortality of 30.15 per cent.

LONGEVITY.—The *Pabellon Medico* quotes from *El Parte Diario* the case of a man named Salvador Calero, who is said to be 150 years old. He has lost his memory and sense of hearing, but retains good vision. At midnight, he awakes and complains of the length of time during which he has had nothing to eat—forgetting that he has had supper. He smokes moderately; and performs his sexual functions normally. *El Pabellon* justly prefaces this account with the remark—"provided there be no exaggeration."

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 15TH, 1873.

OUT-PATIENT DEPARTMENTS.

THE fact that the out-patient departments of our public hospitals are extensively and grossly abused, is not new to members of our profession, if it be to the public in general; nor can it be said that the recent discussion in the *Times* on "Medical Charity" has done much towards clearing the question of its difficulties. We have frequently drawn attention to the subject, and there is nothing to be added to what has been already said and written: still, we may take the opportunity, before Sir Charles Trevelyan's letters are altogether forgotten, of giving once more a brief statement of the facts of the case, in the hope that, by dint of repetition and publicity, something may soon be done to check a great and growing evil.

The present unwieldy state of the out-patient departments is of comparatively recent growth. Until twelve or fifteen years ago, all applicants at the metropolitan hospitals not suffering from severe surgical injuries, were required to produce letters of recommendation. No doubt there were objections to the system as then carried out, but at least it kept the number of patients within manageable limits. About that time, one or two hospitals were established which threw open their doors to all applicants without question, and which advertised extensively in the public papers the almost fabulous number of patients they "relieved". The old hospitals were obliged to follow suit, and hence arose the present system of bidding for patients, and the competition as to how many thousands of patients can be made to figure in the annual reports.

It is quite possible that the hospitals of the time to which we have referred were too exclusive, but there is no doubt that now the opposite extreme has been reached. Whether so called or not, every hospital is now practically "free". The notice that "accidents and urgent cases are seen at any hour" is liberally interpreted. Any one who applies is attended to; if the case be acute, he is treated at once; if it be chronic, he may be told to get a letter; indeed, at most hospitals many more patients are admitted as "urgent" without a recommendation than with one. To the letter system, as thus worked, there can be no objection, provided only that the recommendations be carefully distributed. We shall refer to this again. At the "free" hospitals, all who come are seen as often as they choose to present themselves. The consequence is, that a large number of the patients come once and never return, or attend most irregularly; go sometimes to one member of the staff, sometimes to another, and sometimes attend two at the same time. Many of the patients, especially at some of the special hospitals, are not proper objects for charity; and the time of the medical officer is so taken up with trivial cases, that he can pay but little attention to the few who really require it. A year or two ago, the Committee of the Children's Hospital in Great Ormond Street, with the view of preventing to some extent the abuse of the charity, ordered that every one who came should be seen once as before, but that for the future no patients should be prescribed for a second time unless they produced a certificate, signed by a medical man, clergyman, or other responsible person, to the effect that they were unable to pay for medical advice. Of those who came on the first day of the new rule, less than one-fourth returned with the form signed, although their at-

tention had been specially directed to it; that is, three-fourths of the applicants were either ashamed to go to any one for a signature, or their cases were of so trivial a nature that it was not worth the trouble. Of the new cases next week, one-half returned; and the rule certainly diminished the number of respectable (?) beggars.

What is wanted, then, is more careful regulation of the out-patient department: its abolition, which some have recently advocated, would, even if possible, be a great loss. It is invaluable; first, as a means of keeping in view and completing the cure of convalescent patients; secondly, for the treatment of patients suffering from ailments which are too chronic, or not sufficiently acute for treatment as in-patients; thirdly, for purposes of instruction. At present, the out-patient room is almost useless for clinical teaching—useless, at all events, in comparison with what it might be. A few students do indeed acquire a somewhat dangerous knack of hasty diagnosis and rapid prescribing; but—on the medical side more especially—all the energies of the medical officer are required to get through his roomful of patients within the two or three hours which he can afford for the purpose. Lastly, the out-patient serves as a feeder to the in-patient department. Eligible cases coming with an out-door letter can always be admitted on the recommendation of the medical officer; and this is not unfrequently taken advantage of by economical governors, who take out the full equivalent of their subscription in out-patient letters, knowing that the patients whom they send will, if suitable, thus obtain the benefit of indoor treatment at a great saving to their generous benefactors.

How, then, to come to the practical point of the subject, can the number of out-patients be brought within manageable limits? How can we best exclude patients who are able to pay, patients who come only to gossip, *et hoc genus omne*, and yet avoid putting vexatious restrictions in the way of those who really require advice? As we have said, the "letter" system, as now modified, is certainly free from some of the worst features of the so-called "free" system. All cases with any pretensions to urgency are seen once, unless the patients be evidently able to pay; after that, the patient should get a recommendation or a certificate from his minister. But this letter of recommendation system itself requires regulating. Not long since, we happened to be in a shop when a woman entered and asked for a hospital-letter. The tradesman said he had none then, but should have some shortly. We inquired if he knew the woman? "No, he had never seen her before." "Would you give her a letter if you had one?" "Yes, certainly." At some hospitals, subscribers of five guineas are entitled to an unlimited supply of out-patient letters. At most, these letters are given in such numbers that the majority of the subscribers put no value on them. We know several shops and private houses where letters are given to all who apply. We could name some, who regularly every year thus cost the hospitals to which they subscribe many times the amount of their subscriptions. Many of them are people who cannot say "no", people who would give to street-beggars and organ-grinders; others, we fear use their letters as a sort of advertisement, and get notoriety by them. And this practice has given rise to a regular trade: persons, generally women, go round and collect hospital-letters of all descriptions; a little experience soon teaches them where these may be obtained most readily, and what to ask for at each place. The produce of the day's round is afterwards sold to those who would be ashamed to beg for letters in person, for prices varying from sixpence to half-a-crown. We have heard of one woman collecting between twenty and thirty letters in a day. A well known and active metropolitan officer of health informed us that, for some time after he had been appointed to his district, he used to be constantly asked for hospital-letters. One woman especially seemed to be losing her whole family from phthisis, judging from the number of letters for the Victoria Park Hospital which she required. He good-naturedly took some trouble to get the letters, until one day he was informed that this woman had been offering them for sale at half-a-crown a piece.

If the number of out-patient letters which are given out were more strictly limited, subscribers would be careful to give them only to those

of whom they have some knowledge. Exceptions might be made in the case of parish-clergymen and large employers of labour; though, indeed, the clergy would have little trouble in collecting letters from their parishioners, and, as a rule, large employers are liberal subscribers.

Provident dispensaries are excellent things, and deserve, when properly administered, all encouragement; but under present circumstances it is no wonder that they do not often succeed. The hospital out-patient departments must first be reformed. It is only by limiting the supply of out-patient letters, and judiciously restricting the facilities for becoming a hospital-patient *gratis*, that the lower classes will ever be induced to support the provident plan. We commend the subject to the attention of the Mansion House Hospital Sunday Committee. If, as seems possible, they should become the distributors of a large annual income, they might easily make the reform of some of the abuses which we have mentioned a condition of their grant.

MECHANICAL THEORY OF FEVER.

In the number of the BRITISH MEDICAL JOURNAL for December 7th, 1872, was given an account of the results obtained by Dr. Hüter and Herr Greveler from the injection of fluids containing monads into the blood. Dr. Hüter has since continued his researches, and has recently published an account of the observations which he has made on the circulation in the lungs of frogs.* He seeks to found thereon a mechanical explanation of the phenomena of fever.

The circulation in the frog's lung was, he remarks, described two centuries ago by Malpighi; but it is only recently that attention has been paid to it by physiologists, among whom are specially mentioned Frithiof Holmgren of Upsala, and Dr. Landois.

In the course of the researches which have already been described, Dr. Hüter and Herr Greveler met with the same appearances in the frog's lung, as in the mesentery, tongue, and web of the foot. The normal circulation in the frog's tongue is so extremely rapid, that it is often impossible to trace the blood-corpuscles in the capillaries; they pass on with such velocity as only to give the eye the impression of a continuous red stream. In cases, however, where putrid fluids have been injected, well marked disturbance occurs. In the neighbourhood of some of the alveoli, the circulation goes on normally; at other points it is more or less retarded, though, in consequence of the free anastomoses and the rapidity of its course, it does not come to a standstill. The cause of retardation, however, is less easily detected than in other organs; and Dr. Hüter advises other observers to begin by observing the action of monads in causing obstruction in the mesentery, after which they will be better able to recognise the phenomena that occur in the lungs.

Having made these remarks, Dr. Hüter proceeds to set forth the conclusions at which he has arrived as to the pathology of fever. He is disposed to agree with those who (as Traube and Senator) attribute the increased temperature, not to an augmented production, but to a diminished loss of heat; and he believes that his researches raise what has hitherto been a hypothesis to the rank of a theory. Agreeing with Traube in the general view, he differs from him as to the explanation. Traube attaches importance to contraction of the cutaneous arterioles, as explanatory of the phenomena of fever; Hüter attributes them to blocking up of a number of the smallest vessels in the general circulation, including the pulmonary.

The animal body, says Hüter, is cooled from the external surface of the body and the inner surface of the lungs. The smaller the quantity of blood circulating through the vessels of these surfaces, the less is the loss of heat, and the greater the rise in temperature. Obstruction of about half the vessels, such as he has observed in frogs, will reduce the heat given off by one-half, and, in warm blooded animals, will ex-

* Ueber den Kreislauf und die Kreislaufstörungen in der Froschlunge. Versuch zur Begründung einer Mechanischen Fieberlehre. *Centralblatt für die Med. Wiss.*, February 1, 1873.

plain the heightened temperature attending infection. Rigors, with the increase of temperature which is peculiar to them, denote the shutting off of a large number of the cutaneous vessels from the circulation, by being blocked up with white corpuscles and monads. The number of contractions of the heart is increased by the warmth of the blood (Senator), and perhaps also by the resistance to the circulation in the vessels of the periphery. Death in fever may be explained by insufficiency of the heart's action, or by the mechanical obstruction of a large number of the vessels supplying the nerve-centres of circulation and respiration, or by both these causes.

From these observations it follows, in Hüter's opinion, that the doctrine of pyrogenous and phlogogenous substances, maintained by O. Weber and Billroth, must be modified so far as fever does not necessarily depend on chemical poisoning of the blood, but may be explained by mechanical disturbance of the circulation.

Hüter believes further that the enlargements of the liver, spleen, and kidneys in fevers, are due to disturbance of the circulation through the obstruction caused by monads. This explanation, he says, agrees very closely with that given by Klebs of the phenomena of pulmonary metastasis after injury, and with that of Birch-Hirschfeld on the swelling of the spleen in rabbits after the introduction of putrid blood.

Having repeated his conviction that there is no febrile symptom proper which cannot be readily and simply explained in the way which he has pointed out, Hüter promises further observation on the subject. He guards himself, however, from saying at present that this theory will explain all the varieties of the febrile state. We will give in an early number a further notice of Dr. Hüter's observations on this interesting subject.

CONJOINT EXAMINING BOARDS.

AT the next meeting of the General Medical Council (which now stands adjourned till March 26th), the chief business will, of course, be to consider the schemes to be submitted from the examining bodies of the kingdom for joint examination for a qualification to practise medicine and surgery.

The English bodies have come to a satisfactory arrangement. From Ireland a scheme will be submitted, from which, however, the Queen's University and the Apothecaries' Society stand aloof.

The Scottish Branch Council will submit the following resolution:—

"That the Branch Council for Scotland, although its members were never thoroughly satisfied that the scheme suggested for conjoint examining boards would confer all the benefits desired, have nevertheless loyally attempted to carry out in Scotland the wishes of the majority of the Council. But the results of all the efforts which have in Scotland and elsewhere been made in promotion of such schemes, and the circumstance that several important bodies have declined to accede to any of the schemes as proposed, have convinced this Branch Council that it is expedient for the present to desist from the attempt to form such a board in Scotland, and rather to endeavour to improve the existing system by carrying out a fuller inspection of the examinations as authorised by the Medical Act."

Their case is stated by Dr. Lyon Playfair, M.P., in that portion of his address to the St. Andrew's graduates which we print elsewhere. We do not propose to-day to analyse it. Although urged with all the ability and force of one of the ablest of advocates, it stands condemned by its own inherent weakness. We may have again to traverse his arguments; but it is needless now to go over ground already well trodden.

WE are requested to state that the meeting of the General Medical Council has been postponed from March 13th to March 26th.

SMALL-POX, which has been epidemic in Boston and its vicinity, is diminishing.

DR. WHITMORE has introduced a new feature in his monthly reports on the health of Marylebone—viz., a table on the meteorology of the parish. He is of opinion that the effect of varying conditions of atmosphere, etc., upon the health is a subject which requires further investigation—an opinion in which we entirely concur.

THE next meeting of the Association of Medical Officers of Health will be held on Saturday, February 15th, at 7.30 P.M., when Dr. C. Meymott Tidy will read a paper on Vitiated Air.

THE sanitary committee of the Leeds Town Council have resolved to close as early as possible 800 cellar dwellings, reported to be unfit for habitation.

WE learn that Mr. Robert Rawlinson, C.B., will in future act as the chief engineering inspector of the Local Government Board, and that Major Tulloch, R.E., has been appointed as an additional inspector.

WE understand that the operation for extraction of cataract which has been performed upon Lord Hatherley by Mr. Bowman has ended quite successfully. The case was one of some anxiety, the other eye being the subject of conical cornea.

DR. LYTTLETON STEWART WINSLOW, youngest son of Dr. Forbe Winslow, received last week at Oxford the degree of D.C.L. The subject chosen for his thesis was "The History of Legislation relating to Lunacy from the Earliest Periods down to the present Day."

FACTORY ACTS IN FRANCE.

THE legislative measures by which Lord Shaftesbury has laid the working classes of this country under deep obligations, are in course of imitation in France. Legislative Acts for the regulation of the age and hours of work of children employed in mines and factories are now being prepared.

TEN THOUSAND POUNDS.

WE understand that on Tuesday a gentleman called at St. Peter's Hospital for Stone, Berners Street, and left with the Secretary an anonymous donation of the sum of ten thousand pounds, in ten notes of one thousand pounds each. The munificence of the gift will attract deserved admiration. Wealth and munificence of this character involve, however, serious responsibilities; and on those who have at their command resources so extensive, it must be considered an incumbent duty to watch over the useful administration of the funds which they provide. This institution is one which has been regarded by those best able to judge as so little necessary, and open to so many public objections, that the young gentleman who was its founder was, with the general approbation of the profession, in consequence called upon to resign an appointment which he held as assistant-surgeon at one of the principal metropolitan hospitals. It is one of the unnecessary special hospitals which constitute mischievous excrescences on our system of hospital charity; and the ill-advised munificence which endows it only tends to perpetuate an evil which might otherwise have been expected to die out with those who promoted it.

AMERICAN PROTECTORATE OF BRITISH CHILDREN.

A CORRESPONDENCE has taken place between the Foreign Secretary of the United States and the Clerk of the Toxteth Union, which is not unimportant. A Lieutenant-Colonel Torry, of Fayette, Jefferson County, Mississippi, had applied to the guardians to be supplied with eight boys and thirteen girls between seven and eleven years of age, inmates of the workhouse, that he might "place them out in his State with parties who are prepared to receive them, in the hope that their services ultimately will amply compensate for the cost incurred in their care, maintenance, and education." The guardians wished to know whether the Government of the United States would offer any objection to the bargain; and they respectfully draw attention to the special report on emigration, published in 1872, by the Chief of the Bureau of Statistics at Washington, wherein the addition to the material wealth of the United States of the children proposed to be taken to that country by Colonel Torry is appraised at 1,000 dollars each. We favour the principle of boarding out in rural districts, under suitable regulations; but this proposition savours a little too much of the ol

"apprenticeship" in the plantations; and we are glad to say that Mr. Fish, in the name of the American Government, declines the wealth of involuntary labour which the guardians offer. He writes:

"With reference to the particular proposition suggested, it is regarded with disfavour. Children of the ages named ('between seven and twelve years') can have and can exercise no judgment or choice of their own, nor is any choice or any judgment exercised by their natural guardians or protectors; and they are not to be accompanied by any one who is bound either by natural affection or by any legal obligation to take charge of either their moral or their physical necessities at a period of life when both need an affectionate supervision. To them the transmission would be involuntary and forced; and the statement in your letter, that they are sought 'in the hope that their services will amply compensate for the cost incurred in their care, maintenance, and education,' suggests the possibility of a service which this Government is not inclined to tolerate, even though it be moral in its requirements of those of either sex."

Mr. Fish's answer is just and humane, and it conveys a sharp rebuke to the guardians. It may be considered certain that Mr. Stansfeld would not have permitted such an arrangement, had the matter previously been submitted to him; and it may be hoped that a very decided communication from the Local Government Board will prevent the contemplation of any such further bargains, which, it is intimated, are in contemplation in other directions.

CHOLERA IN EUROPE.

DURING the week from January 12th to 19th, 49 cases of cholera occurred in Moravia. These, with 11 remaining under treatment, made up the number of 60, of whom 26 recovered and 17 died. The disease had disappeared from seventeen districts in which it had prevailed. In the following week, there was an increase of the disease. The number of new cases was 62, making, with 17 remaining from the previous week, 79, among which were 23 recoveries and 32 deaths. In Silesia, only one new case occurred in the week from January 12th to 19th. The number of cases under treatment during the week was 11, of whom all recovered except one. Cholera may, therefore, be considered to have ceased in Silesia. In Galicia, during the first half of January, 2,673 new cases occurred; the total number under treatment being 3,913, of whom 2,406 recovered and 1,065 died. On the 1st instant, 602 of the localities in Hungary which had been the seat of cholera were free from the disease, and 982 patients remained under treatment in the kingdom. In Prague and its neighbourhood, during the second half of January, there were 77 cases, of which 28 recovered and 30 died. No fresh cases had occurred in Vienna on the 7th instant. Cholera has reappeared in Moscow, after having apparently ceased. In the week from January 17th to 24th, there were 5 cases, one of which died. Official reports state that cholera has ceased in Warsaw. In that city, the number of cases (excluding the military) has been 1,102, and that of deaths 464. The disease is said also to have disappeared or to be disappearing in other parts of Poland. During the week from January 19th to 26th, the number of cases officially reported as occurring in Russia was 211. Of these, 146 were at Pultusk, in the government of Lonoza, and the remainder in Moscow and in the governments of Grodno, Kowno, and Piotrkow.

THE AMENDED VOLUNTEER REGULATIONS.

WE have received a number of communications from Volunteer medical officers asking our advice on the question of the twopence allowed in aid of medical attendance to the permanent staff by the new War-Office regulations. There appears to be some misapprehension as to the meaning of the regulation. It is known to many Volunteer surgeons that the War-Office, in promulgating the circular of April last, aimed at providing medical attendance gratuitously for the members of the Volunteer permanent staff and their families at the expense of Government, as is the case in the Militia. But the compulsory application of these regulations was, for pecuniary and other good reasons, resented by the Volunteer medical officers. Mr. Cardwell at once withdrew the regulations as they stood, entirely altered their character, and now allows to the members of the permanent staff and their families two-

pence per week for each person, to assist in paying the medical attendant, be he Volunteer surgeon or private practitioner. By this regulation, a material addition is made to the pay of the permanent staff. It would appear that the sergeant may make any private arrangement he pleases in securing the medical advice which he or his family may require, and receive the War-Office allowance in aid of this from the adjutant, on the production of the required certificates. It must be, therefore, in a private capacity only that the Volunteer surgeon, whatever pecuniary arrangement he may have with the members of the permanent staff, can afford medical aid. Of course, if he think fit, as a Volunteer surgeon, to afford medical attendance gratuitously to members of the permanent staff and their families, he will not often be denied the opportunity of doing so. In this case, he will, we think, be going beyond what is expected of him as a Volunteer, and what is desirable; but he will save the War-Office considerable expense. The new regulation no doubt presents one advantage of importance to the permanent staff—viz., that the sergeant residing many miles from the medical officers of his regiment will now receive a government allowance to assist him in paying the local practitioner.

SMALL-POX IN VIENNA.

IN the week ending January 31st, there was a daily average of 338 cases of small-pox under treatment in the Vienna hospitals. In the following week, however, the number increased to 346. On the other hand, the number of deaths underwent a marked diminution, being 85 in the week ending January 24th, 72 in the week ending January 31st, and 52 in the week ending February 7th.

POISONING BY CARBONIC OXIDE.

M. GRÉHAUT concludes, from researches which he has reported to the Académie des Sciences, that carbonic oxide is eliminated as such from the lungs, the organ through which it enters the blood. This result is physiologically important, since it distinguishes carbonic oxide from substances which undergo combustion in the organism. As a practical application, it points to the utility of artificial respiration in serious cases of asphyxia by the vapour of charcoal.

CINCHONA.

THE question of growing cinchona at a profit in various parts of India (says *Allen's Indian Mail*) appears to have reached a very promising stage, in spite of the drawbacks incidental to most experiments of the kind. Mr. M'Ivor, superintendent of the State plantations in Southern India, lately informed his government that large harvests of the bark might now be reckoned upon, and advised the sending home of not less than 25,000 lbs. as a first consignment, to be sold by public auction, with a view to test its quality and market value. It is still open, we believe, to question how often the same trees can be stripped of their bark without injuring the quality of the yield, and many persons predict some kind of deterioration in the trees themselves. Canker also has for some time been at work in several plantations on the Nilgiris and the Sikkim Hills; but its ravages seem to be confined mainly to plantations grown on unkindly soil or in climates more or less unsuitable. The *Darjiling News*, however, speaks with perfect confidence of the results already attained in the Sikkim Hills. It declares that the bark there grown "could be sold with a fair profit at prices which would be ruinous to the producers in any other country where it is cultivated". In South America, where the mere cultivation of the plant costs nothing, the cost of carriage to the sea-cost tends to check the export trade whenever a fall in the market price occurs. In India, the extent to which government once carried their experiments in growing cinchona is said to have frightened a good deal of private enterprise out of the field; but the few speculators who hold on in spite of every hindrance may now expect to "enjoy a golden harvest" after some ten years of anxious waiting. While the private gardens on the Nilgiris show little chance as yet of winning back the sums laid out on them for years past, it is reckoned that the Darjiling planters will soon be reaping a dividend of thirty per cent. As no return, however, can

be expected from a cinchona garden for the first eight years or so of its existence, none but capitalists are likely to embark in a venture which demands a good deal of ready money, combined with a very large stock of human patience.

THE TRADE IN DIPLOMAS.

THE bogus degrees of the suppressed University of Philadelphia are, it may be hoped, nearly "played out" in this country. Trusting, however, to the proverbial neglect by French editors and readers of foreign literature, the Jersey speculators are finding still a credulous and quite fresh public in France, where the whole subject is being discussed as one of astonishing novelty.

SUPPLY OF WATER TO SHIPS AND CREWS.

THE primary importance, in a sanitary view, of the water-supply in ships of war, has engaged the attention of Fonssagrives, Roux, and Lefevre the elder, whose son, also a distinguished French navy surgeon, has recently written a treatise reviewing all that had been written, and entering more deeply on this serious question, which greatly concerns the efficiency of ships of war of all nations, and none more so than the British navy, scattered as it is on all the coasts of the world. He lays down the proposition, to which we willingly subscribe, that, before a supply of water is taken, the medical officers should be the responsible authorities as to its fitness, ascertained by examination and analysis. He enters fully on the qualities, both sensible and by chemical analysis, of fresh waters; and presents the analysis of such as are supplied at the French home naval stations—Cherbourg, Brest, L'Orient, Rochefort, and Toulon. Of these, the first is the only one at which water is obtained from a river, all the others being from springs. The Cherbourg water is also the only one containing clay, organic matter, nitrates, and ammoniacal salts, without free gases, as oxygen, nitrogen, or carbonic acid, which are found in most of the others, together with iron in the waters of L'Orient, Rochefort, and Toulon. Of water obtained on foreign stations, mostly from rivers, he states that in general it is of doubtful quality; and French naval surgeons, like our own, ascribe dysentery and embarrassment of the digestive organs to its use, as in Cochin China and on the West Coast of Africa. All stagnant waters in tropical climates abound in salts and organic matter, and the ova and larvæ of insects, which develop in the tanks on board. He speaks in the highest terms of the supply which may be obtained in a few hours from Artesian borings, as practised by our army in Abyssinia with the most signal hygienic success; but, for use on board ships, he would rely mainly on that obtained by the distillation of sea-water. The original plan was by the cooking apparatus in sailing ships, more fully carried out in steamers by condensation of steam from the boilers. It requires the addition of a condenser, an air-pump to aerate it, and a filter of animal charcoal to deprive it of empyreumatic flavour and of metallic salts derived in distillation. Regarding the distribution, M. Lefevre suggests that every ship should be furnished with a syphon-filter containing charcoal and silica, through which all the drinking water should be drawn from the tanks. He advocates the supply to every ship, for the use of the sick-bay at least, of a freezing machine such as is already given to hospital ships and large transports in the French navy. The tank containing the drinking water to be made of iron, enamelled inside, and cased in wood for coolness, having an issue-syphon with a spout of porcelain or of glass, without a common drinking bowl—each man using his own drinking cup, to preclude chances of syphilitic or stomatitic infection. Instead of employing acid or spirit to flavour water, he recommends the coffee-grounds left in the boilers after withdrawing the morning meal, strengthened by a little fresh coffee. While serving in a surveying vessel in the Mediterranean, M. Lefevre recommended its use in the boats, where the men were much exposed to solar heat, with the best results. He found that, although it was not liked at first, yet the men soon preferred it to acidulated drinks, as one-fourth in quantity of it refreshed and satisfied thirst, in comparison with the acidulous drinks to which they had been

accustomed, which embarrassed the digestive function and caused inordinate perspirations. This practice is strongly recommended, on the high authority of M. Bourel-Roncière, for ordinary use in engine-rooms, where, we believe, among ourselves the common beverage is water with oatmeal steeping in it, and for the general use of the entire crews of ships in hot climates. M. Lefevre considers that, with a threefold view to hygiene, economy of water, and efficiency of the crew, this simple means is worthy of adoption in all navies. The remarks are so practical, that we make them known to our naval surgeons, whose attention to the subject, as fully treated on by M. Lefevre, would amply repay itself.

VACCINATION IN LEEDS.

AT the meeting of the Leeds Board of Guardians last week, Mr. T. Holmes, the vaccination-inspector for the township, made an extremely satisfactory report for the half year ending June 30th, 1872. Of 2,887 children born and registered during that time 2,486, or 86 per cent., had been vaccinated successfully, and the remainder had either died unvaccinated or were otherwise accounted for. There had been only one case of refusal to obey the law.

THE GRANT MEDICAL COLLEGE, BOMBAY.

FROM the report of the Grant Medical College, Bombay, we (*Nature*) learn that during 1872 the total number of students was 283, showing an increase of 37 over 1871. Great improvements have taken place in the Museum; and Dr. Sylvester, the officiating principal, says, that for the last twenty years it has not been in such good order as it is at present. Dr. Sylvester reports that the system of education is not so sound and deep as it ought to be, and wisely recommends that some subjects should be omitted from the course, and a more strict and penetrating knowledge insisted on in the others. He also seems to think that more care ought to be exercised in the appointment of professors, and that a sort of supplementary professor should be appointed to each chair, who would be ready at any time to undertake the duties of the professorship in case of a vacancy.

HOSPITAL SUNDAY.

THE Sheffield Hospital Sunday returns (as analysed by the *Rock*) show that of £1,445 collected, the Church of England gave £725, or 50 per cent.; Wesleyans £215, or nearly 15 per cent.; Congregationalists £151, or over 10 per cent.; the Unitarians £73, or about 5 per cent. The Roman Catholics gave £23, or less than 2 per cent. The total sum raised on "Infirmary Sunday," as it is called at Preston, was £329. Of that amount the Church of England congregations gave £198, or 60 per cent.; the Wesleyans £16, or less than 5 per cent.; the Independents £33, or 10 per cent.; the Baptists £11, or something over 3 per cent.; the Roman Catholics £49, or nearly 15 per cent.; and other places of worship £21, or rather less than 6 per cent.

ST. GEORGE'S HOSPITAL AND MEDICAL RELIEF.

SOME of the governors of St. George's Hospital, who are members of the Committee of the Charity Organisation Society, brought forward, at the Weekly Board on the 5th instant, two resolutions; viz.: 1. "That persons suffering from delirium tremens be not admitted as patients into the hospital, and that such persons be sent into the work-house;" 2. "That servants, and persons whose financial position will admit of it, shall be charged a weekly sum, whether in- or out-patients." After some discussion, both resolutions were referred to a Committee for consideration. The subject of out-patients has for some years past received considerable attention from the Board. They have reduced the evil attending the system at most other hospitals to its minimum. Governors' letters are abolished; twenty surgeon's and twenty physician's cases only are seen each day; and of these, some are those in-patients made out-patients, and others are out-patients whose letters have expired, which takes place after a month's attendance; so that the physician and the surgeon seldom each sees more than from twelve to fifteen really new cases, and more than one hundred altogether.

They are assisted in their work by qualified assistants appointed by the Board. Inquiry is made by the clerk into the social position of each patient, and medically by the junior medical officers, before he is admitted. This system, we believe, works very well; and it is doubtful whether the Board ought to consent to further restrictions or changes in the admission of patients. The extraordinary resolution on the subject of delirium tremens cannot certainly be medically inspired, and has obviously been proposed in ignorance. It would be interesting to ascertain the views of the gentlemen who propose to deny the benefits of the charity to unfortunate persons suffering from that malady, and on what principle they would refer them to the parish. If it be their desire to exclude persons suffering from disease brought on by excess in alcohol, they will have an ample field for work. It is anomalous, however, that unlucky persons, instead of being run over or falling from scaffolding when drunk, and being carefully tended, should be refused relief because their vice has led to results distasteful to the managers of St. George's Hospital. The business of a hospital is to cure physical disease.

THE STRIKE IN SOUTH WALES.

THE unfortunate state of affairs at present existing in Glamorganshire has naturally received the earnest attention of the medical practitioners of the locality. Dr. James Lewis (a well-known member of our Association) has been exerting himself to bring about a conference between the parties concerned, at which the questions in dispute shall be fully and patiently discussed with a view to their settlement; and we understand that it is part of Dr. Lewis's plan that one member of the proposed conference shall be a medical man, capable of giving explanations on the sanitary requirements of colliers and iron-workers. We do not know whether anyone has been selected for this purpose; but it would scarcely be possible to find a better than Dr. Lewis himself, acquainted as he is by long residence with the habits, wants, and language of the men, or than Mr. Dyke, the medical officer of health for Merthyr. In view of the destitution and sickness which must be the inevitable results of a prolonged strike, Dr. Lewis and Mr. Dyke have organised a "sick women and children's relief fund," for the purpose of relieving "women and children, not being paupers, who have no means of procuring such necessary comforts in food, meats, or other suitable nourishment as the Doctor shall recommend." Each case will be specially inquired into; and the ticket entitling the applicant to relief must be signed by the physician and surgeon. Dr. Lewis and those who are acting with him in his benevolent labours will, we are sure, have the cordial good wishes of all our readers for their success.

ROYAL MICROSCOPICAL SOCIETY.

THE following officers and Council were elected on February 5th, 1873:—*President*: C. Brooke, M.A., F.R.S. *Vice-Presidents*: W. B. Carpenter, M.D., F.R.S., etc.; Sir John Lubbock, Bart., M.P., etc.; W. K. Parker, F.R.S.; F. H. Wenham, C.E. *Treasurer*: J. W. Stephenson, F.R.A.S. *Secretaries*: H. J. Slack, F.G.S.; C. Stewart, M.R.C.S. *Council*: James Bell, F.C.S.; John Berney, Esq.; R. Braithwaite, M.D., F.L.S.; W. J. Gray, M.D.; H. Lawson, M.D.; B. T. Lowne, M.R.C.S., F.L.S.; S. J. McIntire, Esq.; J. Millar, L.R.C.P.Ed., F.L.S.; H. Perigal, F.R.A.S.; A. Sanders, M.R.C.S.; C. Tyler, F.L.S.; T. C. White, M.R.C.S. *Assistant-Secretary*: Walter W. Reeves.

LIVERPOOL MEDICAL MISSIONARY SOCIETY.

THE ninth annual meeting of this Society was held in Hope Hall on February the 4th inst. There are now two dispensaries in connection with this Society. One of them has recently been moved to a new locality, where a building has been erected for the purpose at a cost of £2,000, the greater part of which has already been subscribed by friends of the mission. Upwards of 57,000 visits have been made by patients to the dispensaries during the past year, although one of them was only open during six months, and more than 8,000 visits were paid

by medical officers to the houses of the poor. Two Bible women, who act also as nurses, have been extensively employed amongst the patients, and food and clothing, supplied by friends, have been distributed to the most necessitous. Dr. Owles acts as superintendent of both dispensaries, and is aided by two fully qualified medical assistants.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

AN extra general session of this Society, followed by a dinner, both under the able and genial presidency of Dr. Lockhart Robertson, was held at the Freemasons' Tavern, Great Queen Street, on Saturday, February 8th. Dr. Lyon Playfair, C.B., M.P., delivered an address on "Universities as Places of Professional Education". This was an able summary of arguments against the "one-portal system" of a State examination, and was listened to with the greatest attention, and apparently fully met the approval of the majority of those who listened to it. The dinner was exceedingly pleasant; and it speaks well for the Society, that they could muster so goodly an assemblage in such wintry weather. Drs. B. W. Richardson, Take, Bucknill, Sieveking, George Harley, Paul, and Sedgwick, were amongst the speakers.

ACTION FOR RECOVERY OF FEES.

AT the Lambeth County Court, the case of Johnson v. Mallard came on for hearing. The action was to recover a sum of £5:5 for medical attendance. It appeared from the evidence that the defendant had been run over by an omnibus, and that the plaintiff had attended her in his capacity of medical officer of the parish, and had received an extra fee in the case from the guardians. The defendant, however, having brought an action in one of the superior courts against the proprietors of the omnibus, recovered a sum of £80; and it was considered by the plaintiff that, as this sum was intended to cover the cost of the medical attendance rendered necessary by the accident, he was entitled to recover. The judge said that the plaintiff and the defendant had succeeded in compelling the owners of the omnibus to pay this £80; and he was now asked to divide this money between them. He should do nothing of the kind, but should give judgment for the defendant.

RELATIONS OF OZONE TO THE PUBLIC HEALTH.

M. O. JAMIN DESPALLES, in a note addressed to the Académie des Sciences (*Gazette Hebd.*, Jan. 31) states that, when the wind passes from south to north, it may be ascertained that the ozone is at the maximum at the west point, and at the minimum at the east. The proportion of phosphoric acid resulting from the oxidation of phosphorus in the organism, as well as the barometric elevations, ozonometric and pluviometric, are at the maximum during west winds, and at the minimum during east winds. He compares the figures of the three very wet months, October, November, and December, 1872, with the same months of the years 1869 and 1871, for example, when the winds were chiefly from the north, north-east, or east, and the rainfall much less than in 1872. In November 1872, the rainfall exceeded 117 millimeters; the temperature varied between ten and twenty degrees; the winds remained in the west; the barometer oscillated between 740 and 745, descending one day to 721. It may be observed that the mortality of Paris for October, November, and December, was, in 1869, 10,145; in 1871, 10,659; and in 1872, only 9,632—corrections being made for the movement of population. In August and September, 1865, after the east winds, cholera broke out at Paris. In October, November, and December, fifty-two days of south winds or east winds corresponded to 18,043 deaths, of which 5,952 were choleraic. The epidemic raged with variable intensity till September 1866. At that moment, a series of twenty-five days of west winds and persistent rains (94 millimeters), however, so well purified the atmosphere, that in October, November, and December, there were only 9,776 deaths, of which 200 were choleraic. To sum up; the epidemic arising under the influence of the east winds in September 1865, was driven away by the west winds in September 1866, and disappeared completely in the following December.

SCOTLAND.

EDINBURGH UNIVERSITY COURT.

THE University Court at its meeting on Monday appointed Dr. William Robertson, Mr. Benjamin Bell, and Dr. William Dumbreck examiners in medicine for the current year. The Court also sanctioned the opening of a summer clinical class of Gynæcology by the Professor of Midwifery.

THE EDINBURGH LADY MEDICAL STUDENTS.

THE action by the lady medical students of Edinburgh against the Senatus of the University of Edinburgh was called on Thursday in the Second Division of the Court of Session, when the counsel submitted printed arguments, which are to be laid before the whole of the judges before a decision is given.

MANAGEMENT OF INFANTS.

THE *Edinburgh Medical Journal* publishes the following rules for the management of infants, prepared by the Medical Officers of the Edinburgh New Town Dispensary. They are very similar to those which have been issued for some years at the Middlesex Hospital and the Hospital for Sick Children, London.

1. *Warmth, Cleanliness, Fresh Air.*—Keep them warm: let the clothing be warm but not tight. Wash them all over with warm water daily, wiping them thoroughly dry afterwards. Give them plenty of fresh air: send them out, at least for a short time, every day that the weather is fine; and, while they are out, air the room, by freely opening the window.

2. *Nourishment while the Child is under Seven Months old.*—The mother's milk is the most natural, and accordingly the proper food for infants. Therefore, if the mother has plenty of milk, let her suckle her child and give it *nothing else* till it is seven months old. If the mother have too little milk, still let the child have what there is; and, in addition, cow's-milk and water, as directed in Rule 3. Till the child is seven months old, milk must be its *only* food.

3. *How to bring up "by hand."*—If the child *must* be brought up by hand, it should be fed with milk and water out of a bottle. At first, there should be nearly as much water as milk; but when the child is a month old, two parts of milk should be mixed with one of water; after this, the proportion of milk should gradually still further be increased, till, at four or five months, it is given plain. If, at any time, the milk seems to disagree, a tablespoonful of lime-water should be added to each bottleful. *Give the child no other nourishment whatever.* A very large number of the children that are brought up by hand die in childhood; and this mortality is for the most part due to the practice of beginning too soon with gruel, corn-flour, etc. These are not proper nourishment for children under seven months old, and should never be given to them. While the child is under a month old, do not give it more than half a teacupful of milk and water at a time. The bottle should draw easily. It should be very carefully washed out after every time it is used. Then bottle, cork, and tube should be kept separately in a bowl of clean water till next time they are needed. If the bottle is not quite clean, the milk may sour, and may thus make the child ill.

4. *Importance of Regular Feeding.*—The child should be put to the breast *regularly*: for the first six weeks, during the day, in general not oftener than every two hours; afterwards about every three hours. During the night, it does not need to be fed so often. A child soon learns regular habits as to feeding. It is a very great mistake to give the breast to the child whenever it cries, or to let it be always sucking, particularly at night; this is bad for both mother and child. If the child is brought up by hand, it should be fed with the same regularity: never give it the bottle *merely* to keep it quiet. If the child is weakly, the intervals between the feedings must be somewhat shortened, both during the day and during the night.

5. *Nourishment when the Child is over Seven Months old.*—If at seven months the child is strong and healthy and has cut a few teeth, it may now have one or two meals a day of milk slightly thickened with good well baked bread or well boiled porridge. *It should still have, besides this, plenty of plain breast or cow's milk.* At ten months, it may once a day have a little meat-broth made with barley or rice, without vegetables. At twelve months, it should be taken from the breast. Till the child is two years old, no solid animal food should be given. *Even at two years, milk should still be the chief food.*

If at seven months the child is weakly or sickly or is backward in teething, milk must remain the only food for some time longer.

6. *Avoidance of Stimulants, etc.*—Tea, beer, whisky and other stimulants, cheese, fruit and pastry, as also "soothing medicine," "sleeping-draughts," "cordials," "teething-powders," etc., *should never be given*; and even ordinary medicines should, if possible, be given only after proper medical examination and advice.

The editor adds the following remarks in regard to the foregoing excellent rules: First, there are not many mothers, denizens of towns, who are able to nurse their children without assistance up to seven months, this being doubtless the proper thing to do, if it be possible. Second, to mix water with milk is needless; too much of that is added before the poor mother gets it; and even were it not so, the child has need of all the nourishment it can get. A little lime-water should be added in all but exceptional cases, but otherwise the amount of water added should be restricted to about two tablespoonfuls of boiling water in each pint, which are just enough to raise the temperature of cool milk to the normal heat of breast-milk. The mixture should be then well sweetened, and of it a child a month old will take two pints in the day, some will take more, and but few healthy children less. Third, for those children whose nursing needs to be supplemented, a supper of well boiled groat-gruel will be found readily enough digested, as well as relished, long before seven months. It is not always possible to procure good cow's-milk, and there are a few exceptional children with whom cow's-milk invariably disagrees; for poor people, it is a comfort to reflect, that even though gruel is not a proper food for infants, many such have been brought up entirely upon it.

IRELAND.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

THE Belfast annual meeting of the Branch was held on February 5th. Dr. T. H. Purdon, the permanent president, occupied the chair. According to the financial statement of the past year, it appeared that the total sum transmitted to the parent society was £113:13:9, of which amount the subscriptions were £63:13:9, and the donations £50. The meeting resolved on adopting a new system of collection, by taking the town in its Poor-law division of wards.

SANITARY CONDITION OF DUBLIN.

AN influential deputation from the Dublin Sanitary Association waited on the Corporation of Dublin on the 5th instant, for the purpose of presenting a memorial suggesting remedies for the present very defective sanitary condition of the city. After a lengthened discussion, it was arranged that committees from the Corporation and the Association should confer together as to the best means to be adopted on this most important subject. The amalgamation is one from which the citizens may expect great advantages.

UNIVERSITY OF DUBLIN.

THE visitation called for by Dr. McDowel, Professor of Anatomy, opened its proceedings last week before Sir Joseph Napier, Vice-Chancellor of the University, and Mr. Battersby, Q.C., deputy to the Archbishop of Dublin. It seems that Dr. McDowel was reappointed in last October Professor of Anatomy, but by a resolution of the board a portion of the fees previously retained by the holder of this office were transferred to the lecturer on Comparative Anatomy, an appointment created at the same time. In November Dr. McDowel's attention was called by the Registrar to a resolution of the Board of Feb. 1868, that they could not sanction his combining with the professorship of anatomy that of physician to the Whitworth Hospital, which he holds for life; and that this latter appointment must cease before he could be fully admitted to the Chair of Anatomy. The matter at issue, therefore, is whether the Board have a right to alter the amount of fees payable under the College statutes to the Professor of Anatomy, or interfere otherwise with the statutable privileges of the Chair. It may be mentioned that Dr. McDowel, in 1869, was summarily removed from his post of surgeon to Sir Patrick Dun's Hospital, on the ground of being irregular in his attendance on Sundays; and that the Board then refused to allow any investigation, although he repeatedly asserted that the charge was unfounded, and courted a full and searching inquiry. The visitors have decided in favour of the Board of Trinity College, as regards the lectureship on Comparative Anatomy; and in favour of Dr. McDowel with respect to his holding the appointment of physician to the Whitworth Hospital.

THE UNIVERSITY OF ABERDEEN.

REPORT OF THE COMMITTEE ON UNIVERSITY COUNCIL MATTERS
APPOINTED BY THE ABERDEEN, BANFF, AND KINCARDINE
BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE Committee have to report that they have maturely considered the transactions and opinions of the Aberdeen University Council, as it has existed since the carrying out of "the Universities (Scotland) Act" of 1858 by the Commissioners appointed under it; and they recognise a well-grounded dissatisfaction with the above Act and with the ordinances of the Commissioners as at present in force, a dissatisfaction which is not only general and increasing, but which must in time lead to a revision of the working of the universities and a remodelling of the Act and ordinances.

The Committee would, therefore, call the attention of the Branch to the necessity which exists for considering whether the present state of the medical school at Aberdeen is so satisfactory that no effort to amend or improve it need be made in anticipation of such a remodelling of the Act and ordinances.

To this end the Committee have maturely considered the working and results of the machinery at present in action in the Aberdeen School of Medicine, and now bring the results of their deliberations, so far as they concern the university and "the Universities (Scotland) Act", before the Branch, with whom it lies to declare whether their Committee shall proceed farther in the matter by taking such action in the University Council and otherwise as is indicated in the present report.

The attention of the Committee was directed to the Aberdeen Medical School mainly with the view of forming an accurate answer to the following queries, viz.: 1st. Is the Aberdeen Medical School, as now constituted, fulfilling the present requirements of medical education? And 2nd. Is its constitution sufficiently elastic to enable it in the future to meet the growing requirements of medical education?

First. Is the Aberdeen Medical School, as now constituted, fulfilling the present requirements of medical education?

The Committee, believing that, so long as the ordinary "pass examination" is all that is required for promotion to the degree of *Doctor of Medicine*, it is essential that the means of being trained in every branch of medicine and surgery should be open to the students, and that a knowledge of these should be, to some extent, required of every candidate, are convinced of the necessity of providing the students, in addition to their present means of gaining information, with improved facilities for learning histology, practical pathology, especially microscopic pathology, operative surgery on the dead body, eye-diseases and the ophthalmoscope, ear-diseases, skin-diseases, laryngoscopy, teeth-diseases, state medicine and public hygiene, insanity, etc.

These subjects, where taught at all, are taught either insufficiently or in a manner unrecognised by the university, and form, for the most part, no portion of the degree examinations; while the immense importance of some of them calls for their recognition as a part of the regular machinery of a medical school.

The Committee, therefore, report that, in their opinion, the Aberdeen School of Medicine, as now constituted, is not adequately fulfilling the present requirements of medical education.

Second. Is the constitution of the Aberdeen Medical School sufficiently elastic to enable it, in the future, to meet the growing requirements of medical education?

It has been stated above that the School of Medicine in Aberdeen has not kept pace with the requirements of medical science up to the present time. The reasons of this are twofold.

In the first place, the university has no power to appoint teachers or create lectureships on new subjects, and individual enterprise has hitherto been insufficient to do so, owing to the want of encouragement in this direction.

In the second place, the university has no power to give permanency and validity to such classes by instituting corresponding alterations in the examinations for graduation.

The present constitution of the Aberdeen Medical School is, therefore, not sufficiently expansive to meet the requirements of the future.

In regard to the alterations which are necessary in the constitution of the Aberdeen School of Medicine, the Committee are of opinion that the deficiencies of the present arrangements would be obviated; that the constitution of the Medical School would be rendered sufficiently expansive; and that the permanency of the necessary additional teaching and classes would be sufficiently secured by alterations in the Universities Act and Commissioners' Ordinances to the following effect:—

1. That the power of determining and altering, from time to time, as may seem expedient, the subjects of preliminary examination for students

of medicine, and the relative values to be placed on such subjects; and the power of modifying, altering, or adding to, the medical curriculum, be placed in the hands of the University Court, or other competent body.

2. That the aforesaid University Court, or other competent body, have power, from time to time, as may seem expedient, to institute compulsory examination of candidates for medical degrees, on subjects not presently included in the medical curriculum.

3. That the aforesaid University Court, or other competent body, have the power of appointing, on such subjects as are at present not included in the medical curriculum, an examiner, or examiners, in addition to the professors and their assessors, such examiners to be paid by the University at a rate fixed by the University Court, or other competent body aforesaid.

4. That the aforesaid University Court, or other competent body, be empowered to appoint, and fix the fees of, teachers or lecturers on such subjects as are at present not included in the medical curriculum, but which they may, from time to time, judge necessary.

5. That the extra-mural tuition of subjects at present embraced, as well as of those which may afterwards be embraced in the medical curriculum, be recognised by the University of Aberdeen as qualifying for graduation.

6. That extra-mural teachers or lecturers be bound to charge fees not less than, and grant certificates of attendance similar to, those of the professor, teacher, or lecturer teaching the same subject in the university; and, where difficulties occur, the University Court, or other competent body aforesaid, shall fix the fee of the extra-mural teacher or lecturer.

7. Except by the special permission of the aforesaid University Court, or other competent body, only one subject shall be taught by each extra-mural teacher or lecturer.

In conclusion, the Committee are of opinion that, to carry into effect these alterations, the Branch should empower them, as its representatives, to take such action as they may deem proper in bringing the subject under the notice of the University Council, in endeavouring to secure the co-operation of the *Senatus Academicus* and other persons interested, and to take such other steps as may seem proper to attain the ends the Committee have felt it their duty to indicate above as essential to the well-being and progress of the Aberdeen Medical School.

Aberdeen, 25th January, 1873.

REPRINT OF THE BRITISH PHARMACOPŒIA.

PROFESSOR REDWOOD announced, at the last meeting of the Pharmaceutical Society, that it was proposed to reprint the *British Pharmacopœia*, and also that it was intended to publish the long-promised appendix, containing medicines "which had been established in medical practice since the work was published." If we understand rightly, it is intended by the Pharmacopœia Committee to recommend to the Medical Council that the *British Pharmacopœia* should be reprinted without alteration, and that the appendix should also be published separately, for the convenience of those who had previously purchased the original work.

The Professor appealed to the Pharmacists of England, Scotland, and Ireland for suggestions, and mentioned a few remedies which he thought might find a place in the Appendix:—*videlicet*, hydrate of chloral, nitrite of amyl, acetic ether, chloroform water, syrup of liquorice, mustard paper, a powder of elaterium (to be called compound, and to consist of one part of elaterium and nine parts of sugar of milk), hypophosphites of lime and soda, oxide of bismuth, acetum and oxymel ipecacuanhæ, a purgative pill without aloes, nitrate of ammonia, precipitated oxide of mercury, pepsine, and a new form of suppositories.

It seems undesirable to have an appendix crowded with remedies that have not had a good trial, and some of those proposed, we fear, have not. Chloroform water is something new; water will take up about 1-200 of its bulk of chloroform, and the preparation may possibly be liable to change. Syrup of liquorice is inserted in the Prussian and German Pharmacopœias; but whether it is to be preferred to a liquid extract, is a question for the committee to consider. We much doubt whether a diluted elaterium will be an advantage. Medical men who are well acquainted with the dose of elaterium will not care to tax their memory with a diluted form of it. Is oxide of bismuth wanted in addition to the carbonate, the subnitrate, and the solution of the ammonio-citrate, already in the *Pharmacopœia*? The precipitated peroxide of mercury is preferred in the treatment of skin-disease to the red oxide, and for the sake of distinction should be called yellow oxide. Suppositories made of gelatine are in such gene-

ral use as to claim a place in the appendix. Some hesitation is required in introducing another liquid preparation of ipecacuanha. The tincture is already in some of the foreign Pharmacopœias; and it would be desirable to learn the value of this before adopting the vinegar of ipecacuanha recommended by Mr. George Johnson several years ago.

SPECIAL CORRESPONDENCE.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Elections of Honorary Medical Officers to the Manchester Royal Infirmary.—Hospital Sunday.—Donations to Medical Charities.

THE infirmary elections have at length, after exactly eight months' preparation, taken place, and the seven vacancies have been filled up. The election committee, to the number of twenty-two, met on Monday, when they made the following appointments:—For the office of assistant-physician, Dr. J. Leech, M.B., and C. Currie Ritchie, M.D.; for the office of assistant-surgeon, S. Messenger Bradley, F.R.C.S., and Walter Whitehead, F.R.C.S.Ed.; for the office of ophthalmic surgeon, Thos. Windsor, M.R.C.S.; for the office of obstetric physician, John Thorburn, M.D.; and for the office of dental surgeon, G. W. Smith, M.R.C.S. The new officers will enter upon their duties next week.

The amount of the collections made last Sunday is not definitely known, but it is tolerably certain that we shall by no means reach the splendid sum of £8,000, which was the result of Hospital Sunday in Liverpool. The largest single collection was, I believe, made in the Unitarian Chapel in Cross Street, where £216 were subscribed, while they only collected £153 at the Cathedral; but the Unitarians of Manchester are proverbially rich and proverbially liberal.

There is no end, indeed, to the munificence of the Manchester merchant princes and, I ought to add, princesses; for last week Mrs. Linchay, in a gift of £200 to the Royal Eye Hospital, added another to the long list of benefactions made by ladies to our medical charities. Mr. J. G. Frost also presented £1,000, and the late Alderman Rumney £100 to the funds of the same institution; this long list of donations being crowned by the magnificent bequest of £5,000 made by Mr. James Hatton to the income of the Royal Infirmary.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, February 27th, at half-past Seven o'clock; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, }
E. C. BOARD, } *Honorary Secretaries.*

Bath, February 11th, 1873.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held at the Wynnstay Arms Hotel, Ruabon, on Thursday, March 20th, at 1 P.M.; R. CHAMBRES ROBERTS, Esq., President, in the Chair.

Gentlemen having papers or cases to communicate, will please to forward the titles of the same a few days before the meeting.

The dinner, to which members may invite friends, will be at 3 P.M. Tickets 6s. 6d. each, exclusive of wine.

D. KENT JONES, *Honorary Secretary.*

Beaumaris, February 12th, 1873.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: ORDINARY MEETING.

AN ordinary general meeting was held in the Music Hall Buildings, Aberdeen, on Wednesday, February 5th, at 9 P.M. There were present eleven members; Dr. JACKSON, Aberdeen, in the Chair.

New Members.—The following gentlemen were halloted for and admitted, viz., George J. Fraser, M.D., Cruden; Alexander Cran, Esq., Kildrummy; Thomas Collins, M.D., Bervie; and William Lyon, Esq., Peterculter.

The Treasurer intimated the withdrawal from the Branch of Dr. Fiddes, Aberdeen.

Report on the University of Aberdeen. A report by the University Committee was read, and appointed for discussion at the next meeting. It is published at p. 182.

Indentation of the Head during Labour.—Dr. ALEXANDER REITH called attention to this form of injury in new-born children, relating cases in his own practice occurring after instrumental and difficult labours, and the treatment by kneading the bones into shape which he had found useful.

Diabetes.—Dr. ANGUS FRASER detailed five cases of diabetes, four of them treated with codeia or morphia. He also quoted Dr. Pavy's cases, and stated that the only cases benefited were those of senile excessive production of sugar; while the younger patients, where defective assimilation occurred, were not benefited by any treatment.

Exomphalos.—Dr. FINDLAY read a case of protrusion of a hernial sac into the umbilical cord in a new-born infant not otherwise deformed, where death occurred on the twentieth day.

After votes of thanks to the contributors of papers, the meeting concluded.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE fourth general meeting of the session 1872-73 was held at the Midland Institute, Birmingham, on January 9th, at 3 P.M. Present: THOMAS EBBAGE, Esq., President, in the chair, and forty-five members and visitors.

New Members.—The following gentlemen were elected members of the Branch. Mr. J. E. Wood, Leamington; Mr. Walter Lowe, Burton-on-Trent; Mr. Sculthorpe, Tamworth; Dr. Burgess, Birmingham; Dr. Kellett, Bilston.

Place of Meeting.—On the motion of Dr. MACKEY, it was unanimously resolved—"That the Council be requested to consider and report upon the possibility of obtaining a more suitable room for the Branch meetings."

The Late Mr. H. D. Carden.—On the motion of Mr. ALFRED BAKER (President of the British Medical Association), seconded by Dr. RUSSELL, it was resolved—"That this Branch tenders to the widow of the late Mr. Henry Douglas Carden its cordial sympathy in the loss which she has sustained through his sudden and unexpected removal. Esteemed as Mr. Carden was, not only for high professional acquirements, but for those social and moral qualities which endeared him to all with whom he came into contact, her loss must be felt deeply not only by this professional society with which he had been so long connected, and of which he was so valued a member, but by the public at large, who have derived so much advantage from the medical and surgical skill which Mr. Carden has for many years placed freely at their disposal."

Papers.—The following papers were read.

1. *Paralysis of the Fourth Nerve.*—Mr. LLOYD OWEN showed a case of paralysis of the fourth nerve on the right side. The patient suffered from diplopia, which was present only when he looked at objects below the horizontal mesial line. Mr. Owen showed, by means of a test-object, that the diplopia was homonymous, that the false object appeared to the outer side and below the level of the true one and slanting towards it, and that the interval between the true and false appearances increased as the globe was depressed.

2. *Artificial Substitute for Upper Jaw.*—Mr. LAWSON TAIT showed a lad whose upper jaw he had removed three months before, and on whom Mr. Adams Parker had fitted a suction-plate so accurately as to render his speech and mastication perfect.

3. *Methylene Ether.*—Mr. TAIT showed specimens of Dr. Richardson's new anæsthetic, methylene ether, and an instrument made, on Mr. Tait's plan, by Krohne and Sesemann for its administration. The chief novelties of this are that the evaporating surface is of wire-gauze, and that the valves of the apparatus are thin plates of mica.

4. *Malignant Disease of the Ankle.*—Mr. W. C. GARMAN showed the leg of a man which he had removed two days previously for a large fungoid growth, the result of osteo-sarcoma (?) of the internal malleolus. It began nine months ago, with a small swelling about the size of a hen's egg. It became very gradually larger; and the patient had to relinquish his work and take to his bed about three months since. The only point of surgical interest was the rapid growth of the mass since it was interfered with. So long as it was left alone, its size was scarcely altered, although it was painful; but it was opened as an abscess, and then ligatured, after which it grew very rapidly. The patient was highly cachectic and worn down, and showed very little reparative power. Mr. Garman thought the disease might be becoming developed elsewhere.

5. *Uterine Fibroid Tumour*.—Mr. JOLLY showed an intrauterine fibroid tumour, weighing fourteen ounces, which protruded from the cervix, within which it was attached by a pedicle. It was removed by means of strong blunt-pointed curved scissors, and large vulsellum-forceps. The lady, from an advanced stage of anæmia, made a perfect recovery.

6. Dr. RUSSELL read an exhaustive paper on Epilepsy.

7. *Excision of the Breast for Cancer: Primary Amputation*.—Mr. SAMPSON GAMGEE made a communication on excision of the female breast for cancer, and on the impropriety of amputation for injury in *extremis*.—He argued in favour of the local nature of cancer in the early stages of its existence, and advocated the free use of the knife without delay, so long as the deposit was circumscribed, the glandular system unimpaired, and the chief organs sound. Mr. Gamgee cited well attested cases of cancer of the breast in which he had operated, and in which no return of the disease had occurred, though periods varying from three to twelve years had elapsed.—A temperature of 105 deg., pulse 145, respiration 40, thirty-six hours after a compound fracture, had been deemed by Mr. Gamgee good reasons for not amputating in a case under his care at the Queen's Hospital. The man had been a great drinker, the tongue was dry and furred, and the limb mortifying when the observation was recorded. The temperature rapidly fell, the pulse increased in frequency, and within twenty-four more hours the man had expired. Amputation under such circumstances, Mr. Gamgee argued, tended in the vast majority of cases to hasten death.

Microscopical Section.—After the general meeting, a meeting was held to elect officers and make other necessary arrangements in connection with a microscopical section of the Branch; the Council of the Branch having, in answer to a requisition, decided upon the formation of such a section. Dr. Wade was elected Chairman, Dr. Sawyer Treasurer, and Dr. Hinds and Mr. Lawson Tait Honorary Secretaries. The officers were appointed a committee to make necessary arrangements for meeting, and were requested to report to the next meeting of the Branch, to be held on February 13th.

REPORTS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

FOURTH MEETING.—DECEMBER 15TH, 1872.

P. D. HANDYSIDE, M.D., President, in the Chair.

Exhibition of Patients.—Mr. ANNANDALE and Mr. JOSEPH BELL showed cases illustrating the good results obtained by Excision of the Hip- and Knee-joints in suitable cases.

Mr. JOSEPH BELL showed a case of Excision of the Elbow-joint in which the movements of the limb were perfect, and joint-surfaces resembling those taken away had been reproduced, though no attempt had been made to save the periosteum.

Mr. JOSEPH BELL showed a boy aged 16, who for seven years had suffered from obstinate Nocturnal Incontinence, notwithstanding the use of remedies. Removal of a redundant prepuce had effected a complete cure.

Ovarian Tumour.—Mr. ANNANDALE showed an ovarian tumour larger than an orange, which he had removed by gastrotomy from a case in which for months a fecal discharge from the urethra had existed, and in which recently the obstruction of the bowels had been complete. Fibroid tumours of the uterus were also present, and could not be removed. The case was going on favourably.

Old Dislocation of Humerus: Rupture of Axillary Artery.—Mr. LISTER showed the axillary artery of a man aged 58. He had a dislocation of the shoulder-joint (subcoracoid) of seven weeks' standing. Mr. Lister attempted reduction both by the pulleys and by manipulation under chloroform. The axillary artery ruptured, and an immense swelling formed. Mr. Lister cut down on the vessel, and after a great deal of trouble tied it above and below the torn spot. The patient died about three hours after the operation.

Pistol-Ball in Abdominal Muscles.—Mr. JOSEPH BELL showed a pistol-bullet which he had removed from among the abdominal muscles of a young gentleman. The bullet, fired at about six feet distance from a saloon pistol, entered below the xiphoid cartilage nearly in the middle line, slanted downwards, struck the eighth rib, and was fortunately deflected into the muscles without penetration. The patient was making a good recovery.

Urinary Calculus.—Mr. JOSEPH BELL showed an uric acid calculus covered with phosphates, which he had removed by the median operation

from a farmer aged 65, who had cystitis and several sinuses in his perinæum, through which all his urine escaped.

Tubercular Ulceration of the Tibia.—Dr. P. H. WATSON showed a leg which he had amputated for a deep-seated tubercular ulceration of the tibia.

Sciatic Dislocation.—Dr. WATSON showed an excellent example of a recent dissection of a case of dislocation of the femur into the sciatic notch. The patient had died of other injuries, and the preparation illustrated the relation of the tendon of the obturator internus to the head of the bone.

Section of the Neck of the Femur for Ankylosis.—Dr. WATSON showed the parts concerned in an operation which he had lately performed for ankylosis of the hip-joint, after Mr. Adams's method. The patient died of hæmaturia in about three weeks. He also related other cases of the same operation.

Calculus.—Dr. WATSON showed a calculus as large as a field-bean, which he had removed with success by a lithotritic sound.

Cerebral Hemorrhage with Obscure Symptoms.—Dr. MACLAREN (Lasswade) read a paper on a case of cerebral hæmorrhage attended with obscure symptoms. A girl, aged 19, had died after symptoms resembling much more closely hysteria than apoplexy. A large coagulum was found in one hemisphere. Dr. MacLaren showed the difficulty of diagnosis, and remarked that the character of the symptoms in such cases depended more on the position than on the size of the clot. The symptoms were most carefully described.—Drs. MATTHEWS DUNCAN and P. H. WATSON remarked on the interest, rarity, and importance of the case.

Laceration of the Urethra.—Mr. J. D. PRIDIE read notes of a case of laceration of the urethra with hæmorrhage into the bladder from direct injury. The patient, a young man, had fallen with the perinæum on the handle of a washing-tub. He bled from the urethra, but there was no swelling or evidence of extravasation. For many days he was in a most dangerous state from frequent and most profuse bleeding from the urethra, and also into the bladder, requiring the use of a large catheter and exhausting syringe to empty it. The patient and some of his relations had shown evidence of hæmorrhagic diathesis.—Drs. P. H. WATSON and MATTHEWS DUNCAN and Mr. LISTER made remarks on the case. Dr. WATSON related three cases in which he had had to cut down on and tie the artery of the bulb, in consequence of severe and otherwise incontrollable hæmorrhage.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, DECEMBER 11TH, 1872.

THOMAS HAYDEN, F.K.Q.C.P.I., in the Chair.

Modern Application of Electricity.—Dr. WALTER G. SMITH read a paper on the use of the direct and induced electric currents in medicine. He believed, with Niemeyer, that in many cases the constant current particularly exercised a vital influence on the economy. His remarks were based upon fifty clinical histories. Failure occurred from various causes. Thus, medical men sometimes tried electricity as a *dernier ressort*; patients themselves applied for it under like circumstances; and medical men occasionally wished to ascertain the effects of electricity, without a strong confidence in its success. As a rule, spasmodic cases were unsatisfactory; and this might be said also of aggravated lead-palsy and of infantile paralysis. The chemical action of electricity was very successful in various nævi. Dr. Smith had treated cases of Bell's paralysis, of traumatic paralysis, and of lead-palsy, by means of electricity. He detailed five clinical histories of Bell's paralysis. In the first, an example of right facial paralysis from cold, both direct and induced currents had been employed. For a week the muscular contractility on the affected side was more active than normal. In the fifth case, one of right facial paralysis, from sleeping in a draught, muscular contractility remained impaired, even after mobility was quite restored. Five cases of traumatic paralysis had lately come under his observation. The first two were lesions of muscular power of the arm from pressure on the nerves. In the first, the electro-muscular contractility was undiminished; in the second, perfect recovery was insured after six sittings. The third and fourth patients had suffered from gun-shot injuries; in the latter instance the median nerve had been damaged, and here it was clearly shown that, where mobility is once excited, it may increase to its normal standard, even though the application of a current be interrupted or suspended. The fifth patient suffered from localised paralysis of the anterior muscles of the leg without anæsthesia. Of lead-palsy, two examples had come under the author's notice within the last year, in which the legs as well as the arms had been engaged. The lesion of muscular power was by no means always confined to the extensor muscles. The

flexors were sometimes flabby and atrophied, and their contractility diminished. That they were exempt from morbid change was therefore only relatively true. Dr. Smith, in conclusion, exhibited an induced-current machine of improved construction, lately designed by M. Gaiffe, of Paris. The improvements consisted in the substitution of a toothed wheel for the ordinary cord, and of a water tube with sliding brass rod, by means of which the intensity of the current could be gauged and regulated at pleasure.—The CHAIRMAN corroborated Dr. Smith's observations as to the curability of painters' paralysis by electricity, and as to the lesion of the flexor muscles in this disease.—Dr. LYONS described an example of double Bell's paralysis. He spoke highly of the use of the continuous current in chronic painters' paralysis, and in certain cases of local lesion of one of the orbital muscles with double vision.—Dr. H. KENNEDY alluded to the uses of electricity in aneurism and amaurosis.—Dr. EAMES believed that anæsthesia was best treated by the induced current and wire-brush.—Dr. HEAD referred to the importance of bearing in mind that electricity removes the effects of disease rather than disease itself.

Paracentesis Abdominis.—Dr. LYONS described seven cases of abdominal dropsy, in which he performed this operation with the effect of prolonging life. All the patients were females. A woman, aged 40, mother of a large family, suffered from cirrhosis of the liver; hæmatemesis and emaciation being prominent symptoms. She was tapped first in 1870, and the operation was repeated thirty-six times, at intervals of three weeks or a month; from fourteen to sixteen quarts of fluid being drawn off on each occasion. Since November, 1871, the ascites had remained stationary. There was no renal disease. In the second case, there was enlargement of the liver with bossy elevations; the heart was also diseased, a systolic mitral bruit being audible over the apex. The patient was apparently moribund, when sixteen quarts of fluid were evacuated with immediate relief. In five months, tapping was again adopted; a third time, after an interval of fourteen months; and, since then, every four weeks or so—seven times in all. Localised peritonitis occurred each time, with a well-marked peritoneal friction sound over the liver. There was no evidence of renal disease. In the third, fourth, and fifth cases, the liver was enlarged, with more or less jaundice; scanty urine, loaded with lithates, but no cardiac disease. The sixth case was complicated with amyloid degeneration of the kidneys. The lower limbs were anasarcaous. Tapping was performed eleven times, the fluid being of low specific gravity and highly albuminous. Partial right paralysis and heterophasia suddenly occurred in the course of the case. In another instance, ascites and ovarian tumours coexisted. The patient was tapped seven times, a thick oleaginous fluid, like that of ovarian dropsy, being evacuated on each occasion. In the seventh case, the fluid was always highly albuminous, of pungent feel, and had a temperature of 101 degs.—Dr. HEAD referred to the advantages attendant on paracentesis in mitral narrowing and hepatic cirrhosis.—Dr. FINNY suggested an inquiry as to whether the spleen enlarged *pari passu* with the subsidence of the ascites.—Dr. GORDON spoke of the advisability of early operation in cirrhosis.

CORRESPONDENCE.

HÆMATOZOA AND CHYLURIA.

SIR,—I have read with much interest the article in your last number on "Hæmatozoa and Chyluria," founded on Mr. T. R. Lewis's essay *On a Hæmatozoon inhabiting the Human Blood; its Relation to Chyluria, etc.* In reference to this subject I may point out that, as long ago as 1857, I described a case of chylous urine, in which the milk-like fluid passed from the bladder was found, on microscopic examination, to contain innumerable active linear vibrios, or filariæ, which moved in every direction across the microscopic field. These organisms I found, not only in specimens of urine which had been standing for some time, but also in the urine immediately after it had been drawn off from the bladder with a catheter; thus proving that the vibrios were not the products of decomposition outside the body of the patient. The details of this case were published in the *Medical Times and Gazette* for April 18th, 1857.

In drawing attention to this early notice of active organisms in chylous urine, I do not desire in the least to detract from the interest and value of Mr. Lewis's discovery of hæmatozoa in the blood, and their relation to the filaria of chyluria.

I am, etc.,

WM. O. PRIESTLEY, M.D.

London, February, 1873.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE Local Government Board has sanctioned a retiring allowance of £120 *per annum* to Dr. Ede. This is tantamount to two-thirds of his late salary as medical officer to the Islington Workhouse, and is only a proper recognition of very valuable services extending over twenty-eight years.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting of the Association for the election of officers, etc. (which has been unavoidably postponed), will be held at the Medical Club, 9, Spring Gardens, on Wednesday, February 26th, at 3 P.M. precisely, when important matters connected with the future action of the Association will be brought forward for consideration.

As it is not improbable that legislative action will take place during the present session, which will materially affect the interests of the Poor-law medical service, it is most desirable that there should be a good attendance of the members and friends of the Association.

THE PUBLIC HEALTH ACT.

FROME.—A conference of the Frome Board of Guardians and Local Board was held on February 5th; Mr. Wodehouse, Local Government Inspector, was present. It seems that at a previous meeting the question of the appointment of a medical officer was postponed; and inspectors of nuisances (who were the relieving officers) were only temporarily appointed. The Local Government Board expressed disapproval of this proceeding, and the Frome sanitary authorities were therefore anxious to consider what steps should be taken to carry out the provisions of the Public Health Act. Mr. Wodehouse laid before the meeting the duties of the medical officers of health and inspectors of nuisances, and the views of the Local Government Board. He strongly advised that Frome should join with Clutton, Wells, and Shepton Mallet, in the appointment of one medical officer who should be debarred from private practice, and receive a sufficient income as a compensation. A long conversation ensued, in which Mr. Wodehouse was asked a number of questions as to the duties of the new officers, and the probable interference of the Local Government Board. A feeling was manifested that the boards would prefer to manage their own affairs, untrammelled by State supervision or assistance; but no determination as to the mode of action to be pursued was arrived at, and the meeting was therefore practically abortive.

SCARBOROUGH.—A meeting of the Scarborough Board of Guardians was held on February 6th, to decide as to the appointment of medical officers of health and other officers under the Public Health Act. Mr. Hedley, Local Government Board Inspector, was present. Mr. Woodall, the chairman, opened the proceedings by a speech, in which he dwelt forcibly on the advisability of having one officer for the whole district. Mr. Hedley supported these views, and regretted the decision of the Scarborough Town Council not to unite in having one medical officer for the whole district, but thought that the Scarborough rural district could include Filey, over which a joint medical officer could be appointed. After a short conversation, it was, however, resolved by a large majority, that the district medical officers should be elected at a salary of £10 each, four officers being appointed.

CANTERBURY.—At a meeting of the Town Council, held on February 5th, a report of a deputation sent to attend the conference with the Local Government Inspector on January 6th, was read. It stated that at the conference there were present representatives from Bridge, Blean, East Ashford and West Ashford Unions, and from Ashford Local Board; that the Poor-law inspector of the district attended and explained the principles which should guide sanitary authorities in the appointment of medical officers, and what he considered the advantages of combination—viz., efficiency and economy; and that the following resolutions relative to the appointment were passed.

"1. That, in the opinion of the meeting, it is desirable that the districts represented here to-day combine for the purpose of the appointment of a medical officer of health for a term not exceeding three years.

"2. That a salary of £800 *per annum* be paid to the medical officer, including travelling expenses, to be apportioned to each authority according to the rateable value.

"3. That the appointment of the medical officer of health be made

by such combined sanitary authorities by a joint board, consisting of three delegates from each sanitary authority except Herne Bay, who are to have but one such delegate."

Regret was expressed by members of the Town Council of Canterbury as to the decision of the conference; and, after some discussion, it was resolved that the city of Canterbury should not combine with any other district, but should appoint its own health-officer, at a salary of £60. It was also resolved that the Government grant should not be applied for.

MARCH.—At a meeting of the March Local Board, held on February 3rd, the steps to be taken to carry out the Public Health Act were considered. At the adjourned meeting it had been decided to send a deputation to the conference held by Mr. Farnell, the Local Government Inspector, at the Guildhall, Cambridge. The report of Mr. Bates, the chairman, on the meeting, was as follows. "They went to Cambridge, but they did neither good nor harm. Nobody asked them what they went for. It seemed to be pretty generally known that the prevalent idea was for each parish to manage its own affairs. Since then he had received a letter from Mr. Farnell, requesting the Board to inform him what course they intended to take in the matter. This was a matter still undecided; but the general conviction of the meeting was, that each district had better appoint its own man, and disclaim any connection with others." However, to better enable the Board to arrive at some decision as to the course of action to be pursued, it was resolved to send a deputation to the forthcoming meeting of the North Witchford Board of Guardians.

KNARESBOROUGH.—A meeting of the guardians, as the rural authority of the union, was held on January 22nd, as to the appointment of a medical officer of health. Mr. Hedley, Local Government Inspector, was present.—Mr. Ellis, vice-chairman, explained how the circumstances under which the negotiation with the Harrogate and Knaresborough Local Boards had failed, by the Harrogate Board having declined to unite with the other two sanitary authorities.—Mr. Powell suggested that Great Ouseburn and Wetherby Unions should be invited to join.—Mr. Hedley explained what was done in the Malton Union, where there was no urban authority. In that union it was arranged that the salary should be apportioned according to the population, the travelling expenses being paid by the rural parts of the union. This arrangement met with his entire approval, and he considered it a sound one. He strongly recommended the three authorities here to unite in the appointment, the salary being apportioned as at Malton, and asked that the decision might be deferred until he had an opportunity to have an interview with the Harrogate Local Board, in order to endeavour to obtain a reversal of their former decision.—The question of the salaries of the proposed new officers was then discussed, and it was resolved that that of the medical officers should be fixed at £300, and those of the inspectors at £120 and £100. It was then decided that the question of combination be adjourned till that day three weeks.

HARROGATE.—True to his promise to the Knaresborough Board of Guardians, Mr. Hedley attended the meeting of the Harrogate Board on the 3rd inst., but failed to convince them that the appointment of one medical officer over a large area was at once the wisest and the most economical arrangement.

ADULTERATION OF FOOD.

THE Finance and General Purposes Committee of the City of London have reported as follows.

"Your Committee consider that the provisions of this Act should be carried out at present by the appointment of a public analyst for one year, who shall be a resident in London, where the necessary appliances for an analysis of food, drink, or drugs, which may be sent by the inspectors are known to exist; and, with a view to the recommendation of a suitable person for this office, they have applied to Dr. Henry Letheby; but, that gentlemen being in Egypt, they are unable for a few weeks to ascertain whether he could undertake the duty. Your committee, however, would ask the Court to approve the selection of Dr. Letheby, with such of his assistants as he may hereafter name, and that such appointment be submitted for the approval of the Local Government Board (according to section 5). Your committee also consider that, having regard to section 6, the Justices in each Petty Sessional Division should instruct the Inspectors of Weights and Measures to perform the duties required under that section; and that the fee to be paid to the Inspectors by parties desiring an analysis of any article under section 9 of the Act shall be 5s., such fees to be accounted for to the local authority which appointed them, each quarter as in the fines and penalties. Your committee are further of opinion that the analyst should be remunerated upon the following scale for his services:

—For each sample analysed up to 100, one guinea; for the second hundred samples, 10s. 6d. each; and 6s. for each sample over 200. The remuneration of the Inspectors should be left to be determined after the amount of labour imposed upon them can be ascertained."

The report was adopted, subject to Dr. Letheby agreeing to act as analyst on the terms proposed. If his services could not be secured the whole matter would come before the Court at a subsequent session.

OBITUARY.

JOHN ELLIOT, F.R.C.S., KINGSBRIDGE, DEVON.

WE regret to announce the death of Mr. John Elliot, of Kingsbridge, Devon, at the age of 65, on January 29th, of subacute peritonitis, after sixteen hours' illness.

Mr. Elliot became a member of the Royal College of Surgeons and a licentiate of the Society of Apothecaries in 1829; and in 1864 was elected a Fellow of the Royal College of Surgeons. He succeeded his father in a good country practice, and carried it on successfully for many years. Lately, in consequence of gradually increasing deafness, he had retired in favour of his son from an active share in the work; though he was still occasionally induced to see some of his old friends and patients.

Mr. Elliot was very highly respected as a sound and judicious practitioner. In all matters connected with the welfare of the town, and more particularly of the church, of which for a number of years he was vicar's warden, his judgment and assistance were eagerly sought for and kindly given.

Mr. Elliot was a great horticulturist, particularly successful in fruit, of which he would always endeavour to grow the newest and best kinds. In judging at the flower-shows, he was generally selected to take part. But, perhaps, Mr. Elliot was best known and loved for his genial kindness. At his residence, Tresillian House, one would meet the whole neighbourhood when any public matter called people to visit the town; and none who have had the privilege of sitting at his board will ever forget his kind and cordial hospitality. He leaves a widow and a family of eleven children.

EDWARD SMITH, M.B., B.A., LONDONDERRY.

THIS gentleman, whose death at the early age of thirty-five years occurred on December 23rd, was the fifth son of the late Rev. James Smith, Rector of Upper Cumlin, in the diocese of Derry. He took his degree of B.A. at University College, and that of M.B. in 1859. His medical education was completed at the Meath and Sir Patrick Dun's Hospitals, and at the Royal College of Surgeons of Ireland, of which body he was a licentiate. Immediately after taking his degrees, he settled in Londonderry, where he continued to practise until his death. In 1868, he was appointed by the Lord Lieutenant Resident Medical Superintendent of the Londonderry District Lunatic Asylum. He was also Assistant-Surgeon of the Londonderry Light Infantry Militia. Dr. Smith enjoyed excellent health until 1870, when he had a severe attack of rheumatic fever, from which he recovered completely. He was seized with a second attack early in December 1872, under which he sank, notwithstanding every effort of medical skill and domestic care.

WILLIAM EAGLESON GORDON, M.D., BRIDGE OF ALLAN.

Dr. GORDON was born at Strabane in the north of Ireland. Having received his professional education at the University of Edinburgh, he graduated there in 1842, and also became a Licentiate of the Royal College of Surgeons. Soon afterwards, he established himself in practice in his native place, on leaving which he was presented with a service of silver plate as a token of esteem and appreciation of professional worth. Subsequently he practised for several years at Lauder with much success, until failing health made him repair in 1858 to Bridge of Allan, in the hope that the salubrity of its climate and a trial of its mineral waters might prove beneficial. Deriving benefit from these, he settled down there, and speedily acquired an influential and increasing practice, but was compelled to curtail it somewhat, and latterly abandon it, owing to aggravation of his ailments.

He died on January 15th, aged 51, of chronic ulcerative duodenitis, evidently of considerable standing, as disclosed by a *post mortem* examination. His death is much regretted by a wide circle—not only in and around Bridge of Allan—but by many at a distance, who have either enjoyed his friendship or benefited by his advice.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, February 7th.

THE METROPOLITAN WATER SUPPLY.—Colonel Beresford gave notice that on the 7th of March, on the order for going into committee of supply, he should call attention to the necessity for a constant supply of water being given in the metropolis, and should move for the appointment of a select committee on the subject.

THE DIGEST OF SANITARY LAW.—Sir M. H. Beach asked the President of the Local Government Board when the digest of sanitary law, stated by him in April, 1872, to have been "already put in hand," would be circulated among the sanitary authorities; and why there had been so much delay with regard to a work, the publication of which was admitted by himself to be extremely desirable, and was promised soon after the passing of the Public Health Act of last session.—Mr. Stansfeld said the digest was in type, and the printing of it was simply a matter of time. He had considered the digest since its completion, and though it had many merits of its own, it seemed to him to be more suitable for publication in private than for publication by a government department, and he had therefore held it over until the Local Government Board assembled, when the question would receive their consideration.

HABITUAL DRUNKARDS.—Mr. D. Dalrymple obtained leave to bring in a bill for the better care and management of habitual drunkards.

CONTAGIOUS DISEASES ACT REPEAL.—Mr. W. Fowler obtained leave to bring in a bill to repeal the Contagious Diseases Acts, 1866-69.

Monday, February 10th.

SANITARY LEGISLATION.—Sir C. Adderley asked the First Lord of the Treasury whether the entire omission in her Majesty's Speech of any reference so the completion of recent sanitary legislation by a consolidation of the numerous existing acts giving powers to the authorities now constituted, implied that the Government do not intend to introduce any measure this session for effecting such consolidation.—Mr. Gladstone intimated that it was not the intention of the Government to take any immediate steps for the promotion of sanitary legislation.

PUBLIC BILLS.—The following Public Bills which have been brought in for the Session 1873, have a medical interest.

Bastardy Laws Amendment Bill (Mr. Charley); second reading, Thursday, February 13th.

Contagious Diseases Acts (1866-69) Repeal Bill (Mr. W. Fowler); second reading, Wednesday, May 21st.

Habitual Drunkards Bill (Mr. D. Dalrymple); second reading, Wednesday, March 12th.

Permissive Prohibitory Liquor Bill (Sir W. Lawson); second reading, Wednesday, May 7th.

Poor Law (Scotland) Bill (Mr. Craufurd); second reading, Wednesday, February 26th.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, February 6th, 1873.

Lowne, Benjamin Thompson, Colville Gardens, W.

Burton, John Randell, Lee Park, S.E.

Morton, Albert Samuel, Louth, Lincolnshire

The following gentlemen also on the same day passed their primary professional examination.

Tucker, Robert Goldsworthy, St. Bartholomew's Hospital

White, James Benjamin Kelly, London Hospital

As Assistants in compounding and dispensing medicines.

Bradshaw, John, Winsford, Cheshire

Stewart, Edward Hinton, Devizes

MEDICAL VACANCIES.

The following vacancies are announced:—

BANBURY and other combined URBAN and RURAL SANITARY DISTRICTS: £760 per annum.

BANBURY UNION, Oxfordshire—Medical Officer and Public Vaccinator for the Banbury District: £125 per annum, and vaccination fees.

BASINGSTOKE UNION—Medical Officer for District No. 2: £85 per annum, and fees.

BELFORD HOSPITAL, Fort William, Inverness-shire—Resident Medical Officer.

BODMIN UNION, Cornwall—Medical Officer for District No. 2: £30:15 per ann.

BRADFORD (Yorkshire) URBAN SANITARY DISTRICT—Medical Officer of Health: £500 per annum.

BRIGHTON AND HOVE LYING-IN INSTITUTION—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.

CAHERCIVEN UNION, co. Kerry—Medical Officer for the Derryane Dispensary District: £80 per annum.

DARLINGTON RURAL SANITARY DISTRICT—Medical Officer of Health: £120 per annum.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire—House-Surgeon and Dispenser: £100 per annum, board, and residence.

GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.—Assistant House Surgeon: £80 per annum, board and lodging.

GREAT OUSEBURN UNION, Yorkshire—Medical Officer for the Borough-bridge District: £25 per annum.

HALIFAX INFIRMARY—House-Surgeon: £80 per annum, increasing to £100, with board, lodgings, and attendance.

HUNTINGDON and other combined RURAL and URBAN SANITARY DISTRICTS—£800 per annum.

INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.

LEEDS GENERAL INFIRMARY—House-Physician and House-Surgeon: £100 per annum each, with board, residence, and washing.

LIVERPOOL DISPENSARIES—Assistant House-Surgeon: £108 per annum, furnished apartments, coal, gas, and attendance.

MEATH COUNTY INFIRMARY, Navan—Apothecary and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.

NAVAL MEDICAL SERVICE—Assistant-Surgeons.

NORTH UIST—Parochial Medical Officer.

RATHDOWN UNION, co. Dublin—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Glencullen Branch of the Dundrum and Glencullen Dispensary District: £110 per annum, and fees.—Ditto for the Powercourt Dispensary District: £110 per annum, and fees.

ROTHERHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £600 per annum.

ROYAL AGRICULTURAL SOCIETY, Ireland—Chemist: £50 per annum, and fees.

ROYAL INFIRMARY, Dundee—Resident Medical Superintendent: £200 per annum, bed, board, and washing.—Medical Assistant: £50 per annum, bed, board, and washing.

TEIGNMOUTH, DAWLISH, and NEWTON INFIRMARY—House-Surgeon: £50 per annum, board, lodging, and washing.

TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £100 per annum, furnished apartments, coals, gas, and attendance.

UNIVERSITY OF LONDON—Assistant Registrar: £500 per annum.

WALLASEY URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

WEST LONDON HOSPITAL, Hammersmith—Dispenser.

WHITEHAVEN UNION, Cumberland—Medical Officer for the Whitehaven District: £58 per annum.

YORK DISPENSARY—Two Resident Medical Officers: £130 per annum, furnished apartments, coals, and gas.

YORK RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DRAKE, Augustus, B.A., M.B., elected Consulting Physician to the Devon and Exeter Hospital.

GAIRDNER, Matthew W., M.B., appointed House-Physician to the Hospital for Women, Soho Square, *vice* Dr. Harding, resigned in consequence of ill health.

SHAPTER, Lewis, B.A., M.B. Cantab., elected Physician to the Devon and Exeter Hospital, *vice* Augustus Drake, B.A., M.B. Cantab., resigned.

*THORP, Charles William, L.K.Q.C.P.I., appointed Factory Certifying Surgeon to the Todmorden District, *vice* J. Hardman, Esq., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

ASHDOWN.—On February 11th, at Northampton, the wife of *George Ashdown, Esq., Surgeon, of a son, still-born.

NAPPER.—On February 11th, the wife of *A. Arthur Napper, Esq., Surgeon, Chiddingfold, of a son, prematurely.

RAINS.—On February 11th, at 36, Cavendish Street, Manchester, the wife of *Samuel Rains, Esq., Surgeon, of a daughter.

MARRIAGE.

ON February 12th, at the Parish Church, Allesley, Warwickshire, by the Rev. F. Alderson, B.A., brother of the bride, assisted by the Rev. W. Fox, B.A., Rector of Stanton-by-Dale, Derbyshire, brother of the bridegroom, Edward Charlton Fox, M.D., eldest son of the late Rev. Samuel Fox, M.A., Rector of Morley, Derbyshire, to Julia Anna, youngest daughter of the late Jonathan ALDERSON, Esq., of Gannow Hill, Derbyshire.

DEATHS.

BARROW, John G., Esq., Surgeon, at Davies Street, Berkeley Square, aged 65, on February 3rd.

BEDWELL, Henry Hamilton, M.D., at Emscote Lodge, near Warwick, on January 22nd, aged 56.

DOUGLAS, Frederick, M.D., Surgeon-Major 17th Royal Irish Fusiliers, at Halifax, Nova Scotia, on January 5th.

DRYDEN, George, Esq., Surgeon, at Bingley, aged 70, on January 21st.

HARDMAN, James, Esq., Surgeon, at Todmorden, aged 85, on February 1st.

PAYNE, George Burton, M.D. at Charlwood Street, Warwick Square, on January 31st.

RICHARDSON, William, M.D., Surgeon-Major Royal Artillery, at Bedford Terrace, Plumstead Common, aged 68, on February 7th.

RORKE, James, L.K.Q.C.P.I., at Howth, Dublin, on January 27th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Clinical night. Mr. Bond, "On Excision of Portion of the Metatarsal Bone"; Dr. J. T. Dickson, "A Case of Trephining in Epilepsy"; Mr. Teevan, "On so-called Irritable Bladder"; Mr. Nelson Hardy, "A Case of Frontal Anæsthesia, and loss of Parallelism between the Eyes, caused by the presence of Two Pieces of Glass within the Orbit"; Mr. Pennefather, "Instruments".

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited. Dr. Cooper Rose: Malformation of the Heart. Dr. Vandyke Carter: Urinary Calculi from India. Dr. Vandyke Carter: Drawings of Elephantiasis Arabum. Mr. Coupland: Cancer of Duodenum and Gall-Bladder. Mr. Wagstaffe: Tumour of the Femur. Dr. Payne: Melanotic Sarcoma of the Liver. Dr. Charles Carter: Fibro-cystic Tumour of the Right Ovary. Dr. Wiltshire: Fibrous Tumour of the Ovary. Dr. Kelly: Papilloma growing in the Fourth Ventricle. Dr. Goodhart: Surgical Kidneys. Dr. Henry Green: Syphilitic Phthisis. Dr. Peacock: Specimen of Intussusception. Dr. Bagshawe: Epithelioma of the Epiglottis and Base of the Tongue.

FRIDAY.—Medical Microscopical Society, 8 P.M. Mr. E. Schäfer, "On the Structure of Voluntary Muscular Fibre"; Dr. M. Pritchard, "On the Cochlea."

EXPECTED OPERATIONS AT THE HOSPITALS.

HOSPITAL FOR WOMEN, Saturday, February 13th, 9.30 A.M. Gastrotomy for supposed Extrauterine Fœtation. Other operations.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

W. K. is informed that a letter awaits him at the office, in answer to his advertisement, "A Partner Wanted," in the JOURNAL of February 1st.

DR. PHILPOTS (Poole).—The communication shall have careful attention.

A MEMBER (Yeovil).—The licence of the Faculty of Glasgow is accepted as a surgical diploma by the public authorities.

ERRATUM.—In the list of appointments in last week's JOURNAL, for "Parnen" read "Parnell".

X. Y. Z.—1. In the Dublin newspapers. 2. To the Honorary Secretary of the Dispensary Committees;

EXAMINATION OF CLUB MEMBERS.

SIR,—Your correspondent L. H. asks the question "Can a surgeon to a lodge refuse to examine a candidate for admission, on the ground of his being able to afford fees?" According to the rules of the club, your best patient might obtain a certificate from yourself, or from any other medical man, and be admitted to the benefits of a club. Such is the grievance we ought to abolish. We ought to hold in our own hands a power to rule clubs, not for us to be ruled by them; and that is, union and support to those who are fortunate to hold club appointments at 2s. or 2s. 6d. a member per year. We might be ashamed of ourselves for accepting such a paltry acknowledgment of what service we can and do give.

Dunster, Somerset, January 13, 1872.

I am, etc.,

THOMAS CLARK.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

MR. KENT JONES.—In March. Price about 8s.

DR. C. KIDD states that the late Mr. Charles Buxton, M.P., was the gentleman who offered a prize for essays on anæsthetics; and that "the only essay sent in that got a prize was Dr. Kidd's." He is apparently not at liberty to say of what amount the prize was, or by whom or when adjudicated. His letter again refers to forty-one deaths from ether, of which "half are doubtful"; but again he fails to give the references.

AN Irish member writes:—Would any of your numerous correspondents kindly say if they could recommend any medicine likely to suppress a very severe spontaneous salivation, which has annoyed a respectable married female, about 35 years of age, for nearly twelve months, and no cause known for it. Astringents, tonics, bitters, extracting decayed teeth, have been all tried in vain. Perhaps some of your able correspondents or readers might suggest a remedy.

HYPOGASTRIC LITHOTOMY.

A GUY'S HOSPITAL STUDENT asks whether we can afford him information on the following statement of an Edinburgh correspondent of the *Guy's Hospital Gazette*.

"Some of the Edinburgh surgeons have resumed the old operation of hypogastric lithotomy, and confidently assert that, with the aid of antiseptic treatment, which is so much in vogue here, this operation is by far the safest and easiest method of lithotomy. It seems rather a bold statement; but there was a case, that of a young lad, treated in this way here a week or two ago, in which the result was in the highest degree satisfactory."

We have inquired for him on the subject, and have received the following reply from a correspondent in Edinburgh.

"The only cases of hypogastric lithotomy in Edinburgh, so far as I know, are two. In one case, Dr. Heron Watson removed a stone too large to pass through the pelvis, about three years ago. This was a most daring operation—first of ordinary lithotomy, and then the other at once. The patient was treated chiefly by oakum dressings, and made a good recovery. In a boy with a stone about the size of a bean, Mr. Lister performed the hypogastric operation, with all antiseptic precautions. Notwithstanding that the peritoneal cavity was opened, the patient recovered. I do not think that much stress can be laid on this, as boys generally do recover; and the use of antiseptics is doubtful in bladder-cases where we have putrid urine to deal with."

ORDINANCE MAPS FOR MEDICAL OFFICERS OF HEALTH.

SIR,—A few years ago, Government was induced, partly through the representations of our Association, to act rather generously by our profession in sending to every member of it a copy of the new Nomenclature of Diseases of the Royal College of Physicians.

It strikes me that the Local Government Board would be doing a very useful, as well as a proper thing, if it could be induced to supply each of the newly appointed Medical Officers of Health with an Ordinance Map of his district; to be considered, like the books of the Sanitary Officer, the property of the sanitary authority. The Abstract of Sanitary Laws, which we are glad to hear from Mr. Stansfeld is already in the press, would also be an appropriate present for each officer's guidance on entering on his novel and complicated duties.

If the Local Government Board does not find itself in a position to furnish these maps and books, perhaps it could arrange with the proper authorities that they should be supplied to Medical Officers of Health at reduced rates.

I am, etc.,

A POOR HEALTH OFFICER.

ERRATUM.—In the Report on Medical Electric Apparatus, in last week's JOURNAL, the remarks on "bisulphate of mercury" should have been applied, not to Foveaux's, but to Mayer and Meltzer's battery.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Feb. 8th; The Manchester Guardian, Feb. 12th; The Aberdeen Daily Free Press, Feb. 8th; The Bath Express, Feb. 8th; The Birmingham Daily Post, Feb. 10th; The Hampstead and Highgate Express, Feb. 8th;

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Mr. Savory, London; Dr. Alexander Ogston, Aberdeen; Dr. W. R. E. Smart, Penge; Mr. G. E. Norton, London; Dr. Douglas Powell, London; Dr. Murray, London; Mr. T. Holmes, London; Dr. Theodore Williams, London; Mr. G. A. Gloag, Bristol; Mr. Parnell, Worcester; The Secretary of the Pathological Society; Dr. Farquharson, London; Dr. Coales, London; Mr. Holland, London; Dr. C. Kidd, London; X. Y. Z.; Dr. Joseph Rogers, London; Dr. Yeats, Coton Hill; Dr. Latham, Cambridge; Mr. John Hope, Newcastle-upon-Tyne; Mr. A. Prichard, Clifton, Bristol; M.R.C.S. Eng.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Brigstocke, Calne; Mr. Ingram; Dr. Philpots, Poole; A Member, Yeovil; Dr. Taylor, Ballymoney; Mr. Leonard Armstrong, Harrogate; Dr. Priestley, London; Dr. H. Bennet, Mentone; Dr. Winslow, London; Dr. Tilt, London; Mr. Thorp, Todmorden; Mr. Kent Jones, Beaumaris; Mr. J. McCree, Belfast; Mr. Atkinson, Leeds; Mr. Groves; Mr. Smith, Uxbridge; Our Manchester Correspondent; Mr. Bathurst Woodman, London; Mr. Chilcote, Charlwood; Dr. Cotting, Boston; Mr. Corbin, Guernsey; Mr. Fowler, Bath; Mr. Board, Bristol; Dr. Tuckwell, Oxford; Mr. Cornish, Manchester; Mr. A. Davies, Swansea; Our Dublin Correspondent; Mr. T. Tinley, Whelby; Dr. Moore, Dublin; Dr. Macdonald, London; Mr. J. W. Langmore, London; etc.

BOOKS, ETC., RECEIVED.

Braithwaite's Retrospect of Medicine. Vol. lxvi. July to December, 1872. London: 1873.

On the Temperature of the Body. By Sydney Ringer, M.D. London; 1873.

AN ADDRESS

DELIVERED BEFORE

THE CLINICAL SOCIETY OF LONDON,

On Friday, February 15th.

By PRESCOTT HEWETT, F.R.C.S.,

President of the Society: Surgeon to St. George's Hospital; Surgeon-Extraordinary to Her Majesty the Queen; etc.

GENTLEMEN,—You have done me a very great honour in electing me fourth President of the Clinical Society. But when I think of the names of those who have preceded me in this Chair, I cannot help feeling great responsibility in having to follow such men, and such a responsibility I would not willingly have incurred. It is, however, my duty to accept it at your hands; and, with your assistance, I hope to be able, in some measure, to carry on the good work so well begun. By the valuable work already done in the few years of its existence, the Clinical Society has promise of a great future; and, with its association of physicians and surgeons, with its hospital staffs and private practitioners, it ought to rival its far-famed elder sister, the Pathological Society.

In the remarks which I am about to make, it is, however, more particularly to private practitioners that I wish, on the present occasion, to address myself, as I feel convinced that there is good, sound, useful work to be done clinically in private practice; nay more, if rightly viewed and rightly used, the clinical results to be obtained in private practice are, I think, in many respects, of much greater value than those which can generally be obtained in our hospitals. To catch mischief at its very dawn, to follow it in its development, to watch the various evils to which it may ultimately lead—for investigations such as these, sometimes necessarily extending over years, private practice is assuredly our best field. And associated as the private practitioner sometimes is for years with a family, not unfrequently will he have the opportunity of seeing the gradual development clinically of the child into what the parent was, of watching in the offspring the earliest signs of the troubles fully developed with which he was familiar in the parent, and perchance of following them out in the one as he had previously done in the other. Family tendencies such as these, if carefully watched and accurately noted, would be of great value to the Clinical Society; and so, too, would, in a different way, be the accurate record of many a case followed out from beginning to end.

And now, wishing to urge, as far as in me lies, private practitioners to help the Clinical Society in every way by their work, I will briefly bring under your notice gleanings from two or three subjects with which I have frequently had to deal in private practice, and the thorough working out of which would, I think, be of great practical benefit.

To begin with one of the simplest subjects: severe epistaxis spontaneously occurring after the middle period of life. What apparently could be of so little importance clinically? How little thought, commonly, would be bestowed on nose-bleeding under such circumstances, and yet it oftentimes is the little cloud no bigger than a man's hand.

My attention was first called to this subject many years ago by my having to see a gentleman who was suffering from a severe attack of epistaxis, which had suddenly occurred without any apparent cause. The bleeding was, with some trouble, ultimately stopped; and then came the question, as to what had given rise to it. Healthy-looking, and at the mid-period of life, the patient had always been in all things a temperate man; there was no marked disease in any one of his organs, and the only wrong that I could detect was a little thickening of the radial artery at the wrist, the coats of which vessel were somewhat rigid, and could be felt under one's finger when slightly pressed upon. This was all, but it was quite sufficient to lead to the inference that the minuter arteries in different parts were in the same condition as, probably in a more advanced stage of degeneration than, the radial. It was the arteries of the nose which had given way on the present occasion; but it was felt that, with such a condition of the arterial system, other vessels might in their turn burst at some future period. In the course of three or four years, the nose-bleeding recurred from time to time, with more or less violence, the condition of the radial artery remaining much the same. Then the outpour of blood occurred in the brain; it was slight, however, and so from its effects the patient recovered in due time, and went about for some eighteen months, when

extensive bleeding again occurred in the brain, and this ended fatally in a few hours.

I have ventured thus briefly to allude to this case, as it was the first of its kind which I had an opportunity of narrowly watching throughout its whole course. But since then I have several times had to deal with epistaxis occurring under similar circumstances, the radial artery being in all of them more or less thickened, and without marked disease about any one of the viscera. In some of these cases, too, hæmorrhage ultimately occurred in the brain. I have had no opportunity of examining pathologically the condition of the radial artery in the cases to which I have referred; but I think it probable that the thickening of this vessel will be found to be of the nature of the arterial degeneration, which has been so ably brought under our notice by our late President, Sir William Gull, and his coadjutor Dr. Sutton, rather than of the nature of atheroma. However this may be, the point remains that a slight thickening of the radial artery, easily detected with a little care, is a warning as to the condition of the smaller arteries, and as to the possible ulterior evils which may arise from it.

I pass now to another subject, that of blocking, plugging of the veins, thrombosis, or thromballosis, as it has been called in the present day. And I am induced to direct attention to this subject on account, if I may judge from what has fallen under my own notice of late years, of its greatly increasing frequency in private practice. With few exceptions, all the cases which I have seen in private practice have arisen spontaneously, and been in no wise connected with the ordinary causes of the clotting of the blood, such as wounds, bed-sores, fractures, or pressure of any kind. In a very few cases only did the clotting of the blood appear to be connected with an injury—a slight contusion, a sudden strain—of the limb. In some cases, it followed fever, especially typhoid fever, and in one remarkable case, in which both external iliac veins and both axillary veins, in the course of months, became permanently blocked, it followed small-pox. In endeavouring to sift out the causes, the only one I could fairly lay my finger upon in by far the greater number of these cases was a gouty condition, a condition described by Sir James Paget as gouty phlebitis. In none of the cases had there been an attack of gout, but close questioning proved, at any rate, a tendency to gout. Most of them were beyond forty, and, in tracing out the history, one came upon dyspepsia more or less troublesome, frequent deposits of lithates, slight eczematous eruptions from time to time, anomalous pains in various muscles, sharp deep-seated pains in the tongue, existing for two or three days, and then disappearing altogether for awhile, crackling about the cervical spine in slight movements, more or less, sometimes a mere suspicion of knottiness about the smaller joints of the fingers; mere straws, it is true, but a goodly bundle when put together. In some cases, there had been as yet merely two or three of such straws; but in others, these straws had been gradually showing themselves one after another, and year by year. The great difficulty in such an investigation is to get at a clear recognition of such trifles; for, disappearing as they often do for awhile, they are forgotten until recalled to the mind. In some cases, too, this spontaneous blocking of the veins occurred in two members of the same family, showing, at any rate, a family tendency. It is in men that I have seen this blocking of the veins by far most frequently. Some were professional, some business men, somewhat hard-worked; others were men of independent means; they were all temperate as to stimulants, but two or three of them were large eaters. With two exceptions, all these cases of blocked veins occurred in the lower extremities, the exceptions being one, in one of the brachial veins, the other, in both axillary veins.

In the lower extremities, the cases occurred, with few exceptions, in veins apparently in no wise diseased; in the other cases, the veins were more or less varicose, and it was in these that the clotting of the blood appeared to be connected with a strain of the limb. And, with few exceptions, too, it was in the veins of the leg that the mischief first made its appearance; for the most part, it was in a superficial vein, and only very occasionally in a deep-seated one. A peculiar feature in many of the cases was the point at which the mischief started, at the back of the leg, midway between the heel and the ham. But, whatever the starting-point, the mischief for the most part spread from vein to vein; in some being confined altogether to the superficial veins, and in others involving ultimately both superficial and deep vessels. The spreading mischief in most cases took an upward course, that of the blood; but in a few it proceeded in a contrary direction, and starting from the leg, it ended in the foot. In a few cases, the mischief did not spread along the veins continuously, but made its appearance in isolated spots; about the middle of the leg, then in the sole of the foot, and, after awhile, it suddenly appeared in the upper part of the thigh.

In some cases, the mischief had come on insidiously, and with but

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little pain; the first thing noticed being a sense of weight about the limb, then its gradual swelling; and, in a few cases, so slight had been the pain, that the patients had gone about, and, when seen for the first time, the femoral vein was found blocked in the groin: in such cases the general symptoms, too, have been but very slightly marked. On the other hand, in some cases, and especially so in three (one lady and two gentlemen), the pain was intense, so much so that the slightest touch caused agony. In these three cases, the only thing noticed at first was intense pain, confined to the mid-part of the back of the leg; and, unless on one's guard, the exact nature of the case would at first certainly have been overlooked. Then, after a few days, came very slight puffiness about the ankles, and so matters went on for some days, after which the pain began to spread along the course of the veins, which gradually became hard, and could, after a while, be felt like cords under one's finger. In two of these cases the mischief was in the superficial veins; in the third, it was in the sural; and from these vessels it spread upwards and downwards, involving most of the veins, but not extending to the femoral, the whole limb becoming ultimately more or less swollen and brawny. In these three cases, from first to last, wherever the disease spread there was the same intense pain, which was accompanied by great feverishness, and in one case by slight wandering at the beginning.

In two cases, after a year or two, there was a recurrence of the disease in the opposite limb. In one of these the attacks differed widely from each other. In the first attack, there was comparatively little pain, but the whole limb was very much swollen, the disease having spread to the main veins; in the second attack, the pain was throughout so intense that attempts at standing all but caused faintness, and that in a gentleman of great courage and all-enduring as to pain. This difference between the two attacks was very pithily put by the patient himself: in the first attack it was, he said, 25 per cent. of pain and 75 of swelling, and in the second attack, it was 75 of pain and 25 of swelling.

All these cases of blocked veins were very tedious ones; and, spreading as the mischief did from vein to vein, many weeks, and in some many months, elapsed before the disease subsided. In three cases, embolism occurred, giving rise in two to pleuro-pneumonia, and in one to plugging of the posterior tibial artery and mortification of the foot. The two first recovered; the last, far advanced in years and broken down in health, ultimately sank.

And when seen in after years, the condition of the limb in these cases of blocked veins has varied very much. In a few the limb recovered its usual appearance, save perhaps a very slight increase in its size, in no ways interfering with the freest action; for I have known one gentleman who, after an attack of this kind which confined him to his couch for months, returned to deer-stalking, with as much zest and activity as before. In other cases the limb remained more or less swollen, and, consequently, with its action more or less interfered with, the circulation being carried on by anastomosing veins, largely increased in size and tortuous. In one case, where both external iliac veins and both axillary veins had become permanently blocked, there was a mass of large tortuous veins spreading over the belly and chest; but so little was the action of the limbs interfered with that the gentleman, an officer in a heavy cavalry regiment, was able to remain in the service and efficiently to discharge his duties.

And, as closely allied to this blocking of the veins, I will now direct your attention to a class of cases, not alluded to, as far as I know, in the most recent works on surgery. I believe that blocking may occur in the corpus cavernosum of the penis in the same way as it does in veins—that is, spontaneously in gouty constitutions, and without strain or injury of any kind. I have been led to this belief by two cases, the first of which was in a gentleman sixty-five years of age, whom I had known for a number of years, during the latter part of which he had in various ways shown a decided tendency to gout, and who consulted me concerning a nodule in the under part of the corpus cavernosum, and about an inch beyond the glans. Of the size of a sixpence, this nodule was hard and perfectly circumscribed; it was without pain, and as there had never been any injury of any kind or sort, it had been accidentally discovered. There were no enlarged glands in the groin. Matters remained much in the same state for a couple of years, when this gentleman met with a severe accident whilst riding in the country, and of this he ultimately died. The exact nature of this case thus remained doubtful until the second case fell under my notice. The gentleman, who was fifty-eight years of age, had also shown in various ways a tendency to gout; and in this case, too, the trouble was accidentally discovered, there never having been strain or injury of any kind. In the corpus cavernosum were four nodules, three on the left side and one on the right side. Varying in size from a pea to that of a French bean, they were perfectly circumscribed, hard to the touch, knot-like, and painless when handled. There were no enlarged glands

in the groins; the patient had never had syphilis, and he was in good health and of his usual weight. I first examined the case two years back, and all that has occurred from that time to this is a marked diminution in the size of the nodules; two of them having disappeared, leaving merely a trace of thickening, and the largest being now not bigger than a pea. The groins remain perfectly free, and the gentleman is in his usual health and of his usual weight; and during these two years the case was left undisturbed by treatment; no medicine of any kind has been taken; nothing was applied locally; the disease was left to its natural course. Such were the two cases, and, from the course which they have pursued, I think it may fairly be inferred that they were cases of spontaneous blocking of a gouty origin, in patches, of the corpus cavernosum.

I shall conclude with a subject deserving, I think, of the utmost attention in the present day—that of the after-effects of the syphilitic poison in all their multifarious forms. It is, however, to those effects, known as tertiary, to which I would now especially direct your attention, as it is in such cases that there is oftentimes the greatest difficulty in arriving at a correct diagnosis. And here again I am induced all the more readily to say a few words on this subject, on account of the largely increasing frequency, as it seems to me, of cases of tertiary both in private and in hospital practice. As to diagnosis, the difficulty in such cases may arise from various causes by which the practitioner may be thrown off his guard. Frequently the difficulty arises from the form under which the tertiary makes its appearance, and the lapse of time intervening between it and the other constitutional symptoms. Let me mention briefly five such cases, in which there was an interval of fifteen, twenty, twenty-one, twenty-six, and twenty-eight years between the appearance of tertiary and the cessation of all secondary mischief; and in these long intervals there had been good average health, without a trace to indicate a syphilitic taint. The tertiary mischief which suddenly showed itself, without any apparent cause, in these five cases was, in the first, hemiplegia; in the second, paraplegia; in the third, tumours in several muscles and one on the head; in the fourth, extensive ulceration of the tongue; and in the fifth, a hard painless tumour on the forehead. All these cases did well; and in the cases of paralysis there ultimately was complete recovery, and so much so that now, after a lapse of some years, the patients are as if nothing of the kind had ever happened to them.

Tertiary mischief thus showing itself at so long an interval and at a single point, as it did in four of these cases, might easily lead to an error in diagnosis. But all the more readily would such an error be likely to occur should it so happen, as it is now well known does happen, that there is no history whatsoever either of secondary or even of primary syphilis, as instances of which I will briefly mention the two following well marked cases.

Some ten years ago, a friend of mine came up to town to be under a physician for racking pains in various parts, supposed to be of a rheumatic nature. On examination, large quantities of albumen having been discovered in the water, the case was looked upon as one of Bright's disease in an advanced stage. One day, however, by chance a depression was found in the skull, and about this my friend was told to seek my advice. The depression which had thus been accidentally stumbled upon was of the size of the bowl of a dessert-spoon, and, from its depth, it evidently involved the outer table and part of the diploë; but further examination also proved that there were several other depressions, more or less marked, in other parts of the skull; to all this, however, the patient's attention had never been directed, as he had not suffered from pain about his head, or noticed any irregularity in its shape. Then came the question as to syphilis, but the patient had never had anything like secondary troubles, and had even no knowledge of ever having had anything like a sore. He was an unmarried man, tall, well-built, most active, all-enduring as to fatigue, and without a trace of hereditary syphilis. With the racking pains about the joints and the muscles of the back, and especially from this condition of the skull, the case was, however, now looked upon as one of tertiary syphilis, in which the kidney had become involved; a sore in the urethra, or possibly a soft sore, which, having healed rapidly, had passed unnoticed, was thought to have been the source of infection some years ago, whilst this gentleman was at Cambridge. Briefly, principally with iodide of iron, and a residence during two or three winters at the sea-side in a southern climate, the racking pains and the albumen gradually disappeared; and at the present time this gentleman is in good health, and in field-sports exposes himself to all kinds of weather without a thought.

The second case is that of a foreign gentleman, about thirty-five years of age, who lately fell under my notice. He was a tall, powerfully-built man, but with a sunken, anxious aspect, and looked ill; and of late he had been losing both strength and weight. In the middle part

of the inner side of the left thigh was a large, hardish, ill-defined tumour, not painful, irregular in shape, and lobulated on its surface, which was deeply imbedded in the muscles, but not connected with the bone. It had been first noticed some months previously as a small, hard, deeply-seated lump, which for awhile had remained pretty stationary; but of late it had been growing rapidly. Several enlarged glands existed in the groin. There had been no accident or injury of any kind. Divers opinions had been given as to the nature of this tumour, and a hint had been thrown out as to its perhaps being malignant. On further examination, the right groin also proved to be full of enlarged glands, amygdaloid glands as they are called now-a-days; and then came the question as to syphilis, but of this, either as primary or as secondary, there was no history whatever, and the patient had no traces of hereditary syphilis about him. Nevertheless, with these amygdaloid glands in the groins, it was thought advisable to treat the case as one of tertiary; and when I last saw the patient the tumour had all but disappeared, there being merely a slight trace of thickening at the part where it had existed; and the patient himself was now a strong and healthy looking man.

As surgeons, it is in such a case as this that it especially behoves us to be on our guard. When several tumours of this kind exist in various parts, attention may, by their multiplicity, be directed to the cause of their existence; but with one tumour only an error in diagnosis may very easily occur. A short time ago, at a consultation at which I was present, concerning the removal of a tumour from the back, a question arose as to its perchance being of a syphilitic nature; amygdaloid glands were found in the groins, and a distinct history of syphilis of a few years standing was obtained; the case was treated as one of tertiary, and in due time the tumour disappeared. But patients have, in such cases, sometimes undergone formidable operations. In one case, a large portion of the scapula was removed; and in another, in which the whole tongue had been cut out for cancer, there were good reasons for believing that the disease was of a syphilitic nature.

As far back as the year 1845, Mr. Tatum put into my hands a paper on "Tumours of Muscles cured by Iodide of Potassium"; and, as in two of the cases, at any rate, there were distinct evidences of constitutional syphilis, I advised him to send the paper to the Royal Medical and Chirurgical Society, where it was read; but it was not thought fit for publication in the *Transactions*. In the present day, Mr. Tatum's paper would naturally have found a place in the records of the Clinical Society; and here I think lies especially the value of such a Society, dealing as it does with short practical papers, which may apparently be unimportant at the time, but which in after years become of value.

UTERINE CANCER.—At a meeting of the Berlin Obstetrical Society on November 26th, Herr Ponfick showed two specimens of cancer of the female reproductive organs. In one, the ovaries were converted into hard nodulated masses, and there were cancerous deposits in the neighbourhood of the uterus, especially near the bladder and rectum, and cancerous induration of the mesenteric glands. The uterus was not enlarged. In the second case, the whole body of the uterus was enlarged and infiltrated with cancer; its vaginal portion was destroyed; and the vagina, which was enormously wide, contained cancerous nodules. The parts near the uterus were free; but cancerous degeneration was found in the glands in the abdomen, chest, and neck, and in the thyroid body. The body of the second lumbar vertebra and the left pleura were also affected. Herr Ponfick referred to the affection of the cervical glands as of rare occurrence in uterine cancer.—*Berliner Klin. Wochensh.* February 3rd, 1873.

EFFECTS OF QUININE UPON THE UTERUS.—Dr. F. K. Bailey of Knoxville, Tennessee (*Philadelphia Medical and Surgical Reporter*, November 9th, 1872), gives the result of his experience in a malarious district. "It was very common to find a pregnant woman suffering from uterine pain during a fit of ague, and abortion or premature labour often occurred in cases where timely antiperiodic treatment could not be carried out. In all such cases it was my practice, as well as that of others, to administer quinine promptly and freely. There was no other way to carry a patient over such a period of danger, except to suspend the periodical tendency. Again, the question is often asked, Is quinine admissible or ever indicated during labour, to regulate the expulsive efforts of the uterus? In answer to this, I can say that, in very many instances during labour occurring in the summer or autumnal months, I have given quinine with the most happy effects. It was often the case that a natural labour at term was ushered in by a chill; and the depressing effects of malaria would render the pains feeble and without expulsive power. At this juncture, a full dose of quinine would equalise the circulation and render contractions more forcible."

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

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LECTURE III.—CHRONIC BRIGHT'S DISEASE (*concluded*).

Local and General Symptoms of Contracted Granular Kidney: Frequent Micturition; Pain in the Back.—Dyspepsia as a Cause and a Consequence of Renal Disease.—Dropsy.—Hypertrophy of the Heart.—Inflammation of Serous Membranes.—Hæmorrhage from various Surfaces.—Cerebral Hæmorrhage.—Impairment of Vision.—Cerebral Symptoms the Result of Uremia.—Theory of Uremia.—Nervous Dyspnoea.—Disease of the Liver.—Diagnosis.—Prognosis.

The Local and General Symptoms of Contracted Granular Kidney.—

There are few diseases equally serious, whose progress is so insidious as that of the disease which we are now considering; yet there are few maladies whose presence is indicated by more unequivocal signs, if only they be diligently and intelligently sought for.

One of the earliest symptoms, in the majority of cases, is *increased frequency of micturition*, and especially during the night. The more frequent call to empty the bladder may be a result of a more copious secretion of urine and consequent distension of the bladder, or it may be due to irritation of the bladder by some abnormal quality of the secretion. This symptom is sometimes absent, and it may result from other causes than renal disease. When present, it serves to direct attention to the urinary organs; and it is a symptom which should never be neglected.

Pain in the back is not a frequent or an important symptom. In many cases, it is entirely absent; and often it is not spoken of until the patient's attention has been directed to the subject. When present, it is more frequently muscular than renal—an aching pain in fatigued and feeble lumbar muscles, and often complained of by debilitated patients who have no renal disease. In numerous instances, a patient in the advanced stage of incurable degeneration of the kidney has said, "I cannot understand how my kidneys can be diseased, since I have never had pain in them."

Dyspepsia is frequently associated with this form of disease, sometimes as a cause, sometimes as a consequence. You may often learn that a patient of strictly temperate habits has for months or years suffered from pain or uneasiness after food, flatulent distension of stomach and bowels, occasional nausea and vomiting, habitual looseness or irregularity of bowels, constipation and diarrhoea alternately. With this, there is often turbidity of the urine, which is high coloured, excessively acid, and deposits urates abundantly. After a time, the urine, which had been scanty, becomes more copious, of pale colour, of low specific gravity, and is found to contain albumen and granular casts. In such a case, probably renal degeneration is a consequence of the long continued elimination of products of faulty digestion through the kidneys. I have seen this sequence of events so frequently, that I have no doubt as to their causative relationship. Dyspeptic symptoms such as I have described, and consequent renal degeneration, are in some cases excited or greatly aggravated by habitual excess of alcohol—less frequently, perhaps, by excessive smoking of tobacco.

In other cases, dyspepsia is a *consequence* of advanced renal degeneration. Urea and other urinary products are vicariously excreted by the mucous membrane of the stomach and bowels, in consequence of the defective action of disorganised kidneys. The gastric secretions are deranged; the digestive functions are disordered; and nausea, vomiting, and diarrhoea, are amongst the results of this secondary renal dyspepsia.

The chronic degeneration of the kidney which we are now considering is often preceded and accompanied by such symptoms as the following: a gradual loss of energy, with emaciation to a variable extent; unusual fatigue after exertion, with a tendency to rheumatic pains and cramp in the feeble and fatigued muscles; defective perspiration, with a dry and harsh state of the skin; a peculiar pallid or sallow complexion; and a watery condition of the conjunctiva, or of the connective-tissue beneath it. Pallor is not a constant symptom; there is sometimes a florid complexion even in the advanced stages of this form of degeneration. The tongue is sometimes dry; at other times, moist

and pale. There is often thirst, with loss of appetite and some of the dyspeptic symptoms before mentioned. Not unfrequently there is pain or a sense of weight in the head; sometimes a tendency to drowsiness, and occasional dimness of sight.

Whenever symptoms such as I have described are complained of, the urine should be carefully examined. I need not repeat what I said in the earlier part of this lecture of the indications afforded by the urine from the earliest to the latest stage of this form of renal degeneration.

Dropsy, as I have before told you, is not a prominent symptom in this form of disease. In the majority of cases, it is absent throughout the whole progress of the malady. Excluding those cases in which there is the complication of valvular disease of the heart, I found that, of thirty-three fatal cases of contracted kidney, there had been dropsy in only fourteen, the proportion being 42 per cent.; and in most of these fourteen cases the dropsy was only slight and partial, coming on towards the close of the illness. (See a paper on the Forms and Stages of Bright's Disease, *Med.-Chir. Trans.*, vol. xlii.) The comparative infrequency of dropsy is explained by the free and often copious secretion of urine, which, as a rule, is not highly albuminous. There is not so great a deficiency of the normal blood-constituents in this form of disease, as in most acute cases and in other forms of chronic disease. The specific gravity of the blood-serum is less reduced, and the proportion of water to solids less excessive. An excess of urea, however, is often found in the blood, especially in the later stages, when the secretion of urine becomes scanty.

Hypertrophy of the heart occurs in a large proportion of cases of contracted kidney when the disease has reached an advanced stage. In some cases, valvular disease, in others, atheromatous and calcareous degeneration of the walls of the large arteries, suffices to explain the hypertrophy; but in other cases, as Dr. Bright pointed out more than thirty years ago, there is no such obvious explanation of the hypertrophy, which affects chiefly the left ventricle; and he suggested, as a probable explanation, that "the altered quality of blood so affects the minute and capillary circulation as to render greater action (of the left ventricle) necessary to force the blood through the distant subdivisions of the vascular system." (*Guy's Hospital Reports*, vol. i.) About six years ago, it occurred to me that the hypertrophy of the left ventricle of the heart in cases of contracted kidney might be a result of increased contraction of the small arteries throughout the body, this contraction being excited by the abnormal quality of the blood; and I went on to argue that, if this were so, we should find evidence of the fact in the existence of hypertrophy of the muscular walls of the minute arteries in various tissues. And we have found this hypertrophy not only in the arteries of the kidney, but also in those of the skin, the intestines, the muscles, and the pia mater. It probably exists in the arteries of other tissues which we have not examined.

The probable explanation of the hypertrophied left ventricle in the advanced stage of contracted kidney, then, appears to be this. In consequence of degeneration of the kidney, the blood is morbidly changed. It contains urinary excreta, and it is deficient in some of its own normal constituents. It is, therefore, more or less unsuited to nourish the tissues, and probably more or less noxious to them. The minute arteries throughout the body resist the passage of this abnormal blood, and in consequence the left ventricle beats with increased force to carry on the circulation. The result of this antagonism of forces is, that the muscular walls of the arteries, and those of the left ventricle of the heart, become simultaneously hypertrophied.

Now I wish to direct your attention to the fact that hypertrophy of the left ventricle, indicated by the apex beating below and external to its normal position, with a strong heaving impulse, and the second sound accentuated over the aortic valves, without signs of valvular disease or senile degeneration of the arterial walls, but with a full resisting radial pulse and high arterial tension, may be taken as evidence that the renal disease is not only chronic, but also in an advanced stage. These physical signs, therefore, will assist you in forming a prognosis.

Both the investing and the lining membrane of the heart are liable to become inflamed, as a result of blood-contamination during the progress of the renal degeneration. This complication will be indicated by the local, general, and physical signs of pericarditis or endocarditis, or, it may be, of both combined. Other serous membranes sometimes become inflamed—the pleura more frequently than the peritoneum. Œdema of the lungs and bronchitis are frequent complications. Pneumonia is comparatively rare, but it does sometimes occur.

Hæmorrhage.—In the advanced stages of the disease, hæmorrhage from different mucous surfaces is a common and often a troublesome and alarming symptom. Epistaxis is the most common form of hæmorrhage; but I have seen it occur from the stomach and intestines, from

the lungs, the bladder, and from the uterus in the form of menorrhagia. Amenorrhœa is, however, according to my experience, a more frequent result of advanced Bright's disease than menorrhagia.

Cerebral Hæmorrhage.—The most serious and by no means the least frequent form of hæmorrhage is that which takes place within the cranium. In a large proportion, probably half, of the fatal cases of sanguineous apoplexy, the kidneys are found more or less diseased; and the granular degeneration which we are now discussing is the form of disease which is most frequently associated with cerebral hæmorrhage. The explanation of this common and too often fatal accident is not difficult. The minute cerebral arteries resist the passage of the abnormal blood, while the hypertrophied left ventricle is forcibly driving it onwards. Meanwhile, the walls of some of the intermediate arteries undergo atheromatous degeneration—partly, perhaps, in consequence of the circulation of morbid blood, partly a result of the unusual strain and pressure to which they are subjected. At length, in the struggle between the propelling left ventricle and the resisting muscular arterioles, a brittle artery gives way, and a fatal hæmorrhage occurs.

Impairment of vision is one of the most serious results of granular contraction of the kidney. It occurs in two distinct forms. 1. The impairment of vision may be so sudden in its onset, that in a few minutes or hours there is complete blindness, which usually passes away as suddenly as it came. The attacks of sudden and transient blindness may recur again and again. In these cases, ophthalmoscopic examination discovers no structural change within the eye. This form of amblyopia is believed to be of uræmic origin, and is designated uræmic amaurosis. It is usually associated with other symptoms of uræmia, and I shall presently have something more to say of its pathology. 2. In the second form of impaired vision, the dimness of sight comes on more slowly, and is more durable. One eye alone may be affected, but both are often implicated simultaneously or in quick succession. The ophthalmoscope reveals peculiar structural changes in the eye, the result of which is called *retinitis albuminurica*. You will find these appearances fully described and depicted in works on diseases of the eye, amongst which I may especially mention the elaborate and excellent treatise of my colleague Soelberg Wells. Dr. Clifford Allbutt, too, in his able and instructive book on the *Ophthalmoscope*, has an interesting chapter on the Retinitis associated with Albuminuria. The most characteristic ophthalmoscopic appearances are a broad glistening white mound surrounding the optic disc, the result of sclerosis of the optic nerve fibres and fatty degeneration of the connective tissue elements. The extreme margin of the white mound is broken up into small irregular patches, which assume in the neighbourhood of the yellow spot a peculiar stellate arrangement. The retinal arteries are diminished both in size and number, while the veins are dilated and tortuous. Blood-extravasations, varying in number and in size, sometimes both numerous and large, occur here and there, chiefly in the internal layers of the retina, but sometimes in the external layers, or between the retina and the choroid. The coats of the blood-vessels are sometimes found in a state of sclerosis or fatty degeneration. These structural changes appear to be of an inflammatory and degenerative character. They are associated more commonly with the contracted kidney than with other forms of chronic Bright's disease. So characteristic are the appearances in the retina, and so insidious is the disease in the kidney, that an ophthalmoscopic examination for determining the cause of dimness of sight has in many instances led to the discovery of an unsuspected renal disease. It may be well to mention here that the two forms of impaired vision which I have described may occur together or in succession in the same subject. Uræmic amaurosis may in time be succeeded by albuminuric retinitis; and the dimness of vision which results from the latter may be temporarily much increased by uræmic amaurosis. The hæmorrhage into the retina may be explained partly by the injecting force of the hypertrophied ventricle, partly by degeneration of the walls of the retinal vessels, and partly by venous engorgement consequent on pressure upon the veins by inflammatory exudation.

Cerebral Symptoms.—In the advanced stages of contracted kidney, various forms of nervous disorder occur with so great frequency, that the disease may be said to have a natural tendency to terminate with symptoms referable to the brain. These nervous symptoms are very variable. In some cases, epileptiform convulsions or profound coma may occur suddenly, without premonitory symptoms. Much more frequently these formidable symptoms are preceded for a variable period by other indications of brain-disturbance. Amongst the commonest of these are headache more or less severe and constant, sudden transient vertigo, equally sudden and transient loss of sight or hearing, temporary inability to speak, or the speech for a time is imperfect and stammering; numbness or neuralgic pains, cramps, chorea-like twitchings or transient loss of power may occur in one arm or leg, or in both the

arm and leg on one side; there may be confusion of thought, impairment of memory, and an indescribable nervous dread, with a feeling of utter prostration. After one or more of these symptoms have continued for a variable period, or recurred more or less frequently, the secretion of urine being usually scanty, and vomiting of frequent occurrence, the patient perhaps becomes drowsy, with more or less delirium; the tongue is brown and dry; the breath has a most characteristic sour and foetid odour; the drowsiness gradually increases and deepens into coma; the pupils being natural or equally dilated, and the breathing more hurried than in ordinary cases of sanguineous apoplexy. And so death occurs either with or without convulsions. In some cases, a single attack of violent convulsion is immediately fatal; in others, the convulsions recur again and again for several hours before the fatal termination. The brain after death is usually found extremely pale and anæmic, with some serous effusion beneath the arachnoid and into the ventricles. These are cases of so-called "serous apoplexy"; but the amount of serous effusion is insufficient to compress the brain, and so to explain the symptoms.

Theory of Uræmia.—In attempting to explain these nervous symptoms, I assume it to be indisputable that they are the result of the blood being deteriorated, partly by diminution of its normal constituents, but chiefly by retention and accumulation of urinary excreta. There are two ways in which it is probable that the brain and its functions may be injuriously affected by this blood-deterioration. First, the cerebral tissues, fed with poor and poisoned blood, may have their nutrition impaired, and may in various parts undergo structural changes analogous to those which are often demonstrable in the texture of the retina. Second, it is probable that some of the cerebral symptoms, more especially those which come on and pass away suddenly, are directly due to temporary interruptions or hindrances of the circulation through certain regions of the brain, consequent on excessive contraction of the minute arteries. In my lecture on the Pathology of Epilepsy (published in the BRITISH MEDICAL JOURNAL, March 21st, 1868), I adduced many facts and arguments in support of the theory that the immediate cause of an ordinary epileptic convulsion is sudden and extreme anæmia of the brain, the result of excessive contraction of the minute cerebral arteries.

Our increasing experience of the various forms of nervous disorder which may result from so purely mechanical a cause as embolism, in vessels of various sizes and in different regions of the brain, gives additional support and probability to the theory, that many of the cerebral symptoms resulting from uræmia may be explained by a defective blood-supply to certain parts of the brain, consequent on arterial contraction. An arrest of the circulation through a portion of the brain involves immediate suspension of function in that part, with perhaps a disorderly action in subordinate and correlated parts. Thus amongst other symptoms of nervous disorder, maniacal delirium and acute chorea have sometimes been found associated with, and probably have been directly caused by, mechanical plugging of minute cerebral vessels; the plugging being a result of embolic particles of fibrine detached from the so-called warty vegetations on a damaged mitral or aortic valve. Again, sudden and complete blindness in one eye may result from embolism of the arteria centralis retinae; partial and patchy blindness from embolism in one of its branches. It is in a high degree probable that uræmic vertigo, amaurosis, delirium, convulsions, and even coma, may in some cases be explained by partial or general cerebral anæmia, the result of excessive arterial contraction excited by the presence of impure blood. I do not ask you to adopt this as a complete and final explanation of the phenomena, but suggest it as a theory to be tested by the results of further observation and research.

Let me add that in some cases, notwithstanding the scantiness and ultimately the almost complete suppression of urine, uræmic symptoms are almost entirely wanting, and consciousness remains until death occurs from exhaustion. In some at least of these cases the uræmic symptoms are probably prevented by the occurrence of incessant vomiting or purging, which, while it rapidly exhausts the patient, favours the escape of noxious impurities from the blood. The cessation of the discharges is sometimes quickly followed by symptoms of uræmia.

Nervous Dyspnoea.—A common and very distressing symptom in the advanced stages of the disease is a peculiar form of dyspnoea. I am not now referring to the persistent dyspnoea which results from the œdema of the lungs, from hydrothorax, or hydropericardium, but to dyspnoea coming on in paroxysms, and especially at night. In some cases the attack resembles asthma, and there are loud sibilant sounds, apparently the result of bronchial spasm; while in other cases the heart's action is rapid and feeble, and the breathing hurried and laborious, with loud puerile respiration over the lungs. There is evidently no want of moving air in the lungs, and the disturbed circulation and breathing appear to result from some morbid influence of the poisoned blood upon the nerv-

ous centres. This distressing form of dyspnoea, which recurs in paroxysms night after night, is, in fact, a form of uræmia.

Disease of the Liver.—In a large proportion of fatal cases of contracted kidney, the liver is found more or less diseased, sometimes enlarged and indurated or fatty, more commonly cirrhotic and contracted. Alcoholic excess may, and often does, excite at the same time cirrhosis of the liver and granular contraction of the kidney. With the cirrhotic liver there is often ascites. When ascites exists without anasarca, or remains after the removal of anasarca, and so forms the prominent dropsical symptom, serious disorganisation of the liver may always be suspected.

Diagnosis.—In addition to what I have said of the symptoms and progress of the disease, I have yet some hints to give you on the subject of diagnosis. The state of uræmic stupor or drowsiness, with a dry tongue and sordes on the teeth, may be mistaken for typhus or enteric fever. The difficulty of diagnosis is increased by the fact, that in some cases of typhus and enteric fever, when there is much cerebral oppression, the urine is often scanty and albuminous, and it sometimes contains granular casts. A close attention to the entire history of the case, and a careful examination of the urine, will seldom leave you in doubt. The specific fever-eruption, when present, is decisive. The thermometer will assist you. The temperature is higher in fever than in uncomplicated uræmic poisoning. Bear in mind that a patient with chronic renal disease may, in addition, have a specific fever—a complication which is usually fatal. With regard to indications afforded by the urine, remember this, that although during the progress of typhus or typhoid fever there may be an acute and transient disintegration of the renal gland-cells, as indicated by the appearance of granular casts—not easily to be distinguished from those which occur in cases of chronic desquamative disease—yet there is this difference, that whereas in the advanced stages of chronic desquamative disease the urine is pale and of low specific gravity, the albuminous urine of fever is usually of deep colour and rather high specific gravity. It is important to bear in mind that granular casts, with albumen, may appear temporarily in the urine as a result of other blood-poisons than those of typhus and enteric fever. I have seen them in cases of pneumonia, erysipelas, and pyæmia. Once, in a case of pyæmia, I found granular and large hyaline cysts exactly like those represented in Fig. 15, but the urine was of deep brown colour and of normal specific gravity; and after death, which resulted from pyæmic abscesses in various parts, the only disease found in the kidney was a recent result of pyæmia. You see, then, that, although the observation of the various forms of tube-casts is of great practical value as an aid to diagnosis and prognosis, yet a too exclusive reliance upon this microscopic evidence may mislead you. When, after a careful inquiry into the history of a case, a doubt exists as to renal disease being recent or of long standing, the evidence of hypertrophy of the left ventricle of the heart without valvular disease, but with a full and firm radial pulse, points to chronic disease in an advanced stage.

I have seen several cases of subacute renal disease occurring in men about middle age as a result of overwork and anxiety, in which it was difficult to decide between acute and chronic disease. I have preserved the urinary sediment from three of these cases; and although the first case occurred nearly fifteen years ago, the tube-casts are as well seen as when the specimen was recent. You may see these specimens under the microscopes on the table, and, having carefully inspected them, you may recognise their like when you meet with them in practice. One case was that of a solicitor aged 40, another a merchant aged 56, another a clergyman aged 45. The symptoms and the condition of the urine were alike in all. There were great prostration, vomiting, bleeding at the nose, and in one case from the gums, no dropsy, ultimately a typhoid condition, and unconsciousness shortly before death. The urine was blood-tinged, the specific gravity from 1009 to 1017, moderately albuminous. A rather copious sediment was composed of dark granular and large hyaline casts, with scattered blood-discs. Some of the granular casts had a blood tinge, and it is probable that they were in part composed of disintegrated blood. After death, in the only case examined, the kidneys were found somewhat enlarged, soft, and congested. Some tubes were injected with extravasated blood, and others, opaque, with desquamated and disintegrated epithelium. In cases of this kind, although the prognosis is very unfavourable—in fact, all the cases that I have seen have died—yet the disease is not so inevitably fatal as chronic desquamative disease in an advanced stage, and therefore it is important to distinguish between them.

Prognosis.—On the subject of prognosis, I have but little to add to what I have already said. Chronic desquamative disease, as a rule, tends gradually to a fatal termination. The rate of progress varies much in different cases and at different periods of the same case. You will remember what I said as to the evidence to be derived from the

amount as well as the character of the sediment in the urine. The most trustworthy prognostic indications are to be obtained by comparing the state of the urine with the general symptoms. When, with a condition of urine indicating advanced degeneration of the kidney, there is evidence of hypertrophy of the left ventricle, with an unspiring skin; when, with a diminishing secretion of urine, or even without a marked decrease, symptoms of uræmia begin to appear, the disease is generally not far from its fatal termination. You cannot be too cautious in giving a prognosis. The symptoms of chronic renal disease are sometimes much aggravated for a time by some imprudence in diet, by fatigue or anxiety, or exposure to cold. The patient may apparently be on the verge of uræmic coma, or he may have a fit of convulsions, yet, under appropriate treatment, these formidable results of his indiscretion or his misfortune, may pass away, and, in a few days, he may be apparently no worse than he was before the occurrence of this temporary disturbance. The uræmic symptoms which are not traceable to an obvious external exciting cause are, as a rule, more serious and intractable than those which result from influences capable to some extent of being removed or counteracted.

CHLOROFORM ACCIDENTS.*

BY AUGUSTIN PRICHARD, F.R.C.S.,

Consulting Surgeon to the Bristol Royal Infirmary.

I HAVE long wished and intended to lay before the Society some of my views on the subject of chloroform, and had already begun to write my paper, when Mr. Green introduced the subject at our meeting in October last. I have naturally, in the course of the last twenty years and more, had a good deal of experience of it; and I may state in the beginning, what you would discover as I proceeded, that my faith in it does not increase with years.

The late James Miller, the accomplished professor of surgery at Edinburgh, in the year 1848 introduced the subject of chloroform to his class with the utmost enthusiasm and eloquence; and I hope you will excuse my quoting some sentences of his lectures which treated the question of danger too lightly. While he helped to make the members of our profession blind to the risks of the agent, he introduced a most uncomfortable creed, the inconveniences of which meet us at every turn, and, by a public exhibition of one or two operations under its influence at the Edinburgh Infirmary, led the laity to think that it is a perfectly safe remedy.

On the 23rd December, 1846, Mr. Liston wrote to Mr. Miller on the new subject of anæsthesia. Mr. Miller says: "Its first sound had come from across the Atlantic; it fell on no dull or idle ears; it was taken up, tried, and speedily re-echoed, and in a few days it filled the island. Mr. Liston struck the key-note, and a pealing note it was." This of course had reference to the production of anæsthesia by ether. In October 1847, Dr. Simpson began his experiments with various other substances, and among them was chloroform. The following is Mr. Miller's narrative. Most of the experiments were performed after a long day's toil was over, and when the greater part of mankind was asleep. Each operator was provided with a tumbler, a finger-glass or saucer, into which the respirable substance was placed.

"Late one evening (November 4th, 1847), on returning home after a weary day's labour, Dr. Simpson, with his two friends and assistants, Dr. Keith and Dr. Matthews Duncan, sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material, which had been set aside as of no likelihood whatever: that happened to be a small bottle of chloroform. It was searched for and recovered from beneath a heap of waste-paper; and, with each tumbler newly charged, the inhalers renewed their vocation. Immediately an unwonted hilarity seized the party; they became bright-eyed, very happy and very loquacious, expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, brother-in-law of Dr. Simpson. But suddenly there was a talk of sounds being heard like those of a cotton-mill, louder and louder; a moment more, then all was quiet, and then a crash. On awaking, Dr. Simpson's first perception was mental. 'This is far stronger and better than ether,' said he to himself; his second, was to note that he was prostrate on the floor, and that among his friends about him there was both confusion and alarm. Hearing a noise, he turned round and

saw Dr. Duncan beneath a chair; his jaw dropped, his eyes staring, his head bent half under him, quite unconscious, and snoring in a most determined and alarming manner. More noise still, and much motion. Then his eyes overtook Dr. Keith's feet and legs, making valorous efforts to overturn the supper-table, or, more probably, to annihilate everything on it."

We cannot but admire the courage of the experimenters; and my belief is, that at that period of the evening, after supper, and in an upright position, they ran as much risk of their lives as our soldiers did in the middle of the battle of Inkermann.

I had the misfortune to witness one fatal case in my own practice, where a man aged 49, healthy except for a diseased elbow brought on by injury, walked into the operation-room, and lay down on the table and died, after taking one or two inhalations of a drachm of chloroform, which had been poured on the sponge two or three minutes at least before. The case was published in the BRITISH MEDICAL JOURNAL for March 13th, 1858. Death was clearly the result of sudden stoppage of the heart's action. Since that time there have been three deaths at our infirmary; one since our last meeting in October; and, I believe, besides, there have been two or three others in Bristol—a small number, perhaps, in proportion to the vast number of cases where chloroform has been administered. There have been, however, in my own practice, and, I presume, in that of others, a number of marvellous escapes and terrible alarms, where the patients have ultimately recovered, but where the furious struggle made by the medical men present for the preservation of life, and the excessive anxiety of the time, have been almost unbearable. Some present here have been at such scenes with me and have aided in the fight; and, were it possible to weigh these dangers and calculate the risks, and gauge and compute their amount, and add the whole in due ratio to the deaths, we should have more to lament than even the dreadful and fatal score of one death per week in Great Britain, admitted recently by our JOURNAL.

I have already in some of my published cases given accounts of persons in whom the slightest inhalation of chloroform caused collapse, and almost death, and where I have had to perform extirpation of the eye or removal of the breast, or some other serious operation, without the use of the anæsthetic. My late colleague, Mr. Bernard, had a case requiring amputation in a boy, where for a similar reason he was obliged to put off the operation, and afterwards amputate the thigh with the aid of brandy and opium, without the evidence of much suffering. We must also admit the uncomfortable fact, that the *post mortem* examination in most instances gives no clue to the fatal result. When chloroform was first introduced, I had a bottle of it, and, in speaking of its properties, for about two seconds held it to the nose of a member of my own family, who was so weak and faint afterwards as to give me some alarm. If I were asked what cases, according to my own experience, were most likely to cause anxiety under chloroform, I should say those who were affected with organic disease of the brain, lungs, or heart. With your permission, I will narrate one or two of these cases, with the preface that no words of mine, however vivid, could ever represent faithfully the anxious and painful strain which accompanies this wrestling with death for the victim claimed by chloroform; and first I will give you, in the words of my friend Dr. Shingleton Smith, the excellent house-surgeon of the Bristol Royal Infirmary, an account of the fatal case which has happened there since our last meeting.

CASE I.—R. W., aged 51, a labourer, was admitted on November 4th, with Pott's fracture, caused by a fall in the street while drunk. His wife stated that he had been drinking excessively for six weeks. Dupuytren's splint was applied to the leg, and removed the next day and a weight attached to the foot. On November 6th, he was restless and talkative in the morning, and had not slept much during the night. The leg had become swollen and again displaced, with the heel drawn up, in consequence of his having moved about. At nine in the evening, he was talking incessantly, with muscular tremor, and resisted any interference. One third of a grain of morphia was injected. At thirty-five minutes past nine, the weight was to be removed and the limb placed on the MacIntyre splint. One drachm of pure chloroform was poured on the sponge and held over his mouth. He struggled violently. After two minutes, another half drachm was poured on the sponge and applied. Struggling soon ceased; the breathing and temporal pulse were regular; no stertor. The sponge was handed to the dresser, but not applied to the face, and attention was given by the house-surgeon to the leg: the apparatus was removed, and the other splint placed under the leg. His breathing was then noticed to be very full and slow, not stertorous; and the pulse could not be felt, nor could the heart's impulse be detected. The pupils were dilated. He continued to breathe at long intervals, and deeply; several efficient respirations occurred, but no heart's action could be induced. The wet

* Read before the Bath and Bristol Branch.

towel was used vigorously. The jugular vein opened and blood flowed. The magneto-electric machine was applied to the cardiac region; needles were also introduced through the chest-wall, and the current passed through them. Inflation by mouth, and then Silvester's method of artificial respiration, were also tried, but all to no purpose. The wet towel seemed to incite respiratory attempts, but nothing had the least influence on the heart. No impulse could be perceived at the cardiac region; no pulsation could be felt; no heart's sounds were heard after it was first noticed that the chloroform was affecting him injuriously; but, on the other hand, several very efficient respiratory attempts were noticed, and artificial respiration, commenced at once, was continued for twenty minutes. The heart must have ceased to beat about one minute after the administration of chloroform had been discontinued, and about three minutes after it was commenced. About six ounces of very dark blood dribbled away from the jugular vein, which had been opened. The electricity excited powerful muscular contraction of both arms, of the neck, and of the walls of the chest; but it did not in the least degree influence the respiratory act or the heart.

Post-Mortem Examination Fifteen Hours after Death.—Rigor mortis was well marked; the superficial veins were full. The brain-sinuses were empty; there was no congestion internally; there was an absence of bloody points, but a slight excess of fluid in the lateral ventricles. Both lungs were universally adherent with old adhesions; there was some emphysema along the anterior border and at the apices of both. The liver was large, and in the early stage of fatty conditions. The kidneys were healthy. The heart was decidedly small, compared with the size of the body; the right ventricle was dilated, and, with the auricles, full of black fluid blood; the walls of the right cavities were thin. The left ventricle was contracted and empty; its walls were of a normal thickness. The coronary arteries were slightly atheromatous, and patulous when cut across. The valves were all healthy. The muscular tissue was healthy looking, red, firm, with no mottling. There was no excess of fat on the surface of the heart. Microscopic examination showed numerous dark granules along the centre of many of the muscular fibres. The striæ were mostly distinct, but broken by a single or double row of minute oily granules in their centre. There was no accumulation of fat between the fibres, and no morbid change beyond the commencing granular degeneration of the fibrillæ themselves.

In the following cases the patients came to life again.

CASE II.—A courageous and energetic old lady, who was to undergo removal of the breast for cancer, took leave of her husband—a poor feeble-minded old clergyman, in the dining-room, and walked up to her bedroom for the operation. Our former house-surgeon, the late Mr. G. Cooper, was with me, and gave her chloroform; and I had plenty of assistance, and felt no special anxiety about the case: Dr. Budd was also present. During the operation, which was more than usually difficult, in consequence of adhesions to the fascia and muscle, she suddenly ceased to breathe, and instantly became quite pulseless. I looked up to Mr. Cooper and said, "She is dead"; to which he, in his quiet way, as briefly replied, "Yes, she is". We had recourse at once to the battery, which in those days we always had at hand, and in a short time she gasped, and afterwards breathed again. Her state appeared to us to be one of excessive and almost fatal faintness, and the use of the battery was marked. I hastily completed the operation, and she did well. There was no local return of the disease; but she died suddenly, it was supposed from cancer of the lung, three or four years afterwards.

CASE III.—A woman, aged 40, was under my care for a mammary tumour, as large as an orange, of four years' growth. When chloroform was administered, she suddenly became faint and collapsed, and appeared dying; but, although she was quickly revived, she was so weak that the operation was postponed until a future day, when it was done without chloroform. She recovered from it satisfactorily and went out, taking cod-liver oil and tonics. About three months afterwards she had become florid and very stout, and died suddenly of apoplexy. She had cancerous growths in the cerebrum, cerebellum, and liver and lungs.

CASE IV.—An old man, aged 74, was admitted under my care, suffering from large strangulated scrotal hernia. After trying the taxis, I gave him chloroform, and made more attempts to reduce the mass, when our attention was suddenly called to the state of the patient, whose pulse ceased while the house-surgeon had his finger on the wrist, and all respiratory movements stopped at the same time. The old man appeared to be dead for half a minute; but the battery being at hand, the handles were applied to his epigastrium and the back of his neck, and he immediately started into life and struggled to sit up. The hernia was reduced.

Two years and a half after this occurrence, he was again admitted with symptoms of acute strangulation, and I saw him about midnight. After trying the usual means, it was determined to operate; and the death-like syncope into which the old man fell at the first inhalation of the chloroform, at once reminded me of what I had not recognised before—viz., that I had my former old patient to treat. He was recovered by galvanism in the same way, and I operated without chloroform. He died three days afterwards of sphacelus of the scrotum and integuments around. This was, no doubt, also a case where the heart's action ceased from the effects of chloroform.

CASE V.—This is the case alluded to by Dr. Marshall at our last meeting. A little boy at school thrust a small bullet into his neighbour's ear, and I was sent for, as surgeon to the school, the next day. The boy was about ten years old. I could see the shot and feel it, but could not grasp it, and left with the intention of bringing chloroform and syringe, and other instruments to try and dislodge it. His parents lived at Clifton, and it was arranged that he was to go home, and that I was to see him with their family medical adviser, Dr. Marshall. They were warned, I believe, to give him no food before the time of our visit; and he went home on Sunday morning, where they instantly prepared him with a large breakfast of fish and other good things, which are thoroughly appreciated by a boarding-schoolboy. Dr. Marshall, I need not say a disciple of the Edinburgh school, undertook the chloroform, and gave it on a towel, pouring it out without measurement, which I consider a grievous mistake, and merely judging by the effect produced. The boy became speedily insensible, and I tried to remove the bullet with a forceps; but after a few attempts, I was obliged to desist, for the patient became restless and then vomited, and his respiration stopped, and he became blue and moribund. We turned him over, and tore open his clothes and smacked him with a towel, dripping with cold water, thoroughly and harshly over his chest, and after a time, what might probably be counted in a very few minutes, but which seemed to be interminable, he gave a gasp, and after awhile another, and began to breathe, and, in fact, gradually came to life again, and I was well satisfied to go and leave him alive with the bullet in his ear. His father was not at home, but his stepmother was kneeling at the table all the time, in perfect stillness, waiting the result of our desperate attack on the boy, and apparently fully appreciating the awful emergency. I believe that the bullet presented itself at the outer orifice of the canal in a few days, and was removed by Dr. Marshall. For myself, I know that I incurred a considerable amount of odium and a definite loss of credit among a certain set at Clifton for maltreating the boy, whereas it must have been a very large sum of money that would have repaid me for the trouble and anxiety of that time; an anxiety and risk entirely brought on by the disregard of the friends to our injunctions as to food. This was, of course, not a direct risk from chloroform; but the case is worthy of notice, as illustrating one of the perils of the agent.

CASE VI.—I went a journey some distance into the country to see a patient, and, if necessary, to remove his eye, which had been injured; and, as the region was rural and remote, I took my son with me as my assistant. The case was one requiring operation, and the surgeon informed me that he had made a puncture in the eye, under chloroform, the day before. Our patient was a healthy, active young farmer, who had destroyed one eye recently by injury; it was acutely inflamed and hopelessly lost, and affecting the other. We made a table of a box and couple of chairs, and my son began with the sponge, on which was poured a drachm of the mixture of ether and chloroform, namely, two parts of the former to one of the latter; and I sat on the edge of the chair with my instruments ready to proceed with the operation. Suddenly the respiration and pulse stopped, and the patient seemed in a very dangerous state; but he speedily recovered, and I tried to go on with the operation, but could not, as he was so restless and unsteady. The gentleman whom I met then volunteered to give the chloroform, and began by pouring some pure chloroform, unmeasured, on a towel, and, putting it over the face, our patient became at once insensible, and I removed the eyeball in a very short time; and then suddenly all bleeding ceased, he became white, and his lips blue and pallid, and the pupil of his remaining eye became dilated and fixed, and his pulse and breath quite stopped; in fact, he looked like a corpse. We instantly set to work and beat him with a wet towel, and the surgeon presently worked the Silvester method with great zeal, but we declared him dead. In the middle of this warfare the box broke down, and my son had to hold his body in a horizontal posture, while we worked the wet towel and the Silvester method. My colleague became worn out and gave in, saying that he was dead; but at that moment, after a hearty smack in the face with a wet towel, I fancied that I saw a slight change in the livid hue of his lips, and urged him to go on; the blue became more red, and after awhile the working of the arms seemed to

be followed by a slight gasp or respiratory effort, which encouraged us to still further efforts; and we worked on until we were exhausted, and at last he breathed and the pulse came, and he returned from death to life. The father and mother were waiting in the next room to hear the result of the operation, little thinking of the strife in which we were engaged. If they had been present the scene would have been terrible, and I believe the patient would have died. This man was healthy in every respect; no sickness, no disease; in fact, he called on me in Clifton a fortnight afterwards, looking perfectly well, and requiring advice about an artificial eye. He did not know, until I told him, that he had run such risks; and yet he had most decidedly been killed by a small dose of chloroform, with this little exception, that he did not die, but our exertions saved him. Without a third pair of hands he must have died: I never saw a person so corpse-like come to life again.

These and numberless other instances prove that there are without doubt two sets of cases in which lives are endangered or lost—viz., where the heart's action is stopped, and when the breathing ceases. To see the struggles and congested state of many patients while chloroform is being administered, the wonder is that we cannot add to these two a third series, where death occurs from apoplexy or some cerebral damage; and I have seen many instances of lengthened operations on persons severely hurt, where they have not died at once, but have lingered in a half-conscious state for a day or two and then died. I do not remember this class of case as having occurred, at any rate so frequently, before the days of chloroform, and they are not unfrequently in reality deaths from chloroform, affecting the brain in patients so depressed by disease or accident that they cannot get rid of the drug. In private practice we have no sufficient means of testing a question of this kind, and I should like to draw the attention of some of our acting hospital surgeons here present to its solution.

I have in the cases above narrated sufficiently indicated the treatment to be pursued in a similar emergency: a battery, the wet towel, the Silvester method, and the drawing forward of the tongue to relieve the larynx, seem to be the only reliable means.

I must agree, of course, with the universally received opinion that the artificial induction of anæsthesia is a great boon to mankind; but I am not opinion that it is a very safe one, nor that chloroform is its safest medium. I have for many years used a mixture of chloroform and ether, two of the latter to one of the former, under the impression that it is safer than pure chloroform. I think, too, that care in the administration of anæsthetics, and due preparations for restoring life in cases of danger, are important elements in the successful use of these agents; but I also believe that the anæsthetic state itself is dangerous, and that if you were to take 2,500 sick or wounded, or weak and diseased persons, and make them all so drunk with wine or brandy that they could neither feel nor move, a certain considerable percentage would never wake up to life again in this world. We are repeatedly urged to admit to our patients that chloroform is quite safe, but this I never will nor can do.

I have often tried, but I fear hitherto in vain, to impress on my infirmity colleagues and other professional friends, that the meaning of the word anæsthesia is the state where no pain is felt, and that they have no right in every case to push it so far as to destroy the power of motion for their own comfort in operating. If the patient cannot feel, that is all that he wants; your assistants must keep him quiet by force of arms.

The lithotomy position, with the hands and feet strapped together, is very unfavourable for chloroform, because of the fixed state of the chest; and I have seen some very uncomfortable cases from this cause. Chloroform and other anæsthetics act on young children fairly; but the little patients are apt to fall into a deep stupor after the operation has been finished, if it be not very long, and I have had not unfrequently considerable, but probably uncalled for, anxiety from this cause. Before the time of chloroform, patients made up their minds to necessary operations as readily, I believe, as they do now. It is a common and popular, but most erroneous idea, first started by Professor Miller, that the use of anæsthetics affords great relief to the operator as well as to the patient. Never was a greater mistake. It is a mere sentiment, likely to catch the mind of the public, and to be brought forward as a sign of the great tenderness of the surgeon's heart; but I must say that my own opinion agrees with that of Mr. Erichsen, which I saw quoted some time ago—viz., that the use of chloroform, at any rate in private practice, adds at least a hundred per cent. to the anxieties and responsibilities of the surgeon. In serious or delicate operations, such as ligature of arteries, or removal of the eyeball, or lithotomy, or hernia, it is a great evil to divide the operator's attention between the state of the patient from the chloroform and his own manipulations. In one of my earliest operations for removal of the eyeball, I was told afterwards that at one period of the operation

the patient had uttered a piercing shriek; but I was so much in an anæsthetic state, as far as hearing was concerned, from my attention to my own share in the proceedings, that I did not hear it.

Although it is presumptuous in such an assembly as this for me to touch on the midwifery question, I will nevertheless give my experience, which has been little, but very satisfactory. I have mixed about two drachms of chloroform with six of eau de Cologne, and given it, with a minim-glass armed with a cork, to an assistant, with the direction to keep ten minims in the glass, and to pour this quantity as often as I direct on the handkerchief held by the patient. This she presses over her mouth and nose; and if it be repeated at every pain as soon as it becomes necessary, and more frequently at the last pains, the sufferings of childbirth are relieved without risk. She takes only about two and a half minims of chloroform at each dose, and with this I have known a patient delivered in a state of complete unconsciousness.

In conclusion, while we are ready to give our patients the benefit of anæsthetics, and to take every possible precaution and care against any mishap, I think the entire responsibility should rest on the public who call for their use, and who choose to run a risk of life in cases where the operation itself and its consequences are entirely free from danger: and, practically, the public does take the blame; at any rate, the stereotyped verdict, in fatal cases, is "Death from chloroform, but no blame is attached to the medical men."

THE ORIFICES OF THE UTERUS AND THEIR SURGICAL TREATMENT.

By J. HENRY BENNET, M.D.,

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IN Dr. Matthews Duncan's last communication on the above subject, he dismisses my criticism on his former papers in a very few words, merely stating that I have misunderstood and misrepresented him, and that I am wrong anatomically, physiologically, and pathologically in my views respecting the uterine orifices. I may mention, what my old and esteemed friend Dr. Duncan does not, that the words which he used constitute the title of the paper I read last August at the meeting of the British Medical Association at Birmingham, which was published in the BRITISH MEDICAL JOURNAL the following month. I would add that, great as is the authority of Dr. Duncan, it is not sufficiently great to stamp, by a mere assertion, as a tissue of errors an elaborate paper, deliberately written, founded on thirty-five years' experience, and brought before the profession with a view to debate and discussion, and to prevent uterine surgery from running riot, as I conscientiously believe it now is doing.

My criticism of Dr. Matthews Duncan's scientific and interesting papers is this. Throughout his exhaustive discussion of the mechanical power, of the actual force used in the various modes of dilating the cervical canal, and especially the os internum, he never once even alludes to the nature of the obstruction which he is endeavouring to dilate or overcome. What is meant by all this surgical cutting and dilatation? What is the pathological condition which the dilatation or force is meant to overcome? What is the pathological condition that resists so as to bend a strong silver sound, or which can only be overcome by a pressure of four pounds? We know what a stricture is in the male urethra, the fibrous gristly nature of the contraction, and the antecedent pathological conditions; we know that, if we resort to forcible sounding or catheterism, we break through these fibrous gristly structures, and that without probably using a pressure of four pounds. What I wish to know is, what is the actual pathological condition of the cervical canal or of its orifices, external or internal, which leads one physician of eminence in London to divide the os internum with a double metrotome three hundred times in two years in his consulting-room, and another in New York to divide the os externum and entire cervix down to its vaginal attachment in five hundred cases in the same period of time? Indeed, I come upon traces of these operations constantly in my practice in all kinds of cases, without finding a clue to the motive that dictated them. These serious operations, not to speak of forcible dilatation of all kinds, appear to me, judging from what I see and hear, to be rashly, blindly carried out, as a kind of surgical panacea for anything and everything—sterility, dysmenorrhœa, displacements, etc.

This wild confusion in practice—this constant recourse to severe surgical treatment and operations in women—originates, in my opinion, in the failure to recognise the facts which I laid down in the second edition of my work on *Uterine Inflammation* in 1848, twenty-five years ago. I therein say and now repeat: 1. That, if the os externum will admit a

good sized sound, say, No. 6 or 8, it is an absurdity to divide it on any grounds; 2. That the cervical canal between the os externum and the os internum is an infundibuliform cavity, and seldom or never is contracted or requires dilatation, except in congenital cases, or in cases where there are adhesions from the action of caustics or of labour; 3. That the os internum, so far from being open, as described in anatomical works, is closed by a vital contraction of the circular fibres, like the anus, and so closed that, except in morbid conditions, force has to be used with the sound in perfectly healthy women; the exception being certain morbid conditions, and in some physiological ones, specified in my paper read at the British Medical Association.

I think the non-recognition of this anatomical and physiological fact is at the bottom of all the rash useless surgery which I deprecate, and that I am only doing my duty in bringing the subject before the profession from my semi-retirement on the shores of the Mediterranean. Surely, as one of the Nestors, I may say, of modern gynaecology, as one who long fought the battle of uterine progress single-handed, I have a right to be heard on the subject. Nor do I think that my junior friends in the gynaecological field should feel hurt if in doing so I go counter to their views and opinions. The world of science is open to all. I have fought many a hard battle with a smiling face and a hand held out to my antagonists. Moreover, we are all responsible for our opinions uttered publicly in societies, or published in the medical journals, and must stand or fall by them.

I do not enter into any further details on this important subject, for my paper is there—in the number of this JOURNAL for September 21—to be referred to. I would only ask every gynaecologist who reads this statement to examine carefully with the sound every case of uterine or vaginal disease, slight or severe, that he sees; and, with the exceptions named in my memoir, he will surely find that the sound stops at one inch and a half from the external os, the entire depth of the uterine cavities being two inches and a half. This is the depth at which the sound should pass—two and a half inches—if it enter the uterine cavity, passing the os internum.

When we consider that every healthy woman examined with the sound—if I am right, and if it stop physiologically at the os internum—must be considered to suffer from a morbid contraction by those who are unacquainted with the fact, it becomes evident at once to what a frightful excuse for useless surgery such ignorance leads. Every healthy woman in the kingdom examined under this impression may be pronounced to have contraction, and be dilated or incised, according to the mode of practice adopted.

When we consider, too, that, according to the census, half a million of married women are sterile (one in six), we see to what such ignorance must lead. The existence of the natural sphincter in this half million of women justifies, in those who ignore it, any wild fancy, any amount of dilatation or of division.

I do not think there is just now a more important question before the profession; and I sincerely trust that Dr. Matthews Duncan's memoir will lead to its thorough discussion and elucidation, by himself first, and then by others. I may add that such a discussion should follow the order I have given, and be anatomical, physiological, and pathological.

Mentone, France, February 9th, 1873.

NOTE ON THE CHEMICAL HISTORY OF THE ERUPTION SOMETIMES FOLLOWING THE ADMINISTRATION OF CHLORAL.*

By T. P. BLUNT, M.A., F.C.S.

I DO not think that I shall justly incur the stigma of going beyond my last, if I offer a suggestion with regard to the origin of this phenomenon, now tolerably familiar to practitioners, a strongly marked case of which came under my immediate observation a few years ago, before it was well known and recognised. Although, therefore, an explanation at once suggested itself, I hesitated to call attention to it, thinking it just possible that the exception might be the result of a unique idiosyncrasy.

I must first remind you of the reaction to which chloral hydrate owes its physiological effect. When chloral or "chloraldehyde" comes into contact with an alkali, chloroform is produced, together with formiate of the alkali. The first named substance is very easily detected in a mixture of the kind, from which it separates with all its characteristic properties; the latter is not so readily recognised, though its presence is, of course, equally invariable. When a dose of chloral is taken into

the stomach and absorbed into the circulation, it meets with free alkali in the blood, the reaction described follows, and the chloroform produced exercises its usual hypnotic action upon the patient. Under normal conditions, the formiate produced is no doubt eliminated by the kidneys, after the manner of most other soluble salts; but it must be borne in mind that it is in the meanwhile carried about in the circulation, diffusing itself through the whole body, and therefore finding its way into the capillaries of the skin, and into the neighbourhood of the sweat-glands.

Now the sweat is always during health more or less acid, and physiological chemists tell us that the acidity of the secretion is usually derived from lactic acid—a powerful acid, somewhat analogous to the tartaric; it is probable, therefore, that when the alkaline formiate comes into contact with it, formic acid would be set free. Under normal conditions, the amount of acid might be too small to produce any unpleasant effects; but when the sweat is abnormally acid, as is often the case throughout life with certain individuals, and under exceptional circumstances might occur to any one, the amount liberated might be sufficient to exercise the characteristic irritant action familiar to us in the sting of the ant and the nettle. Two probable objections to this theory present themselves—the first founded on the dilution of the acid in the liquor sanguinis, the second upon its minute quantity. My reply to the first objection is, that the boiling point of formic acid being about 220 deg. Fahr.—i.e., higher than that of water, it would probably be concentrated in the sweat-glands by insensible perspiration. To the second I answer by pointing to the considerable amount of irritation following the injection of the contents of a single poison gland of the common nettle, which is an object so minute as to be scarcely discernible without the microscope. I think, therefore, that I have made out a tolerable case against the alkaline formiate, which is the complementary product of the reaction by which chloroform is produced upon the administration of chloral hydrate.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF SECONDARY HÆMORRHAGE FROM THE EXTERNAL CAROTID ARTERY: WITH REMARKS.

(Under the care of Mr. SAVORY.)

WM. EALES, aged 48, was admitted on the 23rd of last June for a tumour in the right side of his neck. He first noticed it about two months previously, when it was of the size of a small filbert; but up to the time of his admission it had steadily enlarged, and was then of the size of a small orange. It was uniformly elastic, and fluctuated on pressure. It was situated beneath the sterno-mastoid, and that muscle could be plainly traced curving over it. A distinct pulsation could be felt by the hand placed on it, and a bruit might be heard on applying a stethoscope to the surface, but this was obviously transmitted from the subjacent artery. His voice, for the last fortnight, had become very husky, and he suffered from considerable pain in the back of his head. There was no difficulty in swallowing, and his general health was tolerably good. A consultation was held, at which some difference of opinion was expressed as to the contents of the tumour, but it was unanimously agreed that previously to any operation a fine trocar should be passed. This was done on July 5th, and a few ounces of thin sanguinolent fluid were evacuated. On July 8th, the patient being under chloroform, the cyst was freely laid open. It was lined throughout by a smooth membrane, and extended irregularly among the deep structures of the neck. On introducing the finger, the carotid artery could be plainly felt through its wall pulsating at the bottom of the wound. Strips of lint were introduced and changed daily for about a week, the wound being gently washed out by a syringe with a weak solution of Condy's fluid, as the discharge became offensive. Little or no constitutional disturbance followed the operation; the thermometer did not register above 98 deg. in the axilla.

About midday on July 17th, hæmorrhage so sudden and profuse occurred that he lost, as it was calculated, over three pints of blood in little more than a minute. A larger stream of blood, having nearly the calibre of one's little finger, was seen to spout from the wound, but was immediately controlled by digital pressure. He was at once taken into the theatre, and under chloroform the original incision was extended, and the greater portion of the cavity exposed. The part around the

* Read before the Shropshire Scientific Branch.

wound was bathed in unhealthy pus, while the opposite wall was sloughing and matted with the adjacent textures into a confused mass. For a minute or two after exposure there was no hæmorrhage, but presently a jet of blood, of some size, sprang from the upper part of the cavity. This could be only partially controlled by pressure of a finger upon the spot, or upon the common carotid artery, the pulsating trunk of which could be plainly traced upwards through the tissues behind the cavity. The hæmorrhage was too profuse to admit of any delay. The bleeding vessel was so far away, so deep in the neck behind the upper portion of the sac, and in the midst of parts whose anatomy was destroyed by the inflammation and sloughing that it was deemed the safer plan to place a ligature upon the common carotid rather than to subject the patient to the hazard of a dissection which might after all prove fruitless. The patient was already much exhausted, and more blood must have been lost in such an elaborate proceeding. The tissues there were so decomposed that it seemed doubtful whether any would have held a ligature, even for a few hours, and it was found that, although pressure on the carotid artery only partially controlled the hæmorrhage, yet, by that and a plug over the bleeding spot, hæmorrhage was effectually stayed. A ligature was, therefore, placed without difficulty around the common carotid just below the bifurcation, and from the bleeding spot outward the wound was carefully plugged and supported by a bandage.

After this there was no return of hæmorrhage. The poor man rallied to some extent, and his temperature rose. At 4.30 P.M. the pulse was 150. He had been sick several times. At 6.30 P.M. he was in a cold clammy sweat, and appeared to be unconscious. At 9.30 the pulse was 160, very feeble. The vomiting continued into the night until 1 A.M. At 5.15 A.M. the skin was cold and moist, the pulse scarcely to be felt at the wrist. He was very restless. Then the respiration became irregular and very rapid, the lips livid, and at 2.30 P.M. he died.

The *post mortem* examination was made by Mr. Butler Stoney, the house-surgeon. There was considerable softening of the external carotid artery, extending from the bulb of the common carotid to the origin of the lingual, and near the latter point there was an irregular aperture through its external wall, which would easily admit a probe. The common carotid was healthy at the seat of ligature; but the vessel was not normal throughout, for there were several patches of atheroma in its lower portion. The whole of the aorta from its commencement to far down the abdominal portion was found also to be extensively diseased; the atheromatous change being most marked about the arch, and of this there was aneurismal dilatation to about twice its natural calibre. There was some puckering of both mitral and aortic valves, which, however, did not appear in either instance to admit of regurgitation.

Mr. Savory, in a clinical lecture on the case, made the following remarks.

This case illustrates very well some of the chief difficulties in the way of treatment of secondary hæmorrhage. The rules of surgery usually laid down are much more definite and practicable for the treatment of primary than of secondary hæmorrhage. An artery of considerable size is laid open in such a way that, unless the hæmorrhage be controlled, the patient is soon lost; and yet it is impracticable in most cases under these circumstances to follow the golden rule of securing the vessel, where it bleeds, on both sides of the orifice. Admitting that it can be reached and fairly exposed by any reasonable dissection, its structure may be so spoilt by the mischief in which it is involved—by the inflammation and sloughing—that one cannot trust to a ligature placed upon it as security against further hæmorrhage. Therefore, it comes to this—that hæmorrhage from an artery laid open by disease has, in the majority of instances, to be treated upon principles different from those which prevail in the case of a wounded artery. In secondary hæmorrhage from an artery of a limb, after an amputation, when the condition of the stump renders it impracticable to secure the vessel upon its surface, the difficulty has, in some instances, been surmounted by that last resource—amputation higher up; but of course this is possible in certain cases only, even in the limbs, and, if possible, it is, to say the least, a very unsatisfactory course.

But even the golden rule of securing the ends of a wounded artery has its exceptions, as, for a notable instance, in injuries of the palmar arch, and the success which attends the usual treatment is a significant fact. When students are asked how they would treat such a case, the ordinary answer is that either both the radial and ulnar or the brachial itself should be tied; and the latter is usually preferred because it more completely controls the circulation through the hand. But, in point of practice, is it not a fact that, in the great majority of injuries of this nature, well applied pressure over the wounded vessel succeeds? It is extremely rare for pressure to fail in arresting hæmorrhage from the

palm. To be sure the palmar vessels are healthy, not large, and pressure here admits of being very satisfactorily maintained; but the records of surgery can furnish many cases of secondary hæmorrhage from much larger arteries in other situations, which has been successfully treated by pressure. But then again, as we all know, it often, very often, fails. Ligature of the trunk, at a distance from the bleeding point, although usually, when the choice exists, to be preferred to amputation, has always been regarded as unsatisfactory—unsatisfactory, I mean, in regard to complete arrest, but always controlling the hæmorrhage to a very considerable degree.

Now, the interest of the case here related seems to lie in the fact that while neither pressure by plugging the wound, nor ligature of the main artery at a distance, was alone quite successful, the two measures in combination completely at the time, and for some hours afterwards, controlled the hæmorrhage. But what would have happened had the man survived?

Let it be repeated that in those cases of secondary hæmorrhage—when an artery is laid open in the course of disease which involves it—we have but a choice of difficulties. It is not mere oozing of blood, but hæmorrhage from an artery too considerable to be treated with indifference. Even if the bleeding vessel can be exposed amongst tissues confused by the products of inflammation and sloughing and infiltrated with blood and pus, it is too rotten to hold a ligature. Pressure, perhaps, can only be applied by way of plugging, and this cannot by itself be depended on, and pressure upon the main artery at a distance controls, but does not arrest, the hæmorrhage. Under these circumstances, and more especially when the case is beyond the range of amputation, it is fortunate if the hæmorrhage can be completely controlled by the two measures in combination. The instance before us is a case in point, and I do not see that more or less could have been done for it.

ROYAL INFIRMARY, EDINBURGH.

OBSTRUCTION OF BOWELS: PERITONITIS: INGUINAL HERNIA:
ADHERENT SAC: OPERATION: RECOVERY.

(Under the care of Mr. JOSEPH BELL.)

THE notes of this case are furnished by Mr. D. Macleod, house-surgeon.

J. L., aged 55, labourer, had suffered for about four years from an inguinal hernia on the right side. At first the hernia was reducible, but for the last year or so it resisted all efforts to return it. Three days before admission to the infirmary—on November 1st, 1872—after exposure to cold and wet, he was seized with severe pain and tenderness in the upper part of his abdomen. His bowels before this had been constipated, and now resisted numerous purgatives and enemata which were administered. The pain and tenderness increased in severity, and the following morning extended over all his abdomen. His abdomen also began to swell, and the day before his admission was quite tense.

On examination, the hernia was found to be about the size of an egg, and did not protrude beyond the external ring. The abdomen was swollen, tense, hard, and tympanitic; the feeling of hardness was more marked above the umbilicus. The tongue was furred and dry; he was very thirsty, and vomited constantly. The skin was hot and dry; temperature 100; pulse 108, wiry; respirations shallow and frequent. He was very prostrate, and looked pale and anxious.

From the history and symptoms of the case, Mr. Bell came to the conclusion that the patient was suffering from an obstruction of an inflammatory nature in the upper part of his bowel; and, although the hernia was insufficient to account for his state, he thought it should not be allowed to remain unreduced. Taxis having failed, Mr. Bell, by a free incision, exposed the whole length of the inguinal canal, and, dilating the external ring, reached the sac of the hernia in the canal. This he cautiously opened, and found a knuckle of bowel in fair condition, and an extremely tight internal ring. The sac was adherent to the walls of the canal. He separated the adhesions carefully, and then divided the internal ring so as to reduce the bowel. Peritonitic fluid containing flocculent masses escaped. Introducing two fingers into the cavity, Mr. Bell carefully examined the other abdominal apertures from the inside. No other hernia was present, but the colon, the upper part of the ileum, and the stomach seemed to be inflamed and matted together.

For seven days after the operation, the patient suffered almost continuously from severe and protracted vomiting. There was no abatement of the pain and swelling. On November 6th, the vomited matters had a distinct fæcal odour. He was treated by the use of opium in grain-doses every four hours till November 7th, when it was discontinued. During that time, several purgative enemata were administered without effect. His pulse averaged 108, and for a few days retained the wiry character, after which it became smaller and softer, and on the

evening of November 8th was almost imperceptible. His temperature ranged from 101 to 101.6 deg. At first his diet was limited to iced milk and lime-water, but latterly strong soups and brandy were administered. On November 7th, he passed some flatus. The vomiting ceased abruptly about 10 P.M. on November 8th, and the following morning a purgative enema caused a free discharge from his bowels.

The wound, under antiseptic treatment, was healed over on the 11th, with the sac quite consolidated. The pain and swelling of his abdomen now rapidly abated. On being fitted with a truss, he was soon able to get out of bed for a time, and was discharged quite well on December 30th.

This man presented the congenital peculiarity of complete union between the middle and ring fingers of both hands, and between the second and third toes of both feet. None of his relations or ancestors showed this.

NOTTINGHAM GENERAL HOSPITAL.

A CANCEROUS GROWTH IN THE ANTRUM MEDIASTINUM.

(Under the care of Dr. RANSOM.)

FOR the notes of this case we are indebted to Mr. L. W. Marshall, M.B., Resident Medical Officer.

Richard Plumley, aged 28, porter, was admitted March 28th, 1872. Swelling and puffiness of the face, increased by stooping, were first noticed a month before admission. He had also occasional epistaxis and pain in the neck, throbbing of the ears, haziness of vision, and other signs of disordered circulation. He had a dull heavy aspect, his neck being very thick, especially near the clavicles. There was venous engorgement of this part, as also of the superficial thoracic veins, but not of the upper extremities, although a certain coldness and blueness without swelling were perceptible. He said that, after his face and neck had become swollen while he lay in a certain posture, the swelling disappeared on walking about. For some weeks before his face began to swell, he had sudden and urgent calls to stool, and each motion was watery. He was visibly short of breath; and his respiration was slightly laryngeal, especially on expiration, which was audible a yard off. His voice also was rather husky. He had a somewhat disagreeable but not painful shaking sensation in the occipital region, which was relieved by pressure on the neck with both hands. He felt no pain in the thorax or down the arms, but a tightness in the suprasternal region, and once or twice a fluttering in the suprascapular region. He had dyspnœa, increased on exertion, and relieved by the horizontal posture. He had a troublesome cough; the expectoration was frothy and muco-purulent. The pulse was 108, small, weak, somewhat stronger and larger in the right wrist. The thorax was symmetrical, prominent in the sternal region above the middle; the supraclavicular hollows were effaced and somewhat convex. The respiratory movements were tolerably equal on the two sides, and not remarkably restricted anywhere. The superficial epigastrics were distended, especially on the right side; no other physical sign of abdominal disease being observable. There was no glandular enlargement in the neck, axillæ, or groins; nor were there any scars in the latter situation. There was a dull region about the manubrium sterni, which extended laterally into both clavicular spaces nearly as far as the acromial angle, and downwards as far as the third costal cartilage. There was no pulsation, shock, or thrill, perceptible over this area. The cardiac impulse could not be felt by the hand. The respiratory murmur was a little puerile here and there in front of the chest, but presented no other feature worthy of note. The cardiac sounds were perfectly normal at the base and apex. There was no arterial murmur about the manubrium sterni; nor was the shock of the heart or great arteries markedly increased. He was somewhat round-shouldered, but both sides were symmetrical. There were slight comparative dulness, with bronchial and almost tubular breathing, and increased vocal resonance, but no moist râles, in the right suprascapular and interscapular regions. On neither side was there any audible murmur with the cardiac rhythm. The signs were intensified upon the upper dorsal vertebrae; and on the first dorsal vertebra the sound was almost amphoric, but still free from moist râles. His appetite was good; bowels regular; tongue clean and moist; no dysphagia. On May 16, he had an attack of orthopnœa, with lividity of the face and upper extremities, cold clammy sweat, and loud laryngeal respiration. He had had an attack of epistaxis in the morning, which recurred the next day. The attacks of dyspnœa recurred on the 17th (with epistaxis), and on each day till his death, which took place on June 6th.

NECROPSY, twenty-four hours after death.—Rigor mortis was present. The body was pale and emaciated. On removal of the sternum, a

large nodular growth, having the appearance of encephaloid, was found occupying the anterior mediastinum, and situated immediately beneath the manubrium sterni, which, however, was not eroded. Laterally, it was bounded by the lungs, the roots of which were partially enveloped; inferiorly, by the heart; posteriorly, by the trachea and œsophagus; superiorly, by the thyroid body, but was not tangible above the notch in the sternum during life. It invaded the substance of the pericardium, and was visible upon the inner surface, where it was reflected upon the great vessels. Included in its substance were the right and left innominate veins and descending cava. The superior cava had an available calibre of not more than a quarter of an inch in diameter. The walls of these veins were infiltrated; and masses of a whitish substance, not unlike very soft encephaloid, nearly filled the cava and projected into the right auricle. As this, however, was only examined after the action of the preservative fluid, and not microscopically, it is not possible to say how much of it was due to bleached fibrine. The pulmonary artery lay in the midst of the mass, and was compressed, but its walls were not infiltrated. The aorta and its primary branches were slightly compressed. The trachea and œsophagus were a little compressed. The right lung was filled with bloody serum, and consolidated in patches, and contained numerous scattered foci of cancerous matter; the lower lobe had a few small cavities. The left lung was in much the same condition, but to a less extent. There was no valvular lesion of the heart. The liver was pushed down, and encroached on the umbilical region. The spleen was large and engorged.

ANEURISM OF THE COMMON FEMORAL ARTERY.

(Under the care of Mr. WHITE.)

The notes of this case have also been furnished by Mr. L. W. Marshall, M.B.

W. Osborne, aged 34, porter, was admitted April 23rd, with an aneurism situated immediately below Poupart's ligament on the left side. It appeared three weeks before admission; it was at first about as large as a bean, but rapidly increased. He hit himself with the handle of a hand-cart in the left groin a few weeks before he discovered the swelling. He could walk with great difficulty, by help of a stick. The foot of the affected side was slightly swollen, and pitted on pressure. Pressure on the external iliac artery by Bellingham's method was carried out for a month (14 pounds being used). The thrill disappeared completely at the end of a fortnight, and the tumour became much more firm; but in three weeks the thrill reappeared and pulsation became increased, the tumour at the same time enlarging. On May 28th, the circumference of the thigh was 21 inches; that of the other being 14 inches. On this day, the external iliac artery was tied with a double strand of carbolised catgut. The wound was drawn together by wire sutures dressed with carbolised oil (1 in 10). The pulsation of the tumour ceased immediately, and the temperature of the limb was sensibly diminished.—He went on well until June 2nd, when there was a large quantity of grumous discharge from the wound.—On the 4th, the discharge from the wound was much darker and larger in quantity, and more bloody in character. At 8 P.M., secondary hæmorrhage set in, and was controlled by plugging the wound; but he died at 10 P.M.

The following notes of the pulse and temperature were made after the operation.

Temperature.				
	Mouth.	Right foot.	Left foot.	Pulse.
May 28th	99.8	—	—	88
„ 9 P.M.	101	99	98.5	99
May 29th	102.1	98.5	97.2	100
„ 9 P.M.	102.2	99	99	120
May 30th	102.1	98.5	97.2	96
„ 9 P.M.	102.4	99	98.2	104
May 31st	100.4	96.6	96.6	100
„ 9 P.M.	101.4	99.2	99.2	80
June 1st	100.8	98	98	92
„ 9 P.M.	100.6	99.4	99.4	92
June 2nd	102.6	100	100	108
„ 9 P.M.	103.1	100.4	100	112
June 3rd	101.3	96.8	95.2	112
„ 9 P.M.	104.3	99.8	100.6	108
June 4th	100.2	96	96.2	96

NECROPSY, thirty-six hours after death.—There was no sign of peritonitis. The artery was found to have given way at the seat of liga-

ture, the proximal end being closed partially by clot. External to the vessel was a large clot, which with fluid blood filled a space extending beneath the peritoneum as far as the lower edge of the kidney. The aneurismal sac extended on the inner side of the thigh to the adductor longus, and on the outer side was bounded by the iliacus dipping down on the inner side to the back of the limb. The os pubis was eroded. The cavity was filled with loose coagula.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NOURSE'S ETHER-INHALER.

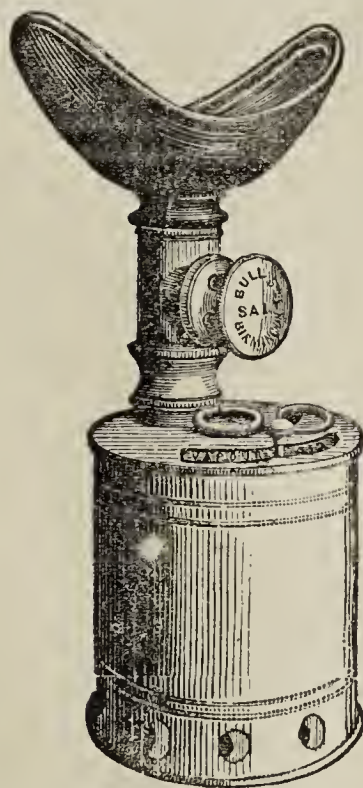
MR. NOURSE of Brighton has forwarded a cheap and very simple inhaler for ether and chloroform. It consists of a cone of cardboard two or three inches in depth, made so as to cover the mouth and nose with comfort. A flat sponge is inserted into and covers the upper end of the cone. This is kept in its place by a few cross stitches with thread.

As an ether-inhaler it presents the advantages of cleanliness, simplicity, and cheapness. The sponge, however, does not effectually close the upper end, and accordingly the ether evaporates rather freely from its upper surface, and is also dispersed by the violence of expiration, thereby causing waste of the anæsthetic and inconvenience to the administrator, and inordinately filling the room with ether.

As a chloroform-inhaler, it would be highly dangerous.

SALT'S ETHER-INHALER.

MR. SALT, of Bull Street, Birmingham, has brought out a new ether-inhaler. The body, or cylinder of the apparatus, is filled with small pieces of sponge well saturated with ether; the top plate on the upper part of the cylinder is double, and is moved from right to left by



means of a "button" (shown in the engraving); this inner plate revolves, and has communication with the interior of the cylinder, and also with the tube which passes to the mouthpiece—it also serves to admit free air into the same tube, so that by moving the button to the right or left, the strength of the vapour is regulated, or it is cut off entirely. The sponges in the cylinder may be continuously supplied with ether through a central aperture on the top plate. A small compress for the nose is supplied with the apparatus.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 22ND, 1873.

RESEARCHES CONCERNING CHOLERA.*

I.

"IN the instructions issued by the Army Sanitary Commission for the conduct of this inquiry," the authors tell us, "particular stress is laid on the importance of accepting no statement bearing on the question of the mode of origin and diffusion of cholera, no matter how distinguished the authority on which it may have been made, until an opportunity occurred for verifying it for ourselves." In this second instalment of the careful researches now being made by Messrs. Lewis and Cunningham with the view of attempting to unravel the nature and causes of cholera, there is good evidence that the above instructions are being acted upon. The present *brochure* is divided into three parts, and contains valuable information under the following heads:—1. Microscopic Examinations of Blood; 2. Experiments on the Introduction of Organic Fluids into the System; 3. Experiments on the Section of the Splanchnic and Mesenteric Nerves.

As no very extensive observations have ever been made concerning the microscopical characters of the blood in cholera, and more especially "of the changes and developments occurring in it when removed from the body," this was deemed an important part of the inquiry. The specimens of blood taken during life were derived mostly from the tip of the finger (after this had been previously cleaned by spirit or water) by pricking it with a needle; whilst those taken after death were generally procured from one of the chambers of the heart. Some of the specimens in each case were mounted for immediate examination, whilst others were destined for frequent observation extending over many days or even weeks. In the latter case, "wax cells" were employed very similar to those made use of by Stricker in investigations of a like nature. "A small drop of blood having been received on the centre of a carefully cleaned covering-glass, the latter was pressed down on the wax cell and hermetically sealed. The cell was deep enough to prevent the blood from coming into contact with the slide, and, therefore, allowed its free exposure to the included air." In this state, large numbers of specimens were retained for examination without any danger of the admission of extraneous elements.

Before proceeding to the investigation of the peculiarities and changes undergone by blood taken from persons suffering from cholera, the authors made themselves conversant, by daily and in some cases hourly observation, with the changes which were apt to occur in specimens of blood taken from healthy persons, or from such as were suffering from diseases other than cholera. Thus the subsequent comparison of these with a large number of other observations which had been made upon cholera-blood, enabled them to ascertain the distinguishing characteristics of the latter specimens. And such characteristics were by no means wanting. The authors describe with much minuteness a series of remarkable changes which were constantly repeated in specimens of cholera-blood, the temperature of the air at the

* *A Report of Microscopical and Physiological Researches into the Nature of the Agent or Agents producing Cholera.* By T. R. Lewis, M.B., and D. D. Cunningham, M.D. (on special duty), attached to the Sanitary Commissioner with the Government of India. Calcutta: 1872.

time ranging from 76.3 deg. to 98.2 deg. Fahr. The narrow rim of serum first observable at the circumference of the drop ultimately widened into a clear area of fluid, whilst the minute clot contracted. The number of white corpuscles at first visible was small and not very notable, but with the widening of the ring of serum a series of very remarkable phenomena gradually occurred—beginning at the close of one hour after the blood had been drawn. These changes are thus described. "Normal-sized white corpuscles began to migrate into the fluid, but in addition to these, and in far greater numbers and activity, were much larger and more delicate bioplastic bodies; cells they were not, for they had not at this time the faintest differentiation of wall, contents, or nucleus. They were simply masses of fluid bioplasm—bioplasm so fluid and diluted as in many instances to be almost, if not entirely, indistinguishable by refraction from the surrounding medium. . . . Gradually the consistence of these large bioplastic masses appears to increase, and they, as it were, grow into sight. Their movements are extremely constant and free—no mere alterations of form, but free progression, along with such movements. The alterations in form vary extremely, sometimes consisting of the emission of rounded and lobulated protrusions, and at others of the running out of elongated slender extensions and threads." Similar bodies may at the same time be seen in the serous spaces of the clot. After a time they begin to divide, and give rise to a second generation of bioplasts, smaller, though scarcely less active. But at the close of twenty-four hours from the commencement of the examination, only a few remain freely mobile; the majority have considerably increased in size, whilst they have also become denser in substance and more full of granules. At this stage they are more or less spherical, and are not at all unlike pus-corpuscles. During all this time, moreover, the serum remains clear and free from all traces of bacteria. The specimen may remain in this condition comparatively unaltered for weeks, though the bioplasts in the majority of cases pass on to further changes, which are fully described by the authors.

Without wishing it to be inferred that there is anything distinctly specific about the above mentioned changes occurring in cholera-blood, the authors think that (partly perhaps on account of its diminished coagulability) the blood in this disease is much more prone than ordinary blood to exhibit such changes to a well marked extent. Similar amœboid corpuscles were detected creeping out of the clot, even in most of the other specimens of healthy blood; but the authors say, "in no single case have we hitherto seen them appear in anything like the same proportion as in the blood obtained from persons suffering from cholera, where not unfrequently little white spots about the size of a millet-seed may be seen with the naked eye, which, when placed under the microscope, will be found to correspond with aggregations of these pus-like corpuscles." The corpuscles are also smaller and disintegrate much more rapidly in specimens of normal blood.

These observations appear to afford an explanation as to the nature of the bioplastic bodies and cells which are abundant in, and characteristic of, evacuations passed during the course of cholera. Owing to the occurrence of red blood corpuscles, to the pinkish sanguineous tinge of the fluids, and the subsequent appearance of blood-crystals in them, there can be little doubt that cholera-evacuations are very frequently indeed contaminated with escaped blood. And if bioplasts are capable of such activity and rapid multiplication in drops of blood contained in wax cells, we have a right to infer that such changes might proceed with an equal, if not increased rapidity, when blood is effused upon the inner surface of the intestines. Such bioplasts "in their early stages will correspond with the freely mobile amœbæ of the evacuations; when rather older they lose their freedom of motion, and show more feeble changes of form, ultimately becoming motionless and pus-like, or rather exudation-like cells, such as are observed in the flakes of lymph in peritonitic and similar effusions, and such cells we know to form the great bulk of those present in perfectly recent choleraic dejections." Certain peculiar "hyaline cells," which are also

very commonly met with in the dejections, are in every way similar to bodies which have been seen to be derived from later series of changes taking place in the blood-bioplasts.

Other important facts have been made known by these investigations bearing upon the "germ theory" in its application to cholera. In the specimens of blood submitted to immediate investigation, not the faintest trace of bacteria was detected in any instance, although they were carefully searched for under high magnifying powers; and, as a rule, such organisms were similarly absent from the specimens submitted to continued observation. The authors say, "One of the most important points determined by these observations is the fact that the blood in cholera is, as an almost invariable rule, free from bacteria, either actual or potential. This is the case as well shortly after death as during life, and holds in regard to every stage of the disease. In one or two cases a slight development of distinct bacteria has occurred during the course of observations, but this is no more than may occur in the most healthy specimens of blood [owing most likely to accidental contamination], and the idea that bacteria are normally present in the blood in cholera may be finally dismissed." With regard to the presence of fungus-germs as a characteristic of the disease, Messrs. Lewis and Cunningham write: "There is absolutely nothing in favour of any such view; there is absolutely no evidence of the existence of fungal elements in the blood whilst in the body, and only very rare and clearly accidental development of such bodies after its removal from it." Their observations were made upon one hundred and twenty-eight samples of blood taken from cholera and other patients, the samples being kept in wax cells, and observed for periods varying from three days to nearly three months. In not a single instance is it recorded that either bacteria or fungus-spores were present when the specimen was examined immediately after it had been obtained, and only in a very small percentage of the cases did such organisms subsequently manifest themselves. Such late development of organisms also occurred only very slightly more often in blood from cholera patients than in that from healthy persons. This absence of subsequent development in such a large proportion of the cases, is in itself a noteworthy circumstance, when we are told that "no extraordinary precautions were adopted, such as exposing the covering glass on the needle to the flame of the spirit-lamp": it seems quite irreconcilable with the long reputed prevalence of germs.

There seems good reason for believing that the statements which have been made concerning the existence of organisms in the blood of cholera-patients and of persons suffering from other acute specific diseases have been based upon more or less obvious errors. In the first place, mere molecular *débris* have doubtless often been cited as the so-called "micrococci" of Hallier; whilst, on the other hand, cultivation-experiments with the view of developing actual or "potential" germs are liable to be vitiated by numerous sources of fallacy, and have given rise to many other erroneous statements.

Again, with regard to the presence of sarcinæ in the blood, Messrs. Cunningham and Lewis cannot reconcile their observations with the statements made by Lister and other observers as to their constant occurrence in this fluid. They say—"On two occasions only did we observe them make their appearance during our examinations of the preparations of blood here referred to; and it so happens that, whereas six samples of the particular blood alluded to were under examination, only in the two specimens to which a solution of acetate of potash had been added did the sarcinæ appear." The authors also add, "we incline strongly to the opinion that they are crystalline rather than organised bodies"—and thus tend to confirm the views already expressed by Dr. Bastian as to these peculiar bodies.

On the whole, therefore, these observations on the blood in cholera, taken in conjunction with those previously recorded concerning the dejections, "do not tend to indicate the presence of a microscopically demonstrable morbid poison in either medium." The present researches, however, appear to throw considerable light upon those published about two years ago, since they show that "the escape of materials from the blood is sufficient to account for the presence of the most remarkable and constant microscopic features in the evacuations."

THE NEW "DUNCIAD".

THE dunces have great reason to be thankful to Mr. Hancock. Arrayed in the twofold dignity of President of the Royal College of Surgeons of England and of Hunterian Orator, he pleaded their cause with a warmth and evident sincerity of conviction which, in the opinion at least of a sympathetic reporter in the daily papers, rose to eloquence. After "feelingly alluding to the distinguished disciples of John Hunter who had died since their last meeting," beginning with the late Mr. Skey and ending with the late Mr. Holmes Coote, he entered upon his real topic. He argued that the result of the institution of late years of a preliminary examination in the elements of education, was "a greatly diminished loss to the public of the services of men who might have shed the greatest lustre on arts and sciences, but to whom the door was now closed because they failed in their respective Arts examinations." This view was further amplified. John Hunter, Robert Clive, Beethoven, Reynolds, Benvenuto Cellini, Handel, Ambroise Paré, and a host of others, had never passed a preliminary examination. But now every youth who aspires to become a surgeon is compelled to show that he can read and write tolerably (accuracy in spelling is preferred, but not insisted on); that he can do a rule-of-three sum, has a distantly respectful acquaintance with the first elements of geometry, and can construe an easy Latin phrase. It is of course true that seventeen years of life may be devoted to the attainment of this difficult and unnatural standard of instruction; that this kind and amount of knowledge is essential to the mere writing of prescriptions, the comprehension of the elements of physiology and of the ordinary terminology of our art; but nevertheless the President of this great College and centre of learning publicly lamented last week, during the greater part of an hour, that along this "one especial groove", and through this "arbitrary portal", the 2,258 candidates who had presented themselves under the new order of things must pass; and 944 had been rejected. There were some other lamentable facts of the same kind which Mr. Hancock forgot to mention: for instance, that, without some such amount of extraordinary literary polish, and without passing along the same narrow groove of instruction in the alphabet of general education, no one can now open a chemist's shop; and that it might be inconvenient to plant in the villages and suburbs, however populated, geniuses of the highest medical order, unable to write a prescription or to construe it, or to understand any "hard words" which might occur in the course of their interviews. But the same hard fate has befallen those lads of genius who were anxious to "shed the greatest lustre" on the pharmaceutical business without mastering the intricacies of Cæsar and Colenso. Of them, too, it may with equal justice and poetry be said, that some hundreds have been "rejected and their prospects blighted, who might otherwise, by their individual gifts, have raised themselves to fame and done honour to the country which gave them birth." Might or might not, must of course be read, as the calmer and more sober meaning of that rhetorical passage; and, on the whole, we think that, in urging the affirmative interpretation, Mr. Hancock will stand alone in plaintive prophecy. The downfall of this country, and the destruction of its intellectual and physical progress, may indeed be at hand. It may be sadly and sorrowfully true, as he pathetically suggested, that we are "gradually undermining and destroying that individuality of character, that self-reliance and energy, that freedom of will, which enabled men even of the humblest rank and birth to work out for themselves a high position and a solid reputation, which in former times elicited the admiration of foreigners, even though hostile to us." But to demand of the members of a liberal profession acquaintance with the elements of a liberal education, cannot, we think, be supposed by many besides the orator to be one of the downward steps in the process of abasement. To suppose that John Hunter—the stalking-horse of the argument—could not have acquired the knowledge necessary to pass such an examination, if he had the necessity of it before him during his school-life, is a violent hypothesis, not very skilfully invented or aptly brought forward in an

oration intended to do honour to his memory, in a building filled with the records and legacies of his genius. It suits nothing except the unfortunate and, we imagine, unique opinions of the orator. The exaggeration of those opinions makes them harmless; but they were painfully out of harmony with the official position and duties of the orator, and it is unfortunate that a wider circulation was sought for them by obtaining their transference to the columns of a daily paper. It might be supposed by a few persons that they reflected the opinions of a great collegiate institution, which in so far they painfully discredited.

MR. HIRD has been re-elected surgeon to Charing Cross Hospital for a period of five years.

THE number of ladies attending the University of Zurich during the present session is 110. Of these, 81 are studying medicine, 28 philosophy, and 1 jurisprudence.

DR. LANKESTER reports to the St. James's Westminster Vestry a case of death from diarrhoea which "assumed all the symptoms of Asiatic cholera before death."

UNIVERSITY OF LONDON.

THE following resolution, passed on the 12th instant by the senate, will take effect at the matriculation examination of June next:

That Greek be no longer compulsory on candidates at the matriculation examination, but be ranked as optional with French and German; so that it shall be sufficient for any candidate to pass in *any one* of these *three* languages.

REMARKABLE LONGEVITY.

THE late sudden change to severe weather, following, as it did, on a very mild winter, has, as might be expected, proved extremely fatal to aged persons. The obituary in the *Daily News* of February 18th furnishes a remarkable illustration of this fact. The deaths are there recorded of twelve individuals above 70 years old. Their aggregate age amounted to 1,002 years. One had reached 100; two were 90; five were over 80, and four over 70. The average age of the group was 83½ years.

HOSPITAL SUNDAY.

A LARGE meeting of the general council recently formed for the purpose of establishing a "Hospital Sunday" in London, was held at the Mansion House on Monday, under the presidency of the Lord Mayor. The Lady Mayoress, the Baroness Burdett-Coutts, and Mrs. Gladstone, all of whom are members of the council, were present; and among those who took part in the proceedings were the Earl of Shaftesbury, Mr. Charles Reed, M.P., Rev. J. E. Kempe, Rev. A. Thorold, Bishop Claughton, Rev. Canon Miller, Canon Oakley, Rev. Dr. Allon, Rev. J. Thain Davidson, and Rev. Dr. Sadler. A letter was read from the Bishop of London, expressing an opinion adverse to trying the experiment this year, many of the clergy having informed him that they had already arranged their plans for collections during the year, and that some had already had collections for hospitals in which they were interested. The Lord Mayor said he felt strongly that if the proposed hospital Sunday were not to be held this year it would be to a large extent a failure; and the Earl of Shaftesbury deeply regretted the Bishop's letter had been written. It was resolved to fix the 15th of June for the collections; and, to meet the difficulty felt by the Bishop of London, it was resolved, on the suggestion of the Rev. Canon Miller, that the clergy should be informed that if it might be impracticable, owing to previous arrangements, for some of them to make the collection on the day suggested, the committee would receive very gratefully the assurance of their co-operation on some convenient day this year. The following gentlemen were appointed a committee of distribution to administer the fund for this year: The Lord Mayor, Sir Anthony de Rothschild, Mr. Thomas Hankey, Mr. Chas. Goschen, Mr. George Barnett, Mr. Samuel Morley, M.P., and Mr. Alderman M'Arthur, M.P.

COUNT BERNSTORFF.

THE political anxieties and the fatiguing social duties required of the representative in London of a great state fully explain the illness of Count Bernstorff, who has attained a rather advanced age. He is suffering from very gradually progressive disease of the liver, presumably of a cirrhotic nature, which, resulting in ascites, would naturally preclude the likelihood of any rapid improvement for the present in the condition of the distinguished ambassador.

TUNBRIDGE WELLS INFIRMARY.

WE have before us the report of an inquest which appears to reflect considerable discredit upon the officials of a large charitable institution, and calls for explanation from them. A man was found with his throat cut. A surgeon examined him, and he was then taken to the Tunbridge Wells Infirmary. Here he was apparently refused admission by the resident medical officer. This gentleman stated that all the beds were occupied; and he also furnished the information that had there been room, the case could not (he thought) have been admitted, as the infirmary was not a "criminal lunatic asylum." He recommended the man to go to his parish union, which advice was followed, and the patient was taken to East Grinstead by train (a distance of thirteen miles), was admitted into the Union Infirmary, and died in the course of a few days. We know full well that the house-surgeons of our metropolitan general hospitals have daily to perform the painful duty of sending away cases of severe illness, in consequence of the crowded state of the wards; but we never heard of their refusing admission to so urgent a case as one of cut-throat, and we have seldom known a hospital so full, that an extra bed could not be temporarily provided. To what extent the welfare of the patient was influenced by the delay in treatment, we will not presume to say. But, although the laws of the land may have allowed the medical officer to refuse help to a patient in so critical a state, the laws of humanity should have compelled him to make an effort to save the life of this poor man, even if a criminal or a lunatic.

ENLARGEMENT OF THE LONDON HOSPITAL.

FOR the past three years, the necessity for additional accommodation has been seriously felt, and this chiefly in the medical department. The pressure on the beds has been becoming more apparent. It is now proposed by the authorities of the hospital to provide a wing, which shall be practically a pavilion, for a minimum of two hundred beds. The governors, however, state that they present an annual deficiency of £20,000; and they therefore deem it essential to secure, before building, such a sum from the public as shall not only build and fit the wing, but leave them for a term of years at least with no additional annual deficit.

THE SANITARY ASPECTS OF THE STRIKE IN SOUTH WALES.

SEEING that the national power depends in a great degree on the health and morals of its people, we cannot but view with sorrow and alarm the strife that exists between capital and labour in South Wales, similar elements of disunion existing in a more or less degree elsewhere, ready to blaze out and burn. If, on the one hand, labour is exacting, irregular, unreasoning, impulsive, and sometimes inebriate, is it not partly the fault of capital, often despotic, greedy (of gain), impatient, selfish, careless of dangers and injuries, heedless of supplying the factors of health, and altogether indifferent to sanitary laws, and frequently opposing those of general acceptance? The members of our profession have an important, nay, a sacred duty to fulfil in insisting on labour, at whatever pecuniary cost, being performed in accordance with the possible enjoyment of good health. The Legislature in the Mines Regulation Act, too long delayed, has initiated the principle of the limitation of underground labour to those who are not more than sixteen years of age; and the high wages, domestic comforts, health and ability to labour, of the Northumbrian and Durham colliers, are well known. They use the double-shift system: two sets of men work in succession, each for seven hours; the work-time thus altogether

amounting to fourteen hours, leaving ten hours for repair, etc., on the owner's part, and full sixteen hours for repose, refreshment, and renovation for the collier: six hours of which time at least will occur during daylight, and might be profitably employed in gardening and in improvement of mind and body. In commencing the first shift or turn at 4 A.M., and leaving at 11 A.M. to cleanse and refresh himself, the second shift commencing at the latter period and leaving at 6 P.M., neither need be tempted to the pothouse, which, happily, is now closed at 10 P.M. We are assured on trustworthy authority, that the statement that colliers usually consume ten shillings' worth of beer weekly, is wholly incorrect. There may be occasional excess of this kind on a pay-day or at the beginning of a month; but it is quite the exception, and none know this better than the laborious and able members of our profession who practise in the mineral districts. We commend the double-shift system to their consideration.

POISONING BY CARBOLIC ACID BY INADVERTENCE.

ON February 15th, Mr. Bedford held an inquest at St. George's Hospital respecting the death of Mary Geary, aged 40. The deceased was an inmate of one of the wards of the hospital. On the morning of the 13th, one of the nurses found that she had given the deceased carbolic acid instead of senna. Attempts were made to arrest the action of the poison, but to no purpose. The nurse in question had twenty-four patients to attend to, and was on duty from 9.30 P.M. to 9.30 A.M. The bottle containing the carbolic acid was generally put at the bottom of the medicine cupboard, but on this occasion it was inadvertently left at the top for a few moments by another nurse. The authorities expected the nurses to examine the bottles carefully. The jury returned a verdict exonerating the nurse from blame, but recommended that the carbolic acid should in future be stored in bottles which did not closely resemble ordinary medicine-bottles. We have repeatedly and earnestly cautioned hospital authorities to avoid this source of homicidal error.

THE MISSION OF HOSPITALS.

WE commented last week on the proposal of some of the managers of St. George's Hospital to refuse admission to persons suffering from delirium tremens; and now we have to chronicle the fact that the Weekly Board of the Middlesex Hospital have passed resolutions to the effect that cases of delirium tremens brought to the hospital should, when no additional risk to the patient is involved, be sent on to the parish infirmary; and further, that all cases of delirium tremens admitted a second time to the hospital must be reported to the secretary, with full particulars, for the information of the Weekly Board. It is difficult, indeed, to see on what grounds this serious disease should be dealt with so summarily. There can be no doubt that patients suffering from delirium tremens, the painful result of an unhappy vice, are sometimes most troublesome, and require a large amount of accommodation and attention; and if the Middlesex and St. George's Hospitals be not in a position to afford these requirements, the sooner this state of matters is remedied the better. If, however, the authorities decline to afford relief to such cases on moral grounds, why is the exclusion limited to persons the victims of one of the more acute forms of alcoholic poisoning? Are cirrhosis of the liver, albuminuria, gout, and the innumerable diseases directly or indirectly the offspring of alcohol, to be carefully tended, but this one form of alcoholic disease refused relief? We fail to recognise any rational meaning in the resolutions alluded to, while we see a distinct element of injustice in them. They imply a total misconception of the purposes and uses of a hospital, and one which it might have been hoped was now obsolete. It is the same error of judgment adopting another form of action, which formerly treated the foul wards of our hospitals as places of physical punishment, and which, at St. George's and some other metropolitan hospitals, pretended to exclude from the benefits of the charity all cases of enthetic disease. It is indeed difficult to see on what principle a man or woman suffering from enthetic disease should be allowed to encroach on the funds of a hospital and the energies of its officers; if

the victims of drink are excluded. The vice in the one case is not less apparent as the cause of disease, and not less to be condemned, than in the other. In both cases it is simply impossible for any hospital managers to pretend to exclude all those who suffer the physical consequences of these vices. Any such attempt has already been abandoned in the case of the enthetic poison; and no thinking and really well informed person could, we imagine, pretend to maintain it in the other. It is not to be supposed that the governors of the Middlesex and St. George's Hospitals have a particular tenderness towards the liver or the kidneys, or any well grounded spite against the nervous system. Such predilections or prejudices, however, could alone justify the admission of patients suffering from gin-drinkers' liver, or the diseased kidney of chronic alcoholism, while excluding those who labour under diseases of the nervous system from the same cause.

PROPYLAMINE.

THE following is the formula adopted by M. Dujardin-Beaumetz in the administration of this remedy in cases of acute rheumatism: Propylamine, 0.25 gramme to 1.25 gramme; elder-flower water, 120 grammes; essence of aniseed, 91 grammes; syrup of morphine, 30 grammes. It may also be administered in mucilage or in water. The odour is abominable, but the flavour is said not to be disagreeable. M. Bernutz has taken it himself. In doses of twenty drops, it did not cause nausea; but in doses of thirty or forty drops it caused him slight cramps of the stomach, nausea, and sweating.

IODIDE OF POTASSIUM.

LAST year there was a considerable increase, amounting, it is said, to 250 per cent. in the price of iodide of potassium in Berlin. This arose in part from the circumstance that the chloride and sulphide of potassium, which were obtained in the manufacture of iodine from kelp, are now procured of better quality and more readily from other sources. A further rise took place in consequence of a coalition to buy up all the iodine in the interest of the aniline manufacture. This, however, proved unsuccessful; and the price of iodine has fallen to one half of what it was in December.

EFFECT OF COLD ON FROGS.

DR. HORVATH of Kiew has investigated the question, to which various answers have been given, whether frogs can be restored to life after having been frozen. He finds that a temperature of 23 degs. Fahr. kills the striated muscular fibre, so that, when thawed, it does not contract under either a mechanical or an electrical stimulus; and hence he infers that, in the cases where revival is said to have taken place after subjection to a temperature of 5 degs. Fahr. (von Humboldt), or 14 degs. to 19.5 degs. Fahr. (Kühne), the temperature of the muscles was not reduced to the extent supposed. The heart of the frog, freshly removed and frozen hard, contracted rhythmically for some time after being thawed. The iris, which in rabbits is always dilated when a certain amount of cold is reached, in frogs undergoes contraction during the cooling process, and becomes dilated again under warmth. The contraction, sometimes to the size of a pin's head, and the succeeding dilatation, may be readily observed in the same animal under alternate applications of cold and heat. Dr. Horvath agrees with Pouchet that the blood-corpuscles are destroyed by freezing; but he does not think that they exert any poisonous influence when thus spoiled.

THE WEATHER AND DISEASE.

WE learn from the Registrar-General's report that the mean temperature of the air at the Royal Observatory, Greenwich, was, in the last week, 32.9 degs. slightly lower than the mean in the previous week, and 5.4 degs. below the average for the corresponding week in fifty years. The coldest day was Sunday, the 2nd instant, when the mean was 29 degs., and the deficiency 8.7 degs.; the warmest day was Friday, when the mean was 36.3 degs., or only 2.5 degs. below the average. The deaths returned last week exceeded by 27 per cent. the average number in the ten weeks ending the 25th of January, when the

mean temperature was unusually high. The influence of the recent cold weather upon the mortality at the several groups of ages differs very considerably; the deaths last week of persons aged between 20 and 40 years exceeded the average number in the before-mentioned ten weeks by only 4 per cent., while among children under 5 years of age the increase was 10 per cent.; between 5 and 20 years, 16 per cent.; from 40 to 60 years, 39 per cent.; and at 60 years of age and upwards, 61 per cent. The deaths referred to diseases of the respiratory organs and phthisis, which, in the ten weeks ending the 25th of January, averaged 411, rose to 466 and 615 in the two past weeks; the number for last week had increased 50 per cent. upon the ten weeks' average, the increase in the fatal cases of bronchitis alone being equal to 80 per cent. Persons suffering from old organic diseases, such as cancer, gout, phthisis, apoplexy (from brain-disease), bronchitis, asthma, and heart and liver diseases, were cut off in considerable numbers by the cold. The deaths by diarrhoea also exceeded the average.

THE HANCOCK TESTIMONIAL.

UPWARDS of two hundred guineas have been subscribed to the testimonial fund. The sum will be applied to defray the cost of a portrait of Mr. Hancock, to be presented to him.

THE PATHOLOGICAL SOCIETY.

THE Council of the Pathological Society have decided to appoint a Chemical Committee with analogous functions to the Morbid Growths Committee, and to vote a sum of money every year to defray the cost of any analysis they may think it advisable to conduct.

THE CLINICAL SOCIETY.

MR. PRESCOTT HEWETT delivered an interesting and very suggestive address on the occasion of his taking the Presidential Chair on the 14th instant. It is published in full in another part of the JOURNAL. Mr. Arnott read a paper on a soft cancer of the parotid region, which, after a lengthened treatment by caustic at the Middlesex Hospital, had been entirely dispersed, and after the lapse of four years had shown no evidence of return. The patient was exhibited. Mr. Thornton and Dr. Morell Mackenzie read papers on thyrotomy for removal of growths from the larynx. Dr. Mackenzie's contribution was in large measure intended as a reply to an article on the same subject by Mr. Durlam, which appeared in the last volume of the *Medico-Chirurgical Transactions*; but, as it was considered by the meeting that the paper was personal in tone, and that it should be properly brought before the sister Society, it was moved and seconded that Dr. Mackenzie be requested to withdraw it. This was done; and we understand that the author intends to take the earliest opportunity of communicating the paper to the Royal Medical and Chirurgical Society.

NEW JOURNALS.

A NEW monthly obstetrical journal is announced under the editorship of Dr. Aveling and Dr. Wiltshire. Such an enterprise has, we believe, met with tolerable success in America; and Paris, at this moment, supports on a very small scale two little obstetrical papers. A very large amount of British and foreign obstetrical matter is now brought weekly under the notice of the general practitioner; and the *Obstetrical Transactions* of England, Ireland, and Scotland, furnish valuable special accumulations of the kind; but we heartily wish the new journal all the success its promoters can desire.—From Paris we receive the first part of a quarterly *Revue des Sciences Médicales*, by M. Hayem, which is not yet very complete, but forms, nevertheless, an interesting and in parts an able volume.—From America we have Brown-Séquard and Seguin's *Archives of Scientific Medicine*, containing, as might be expected, a good deal of interesting matter, especially relating to nervous diseases.—A new periodical has this year commenced its existence in Leipzig, under the name of *Archiv für Experimentelle Pathologie und Pharmakologie*. It is edited by Dr. Klebs, professor of pathological anatomy in Würzburg; Dr. Naunyn, professor of clinical medicine in Königsberg; and Dr. Schmiedeberg,

professor of pharmacology in Strasburg. The object is to present in a collected form the researches in experimental pathology and pharmacology which are at present scattered through various periodicals; and to render the *Archiv* a connecting link between theoretical and practical medicine. Original communications will occupy a prominent position; and notices of the most important articles in Germany and other countries will also be given.

REGISTRATION OF DISEASE.

A SYSTEM of registration of disease, as well as of deaths, is carried out in Copenhagen. Returns of the number of cases of disease are furnished weekly by the district medical officers to the town-physician; and a tabular statement of the cases of epidemic disease is published each week in the *Ugeskrift for Læger*, together with notes of the number of cases of various other diseases that have occurred. The localities principally affected by epidemic disease are also indicated. The returns for six weeks, from December 25th, 1872, to February 4th, 1873, are before us. The cases are classified into those occurring in adults (male and female), in children under one year of age, in those between one and five years, and in those between five and fifteen years old. The most noteworthy feature in the present tables is the preponderance of measles. In the six weeks referred to, the numbers of cases of epidemic disease were respectively 1142, 1743, 1465, 1084, 965, and 789; of which there are placed to the account of measles, in the several weeks, 865, 1350, 1071, 725, 611, and 400. It would seem, then, that the epidemic is diminishing. That it has not been of long duration, is evident from the fact that no deaths from the disease are recorded for November, while 40 occurred in December.

GUY'S HOSPITAL.

DR. MOXON has been appointed Lecturer on Materia Medica and Therapeutics, in the room of Dr. Habershon, who will now lecture on Medicine. Dr. Hilton Fagge will undertake the entire duties of Demonstrator of Pathological Anatomy, hitherto conducted conjointly by Dr. Moxon and himself. These changes, however, will not take effect during the present session.

MEDICAL LEGISLATION IN DENMARK.

THE following are the provisions of a Bill for the amendment of the laws relating to the practice of medicine by unqualified persons, which was introduced into the lower house of Assembly (*Folketing*) in Copenhagen, on January 27th, by Messrs. Termansen, Clausager, Rasmussen, and Andersen.

1. Any one, who has not submitted himself to a professional examination in the kingdom, shall be punished by fine or imprisonment if he undertake the treatment of the sick, and if he (a) wrongly represent to any one who has desired to avail himself of his aid that he is authorised to afford the same; or (b) cause the spread of contagious diseases, undertake dangerous operations, or infringe the present arrangements respecting the treatment of the insane and midwifery; or (c) use drugs which apothecaries are forbidden to supply to the public; or (d) be essentially of wandering habits; or (e) have not remained five years in the kingdom; or (f) have undergone penal labour in the kingdom. No one shall be liable to punishment who, when desired, takes patients under treatment under other circumstances than those above mentioned.

2. If any one, not having authority to practise medicine, undertake the treatment of disease, and considerable damage to the patient's body or health follow, he shall be punished with fine and imprisonment; and, in the case of a repetition of the offence, with imprisonment or penal labour for three years.

3. If any important damage of body or health befall any one who, from servitude, contract, or poverty, is entitled to receive medical aid at the expense of another, the person who, by way of fulfilling the duty devolving on him, has caused the patient to be placed under the care of an unqualified practitioner, shall be fined.

4. The punishments mentioned in the present Bill are not to be inflicted in cases where the general law provides punishments of greater severity.

A final clause repeals in general terms those portions of the already existing law which are in conflict with the Bill.

DEATHS UNDER CHLOROFORM.

WE have again the painful duty of recording two deaths under chloroform. Mr. J. S. Wyman, with honourable promptitude, communicates the following, under date February 19th.

I regret to have to communicate to you the particulars of a death occurring during the administration of anæsthetics at the West London Hospital yesterday. The patient was a single woman, forty-five years of age. She was about to undergo an operation for the removal of a fatty tumour from the back. She was fat, but not excessively so; her pulse was of fair volume and force, and regular; the heart-sounds were normal, rather feeble, but not more so than is common in persons with thick chest-walls. She did not appear very nervous about the operation. Besides the usual breakfast, she had taken a pint of beef-tea and bread at half-past eleven, and a little brandy at half-past two. At half-past four, I administered chloroform on a double fold of lint. After a drachm had been used in two portions, the patient's pulse became irregular. I then ceased to give chloroform, and commenced the administration of ether. After a few respirations, the pulse became regular and fuller for a few seconds, and then stopped suddenly. The cessation of the pulse was followed by cessation of respiration. At the time of the cessation of the heart's action the face was dusky red. The tongue was drawn forward, and artificial respiration immediately commenced, and continued for half an hour. At the same time, galvanism was used, one pole being placed above the left clavicle, and the other over the heart and at the epigastrium. The chest was struck with a wet towel, and four ounces of brandy were injected into the rectum. These means failed to re-establish the action of the heart. I may mention that about an ounce of ether was poured on a sponge in the apex of a cone made of felt. The ether was of specific gravity 700. From the commencement of the administration of chloroform to the stopping of the pulse was about five minutes. Several of the surgeons, and one of the physicians were present. This is the first death of the kind that has occurred at this hospital. The *post mortem* examination was made to day by Mr. Ward, the House-Surgeon. The following are the more important appearances. The body was stout; the hair dark, commencing to turn grey; the face marked with small-pox. There was no arcus senilis. The brain and cerebral arteries were healthy. The subcutaneous fat over the chest and abdomen was an inch thick. The muscles of the chest-wall were thin. The costal cartilages were not ossified. The omentum was loaded with fat. Both lungs were gorged with blood. The pericardium was covered with a layer of fat; it contained a small quantity of fluid. The heart was also covered with fat; it weighed fifteen ounces. The ventricles were dilated, and their walls of about the usual thickness; they contained a little fluid blood. The valves were atheromatous, but competent. The pulmonary artery and aorta contained patches of atheroma, particularly the latter. The liver was pale, weighing seventy-two ounces. The stomach was nearly empty, only a little brown semifluid matter being found in it. The kidneys were healthy, as also were the other organs. The other death occurred in Dublin, and is noticed at page 207.

THE HOSPITAL FOR SICK CHILDREN.

THE Duke of Argyll presided at the annual dinner of this charity at Willis's Rooms on Wednesday, and made an eloquent appeal for funds towards the completion of the extensive hospital building now being proceeded with. A very handsome subscription list, amounting to upwards of £3,200, was read during the evening by the secretary.

PROSECUTION OF INDECENT QUACKS.

THE cost of the proceedings necessary to obtain a decision on the point of law involved in the publication of indecent quasi-medical works, has been extremely heavy, owing to the opposition set up by the vendors of these books, who, their lucrative trade being endangered, spared no expense to get a decision in their favour. From the Deputy Recorder's charge in the recent case of Davidson and others connected with Kahn's museum, it is now clear that the indiscriminate circulation of a work treating of matters of an indecent kind is an obscene libel. Henceforth it will be easy to obtain convictions for this offence; and we trust that those who see the importance of putting down the disgraceful nuisance of indecent quasi-medical pamphlets will subscribe to the Quacks' Prosecution Fund, not only to relieve the Society of its present liability, but to assist in further undertakings. Subscriptions may be sent to the Secretary, Society for the Suppression of Vice, 23, Lincoln's Inn Fields, W.C.

DISCOVERY OF DEAD BODIES.

A NUMBER of dead bodies of children were discovered on Monday evening in a disused dead-house attached to the former burying-ground of St. Peter's Church, Walworth. A policeman, who lives near the place, happened to go into the burying-ground in search of a missing fowl, and found, partly covered with timber and stones, six small coffins, each containing the body of a child. Another coffin contained two bodies. They were all apparently newly born infants, with the exception of one, who must have been about twelve months old.

SMALL-POX IN VIENNA.

DURING the month of January, the total number of patients, including those remaining under treatment at the end of December 1872, was 2,056. Of these, 983 were males and 517 females above twelve years of age; 275 males and 281 females below that age. Among those above twelve years, 1,500 in number, recovery took place in 451 males and 191 females, and death in 63 males and 44 females. Among the 556 children under twelve, 30 males and 56 females recovered, 117 males and 120 females died. Of the total cases (2,056), 665 occurred in private and 1,391 in hospital practice. In the former, there were 117 recoveries and 207 deaths; in the latter, 611 recoveries and 137 deaths. Only 98 children under twelve years were received into the hospitals, and of these 60 died; while, of 458 treated in private practice, the mortality was 177. There was during the month one case of small-pox in every 1,875 of the population of the city.

CAMBRIDGE NATURAL SCIENCES TRIPOS.

IN reference to the Cambridge Natural Science Tripos, a correspondent informs us that the new scheme of examination has been carried out for the first time in this Tripos. It is as follows. The examination occupies eight days—six in one week and two in the next—the first three of which are devoted to six papers, intended to test a general elementary knowledge of all the subjects. Two days are then occupied by practical examinations in chemistry, anatomy, and physiology; and in the last three, six papers are set, each containing several questions relating to the higher branches of each subject. A candidate may not be placed in the first class unless he show a competent knowledge of botany, chemistry, geology, mineralogy, or physics, or of any two of the following—anatomy, physiology, or zoology; the intention being that a student should confine his high reading to one, or at most two, subjects.

CATARACT AND STRICTURE.

WE commented recently upon a paper by Mr. Hogg on Stricture and Cataract, basing our observations on an abstract of the paper. We have recently received from Mr. Hogg a copy of the full text of the paper, in which we find that he had, in drawing conclusions as to the connexion of cataract and stricture, fully before him the probable disturbing influence of disease of the kidney. Mr. Hogg states that, "when kidney-disease was suspected, it was at once made the subject of careful investigation; and in six cases only was any morbid state of the kidney observed believed to have been a predisposing cause of cataract." In thus doing justice to Mr. Hogg's fuller exposition of his views, and to the care with which he elaborated them, we feel bound still to say that we regard them as scientifically untenable.

MEDICAL BENEVOLENT FUNDS IN DENMARK.

IN the *Ugeskrift for Læger* of February 1st, Dr. Ulrik appeals to the profession in Denmark in support of the institutions existing in the kingdom for the support of the necessitous members of the medical profession, or their widows and orphans. It appears that there are two such funds. One is entitled the "Danish Medical Aid Society". Its object is to render assistance to indigent aged or infirm practitioners, who are or who have been members of the Society. It was founded in 1854. Any Danish practitioner can become a member by paying a yearly subscription of at least five *rigedalers* (about 11s. 3d.). At the end of 1871, the fund amounted to £2,340, and in the next

year received an increase of only £112 10s. During the same year, a sum amounting to about £138 was distributed among six members. The number of members last year was 265. The other society is for the support of the widows and orphans of Danish practitioners of medicine. It was founded in 1836; and at the end of 1871 had a capital fund of more than £6,750. Last year, a sum amounting to £315 was distributed among sixty-five widows. The number of members last year was 189. In connection with this fund, there is a special legacy of somewhat more than £1,125 for the support of the ten oldest widows of district physicians connected with the society, as well as other smaller special funds. Dr. Ulrik justly observes that the number of members at present in the societies forms but a small proportion of the seven hundred practitioners in Denmark, and that there is no practitioner who ought not be able to afford the small annual subscription.

THE EDINBURGH UNIVERSITY CLUB, LONDON.

THE annual general meeting of this Club was held at St. James's Hall Restaurant on Wednesday, February 12th, at 6 P.M.; Dr. Kelburne King, President of the Literary and Philosophical Society of Hull, in the chair. After the previous minutes had been read and confirmed, it was unanimously resolved, "That H.R.H. Captain the Duke of Edinburgh be invited to honour the Club by becoming its President." The Right Hon. E. Strathearn Gordon, M.P., was elected a Vice-President; and Dr. Farquharson, Thornhill Harrison, Esq., and the Rev. W. Douglas Veitch, as new Councillors. Ten guineas were voted from the funds of the Club; viz., five towards the University Endowment Association, and five towards the purchasing the library of the late M. Daremberg of Paris. The dinner which followed was presided over by Dr. Kelburne King. Twenty-five members of the Club were present. Guests were not invited. After the usual loyal toasts, Mr. Richard Davy read the report of the Council for 1873; and Dr. Halley, the Honorary Treasurer, read the financial report; both of which were ordered to be printed. Dr. King, in proposing "Success to the Edinburgh University", deprecated in eloquent terms any attempt to reduce universities to the level of examining corporations, and specially laid stress on the past and present value of the Edinburgh University as a training-ground in Theology, Art, Medicine, Surgery, and Law.

SCOTLAND.

DR. Patrick Heron Watson, Dr. Alexander Keiller, Dr. Henry D. Littlejohn, and Dr. George W. Balfour, of Edinburgh, have been re-appointed examiners for the degrees in medicine of the University of St. Andrew's.

THE LADY MEDICAL STUDENTS.

AN arrangement has been at length definitely made, by which the lady medical students may now attend the wards of the Edinburgh Royal Infirmary on Sunday with Dr. Heron Watson.

THE "PRELIMINARY" AT THE UNIVERSITY OF ABERDEEN.

THE Aberdeen medical students have prepared a memorial to Mr. Huxley, the Lord Rector, in which they state that they are dissatisfied with the existing preliminary examination for students of medicine. They consider that a special importance attaches in that examination to Greek and Logic, owing to their being made compulsory on all candidates for the degree of M.D.; that such a knowledge of the Greek language as is at present required from candidates for the degree of M.D., has no bearing, either theoretical or practical, on their professional training, and is of no value as a means of general culture. It seems to them that Greek ought to be replaced in that examination by some subject more germane to their professional studies, and of greater efficacy in general mental culture; and they suggest as suitable substitutes a more extensive knowledge of Natural Philosophy than is at present made optional, or an useful knowledge of either the French

or the German language. They are also of opinion that it would be advantageous to make the examination in Logic more extensive than at present. They respectfully submit this statement of their opinion, in the hope that Mr. Huxley will consider the expediency of taking such measures in the University Court as may bring about what they strongly desiderate in their professional training.

LEITH HOSPITAL.

AT the annual meeting of the subscribers to the Leith Hospital, Dispensary, and Humane Society, held on Monday, it was stated that, in accordance with the resolutions of last annual meeting, the directors had taken estimates for and proceeded with the erection of the new hospital buildings. The estimated sum for the undertaking was £6,818 8s., being somewhat more than the directors contemplated; but they accounted for the difference in the expense of material and the rise in wages.

LORD NEAVES AT ST. ANDREW'S.

LORD NEAVES delivered an interesting address, on being installed as Lord Rector of the University of St. Andrew's, on Thursday of last week. His address was chiefly devoted to a rapid glance at the history and formation of the Scottish universities, and the influence which they had exerted in civilising the country. He gave a sketch of what he considered to be the course of study to be pursued at an university. The students behaved in the usual childish fashion.

IRELAND.

THE election to the Chair of Medicine in the Ledwich School of Anatomy has been postponed until the summer; Dr. Eames continuing the course for the remainder of the present session.

SUPERANNUATION ACT.

Dr. NORTH, late medical officer to the Tyrrellspass Dispensary District, Mullingar, having resigned in consequence of bad health, the guardians of that union have granted him a retiring allowance of £40 *per annum*, subject to the approval of the Local Government Board.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

MR. HARGRAVE, the representative of the College of Surgeons in the General Medical Council, to whom lately the Council of the College gave a gentle intimation that he should resign in favour of a more active representative, shows no intention of complying with this wish. How the Council will act in this difficulty it is impossible to say.

THE SANITARY CONDITION OF KINGSTOWN.

THE sewerage of Kingstown, the most fashionable watering-place on the Dublin coast, six miles of the city, has lately been actively considered by the Township Commissioners of that place. At different periods during the last two years, attention has been called to the disgraceful state of the sanitary and sewerage arrangements existing there; indeed, the almost total want of drainage is patent to the most casual observer. It will scarcely be believed that, in a town numbering nearly eighteen thousand persons, several important terraces have no sewers; and the majority of houses which possess those conveniences, have them in such an imperfectly trapped condition that the return gases evolved are most obnoxious to health. Besides this, the main sewerage of the township is brought by pipes into the sea only for a short distance, the result being that, when the tide is out, the effluvia from the decomposed sewage is unendurable to those residing in the locality. To put a stop to a continuance of this evil, the present chairman of the township is now promoting a Bill in the Imperial Parliament to carry out the designs of Mr. Palles, the eminent engineer. By this Bill, it is proposed to carry the sewerage of Kingstown, and if necessary the adjoining townships of Blackrock and Dalkey, into deep and continuously running water, at a place called Sandy Cove Point, between one and two miles from Kingstown; and at this locality a tidal current is found of suf-

ficient force to carry the sewerage matter out to sea. The estimated cost is £28,000, but it is understood that the lords of the soil will guarantee one-half of the expenditure; but, if not, double the money would not be missed if it will conduce to a thorough remodelling of the sanitary condition of this township, which, with its natural advantages of elevation and situation, ought to be one of the most perfectly drained places in the world. The Bill has been read a first time, and the second reading will take place on the 19th instant, which is expected to be unopposed.

DUBLIN SANITARY ASSOCIATION.

THE following are the suggestions made by the committee of this association and the Public Health Committee at their recent conference, as a suitable sanitary organisation for the city.

1. A chief medical officer of health, fourteen district medical officers of health, being the dispensary medical officers of the districts, fourteen sanitary inspectors, as many assistants as necessary, a city analyst, and secretary.

2. The formation of a department for the cleansing of ash-pits and the removal of night-soil, by application to which, and on payment of a suitable charge, any citizen may have such refuse removed from his premises and carried outside the city.

3. That application should be made by the Public Health Committee to the different Dublin hospitals as to what accommodation could be afforded by them in case of cholera appearing in Dublin.

4. That conveyances for the sick should be provided, one for each dispensary district, to be had on application to the dispensary.

ALLEGED DEATH FROM CHLOROFORM.

THE following report appears in the *Dublin Evening Telegraph* of Tuesday, February 18th. We have not yet received further particulars.

Dr. Whyte, City Coroner, held an inquest yesterday on the body of the late Mr. Joseph Lamb, who died in Sir Patrick Dun's Hospital on Friday last, after he had been subjected to chloroform. The first witness examined was Mr. George Forsythe, a pupil at Sir Patrick Dun's Hospital. He deposed that the deceased was suffering from severe injuries to the foot, and it was determined to subject him to an operation. Some chloroform was for that purpose administered to him by Dr. Barton, who was to have performed the operation. Almost immediately afterwards, the deceased became violent; his pulse became weak, and then ceased; whereupon the administration of the chloroform was stopped. The administration of the chloroform had not been continuous; in consequence of the violence of deceased, it could be administered only at intervals. The galvanic battery was applied, but to no purpose. In reply to Mr. Cane, solicitor, who represented the next of kin, the witness said it was usual to examine the heart before administering the chloroform; but he had not seen this done on the present occasion. Mr. Chute, resident pupil at Sir Patrick Dun's Hospital, was examined, and stated that he was of opinion that the deceased must have known that he was to be placed under the influence of chloroform, as Dr. Barton had mentioned it in his presence to witness. He had seen chloroform administered to men without their hearts being examined. The part of the foot which was to come off was pointed out to the deceased, and he seemed satisfied. He did not know whether the family of the deceased had been apprised of the intention to subject him to the operation. The brother of the deceased said no such intimation had been given. Mr. Cane expressed a fear that the deceased had received an overdose of chloroform, and said the matter would not end there. The jury found that the deceased died while under the influence of chloroform, and expressed their opinion that patients should be examined before being subjected to the influence of chloroform.

None of the medical staff appear to have attended this inquest.

PREMATURELY GREY.—A New York writer on fashions says: "The number of our prematurely grey young women on the streets, dressed in the height of fashion, and stylish, attracts attention. The hair is not powdered or frosted, but is really grey. One would hardly credit the fact, but a fact it is, that a chemical process is resorted to to bleach the hair white. The reign of the blonde is over, and the old term 'tow-head' passes from room to room. Golden locks are at a discount. Raven tresses are vulgar, and snowy hair is the style. The highest-priced wigs are grey, and not black or auburn. Such is the tyranny of fashion, that young girls with black and auburn hair are crazy to have a bleached head."

REPORTS

ON

SANITARY ENGINEERING IN HOUSES,
HOSPITALS, AND PUBLIC
INSTITUTIONS.

BY WILLIAM EASSIE, C.E.

V.—WARMING AND VENTILATION OF HOUSES.

EVERY now and then, as if by sound of trumpet, the attention of newspaper readers is drawn to the condition of the houses which they inhabit; and but for this periodical marshalling together of sanitary teachers, it is not to be doubted that disease would be more rife amongst us. The different captains deliver their separate messages to the community, and then fall back into the ranks. This open method of lecturing the people is not new; for, in the matters at least of ventilation and warming, it was practised a century ago, and the crusades of Polignac in 1713, of Franklin in 1745, and of Arnott in 1838, will especially recur to the mind. And it is beyond dispute that the best fireplaces and stoves of the present day—those which best radiate, reflect, and conduct heat into the room—are based upon the patterns indefatigably recommended by these writers. The systems for heating our monster buildings are in some sort also derived from the ancients. We have but added the chimney with which they were unacquainted, and some smoke-consuming economies which arose from our wholesale possession and extravagant use of coal. The principle of sewer-ventilation is not even due to this generation; for its necessity was recognised by the Romans. Trapping is a dogma entirely of our own promulgation; and the faculty knows what this boxing up of the sewer-gases has done for us.

To revert to fire-places for a moment, there are nearly two hundred different descriptions of grates, stoves, and other heating goods in the market at the present time; and the chance is, that the householder chooses a pattern which has been repeatedly condemned by science and experience.

There is too fatal a facility for patenting things just now; and very often the showiest arrangement pushes the more deserving ones to the wall. A tithe of the badly arranged houses in this respect is also due to the practice of incoming owners reserving to themselves the purchasing of the grates and chimney-pieces—the architect offering no remonstrance. In many other cases the site or the outside of the house has swamped the major part of the capital; and the interiors, particularly the domestic fittings, have been parsimoniously treated. Mistakes, too, have been made in foolishly introducing untried novelties into so important a section of the domicile.

Many of these evils would die of inanition, if our chief towns possessed institutions where these necessities could always be seen in full working order. We have a few economic museums, it is true; but they lack the notoriety which results from national support; and, if not carefully watched by their philanthropic promoters, these otherwise excellent places are apt to degenerate into mere advertising pantechica. A permanent sanitary temple, on the principle of that inaugurated at Leeds in 1871, with the conveniences of action, is what is wanted in every industrial centre. Paris had an exposition of this kind only last year.

The forthcoming exhibition of cooking contrivances which is to be held at Kensington in a few months' time will also edify many thousands of people. The fault is, that these dissolving views are speedily forgotten, and the old race goes on, in which the greatest advertiser of his goods wins the day. What is wanted is, a building where all that appertains to health and house-comfort can be exhibited, seen in use, and studied in detail. Such an edifice, under proper *surveillance*, could also be made useful in instructing our but half-educated servants, and prove self-supporting. Such a structure would also afford an admirable lecture-room for those worthy volunteers who aim at ameliorating our domestic woes; for they would have before them, in illustration, the very things which have proved commendable.

And there are at the present time in our metropolis several bodies, such as the Social Science and the National Health Societies, which could easily combine and take the conduct of so truly a patriotic move in the right direction.

A perusal of the many systems of ventilation advocated in the daily press during the past year would be sufficient to prove that we are very far from being unanimous in opinion as to what plan is best for even an

ordinary sitting room. In the patent office lie over seven hundred schemes for the ventilation of houses, shops, ships, and mines, the monopoly fees of which, joined to the necessary cost of previous experiment would doubtless represent a very large sum. If each patent system had been accorded a trial at some such institution as the one just hinted at, we should, perhaps, have long ago hit upon an universally accepted plan. Many scores of small improvements on the general plan we should be sure to have for all time; but we should not have been found wrangling at the present day as to the very alphabet of the science.

We are now about to suffer from a plethora of gas-schemes, and some are in the market already. Experiments have been made by each rival company, and testimonials have been duly signed; but the experiments were not made where the public could very well witness them or test their results, even if they lasted long enough, and the consequence is that the non-shareholding public will be in doubt for a long time to come. Surely it is not as it should be, that we, who can point with pride to the courts in our Crystal Palace, where nearly every kind of architecture can be seen from the Egyptian to the Renaissance, possess not even a building where the ordinary appliances for health and comfort can be seen and studied in a reasonable way. We may inspect the *disjecta membra*, perhaps at some out-of-the-way place or office, but not the living thing.

If the subjects of ventilation and warming are still enveloped in a certain haziness, it is pleasant to think that the subject of house-drainage now enjoys the broad light of day. No differential calculus is needed in studying how to drain our dwellings and their offices. This last science is removed from an almost metaphysical domain, and brought down to one of simplest logic. It is now nearly universally admitted that a basement floor should be concreted and protected from wet subsoil; the closets built externally and their soil-pipes ventilated; the sink, bath, and cistern wastes made to deliver over a prepared portion of the drain, and a disconnection effected between the house-drain and the sewers; and so on. Sumptuousness may even preside over these simple precautions; beneath the basement concrete may be laid a bed of charcoal, as recommended by Mr. Rawlinson; automatic disinfection can also be practised over the sinks and closets; and even deodorising trays may be placed in the traps and the ventilating shafts of the drains.

The same simplification has to be brought to bear upon ventilation, and a plain code laid down by which we can secure a thorough withdrawal of the air vitiated by respiration and gas-burning. Warming is in as bad a plight as ventilation; for, in five-sixths of the houses now springing up in our towns, as anyone can see, no provision is made for supplying the fires with fresh air from without. The householders will suffer, but they can do little or nothing. They are mostly in the position of a magistrate who has to consult, in the absence of the experienced clerk of the court, a hundred bewildering precedents in Common Law.

THE NEW EDITION OF THE UNITED STATES
PHARMACOPŒIA.

ABOUT every ten years, the United States *Pharmacopœia* is revised by a committee appointed for the purpose. We have the last three revisions or editions before us; that published in 1855 being the second edition of the revision in 1850, the next issue in 1863, and the book now issued in 1873. It is by carefully examining the three, that we are best able to form a judgment of the changes from time to time made in this national work.

We make an extract from the preface of the first of these books: "It is of the highest importance that medicines having the same names should have the same composition; and as British works on medicine are much read in this country, it would lead to never-ending confusion if the substances they refer to by name, should differ materially from those known by similar names with us. It has therefore been a general aim to bring our pharmacy into as near a correspondence as possible with that of Great Britain."

One difficulty in comparing the United States *Pharmacopœia* with the British *Pharmacopœia*, is the difference in the weights and measures. In the British *Pharmacopœia* the ounce weighs 437.5 grains, and the fluid ounce of water weighs 437.5 grains. In the United States *Pharmacopœia* the ounce weighs 480 grains; but the fluid ounce of water weighs 455.7 grains. And the difficulty is increased by the *Pharmacopœia* having ordered some liquids by weight, others by measure.

We will take as an example spirit of chloroform, the strength of which we notice has been altered in the present edition of the United States *Pharmacopœia*. The British *Pharmacopœia* orders chloroform

one fluid ounce, rectified spirit nineteen fluid ounces, so that twenty minims contain one minim of chloroform.

The United States *Pharmacopæia* orders purified chloroform one troy ounce, diluted alcohol twelve fluid ounces; the chloroform by weight, the alcohol by measure. The ounce by weight, as explained above, is of a different value from the ounce by measure; so that to find the quantity of chloroform contained in a given measure of the preparation, we must convert the quantities of chloroform and diluted alcohol into grain-measures, allowing for the specific gravity of the chloroform.

In the preface to the issue in 1863, it is stated that "as weighing is more convenient than measuring, in the instance of heavy corrosive liquids, the strong mineral acids are always taken by weight; and that the fixed oils are taken by weight, a change of plan called for by their adhesive nature, which renders it more convenient to weigh than to measure them."

The preface to the present issue (1873) does not refer to liquids being weighed, so we presume the reasons for weighing some liquids in this issue are the same as those set forth in the preface to the previous issue. If so, why is chloroform, which is not corrosive, and does not inconveniently adhere to the measure, weighed; and glycerine, which does adhere to the measure, measured? A resolution was passed by the Convention for the guidance of the Committee—"That measures of capacity be abandoned in the *Pharmacopæia*, and that the quantities in all formulas be expressed both in weights and in parts by weight." The Committee appear to have taken a middle course. Strong nitric acid is ordered to be weighed. Strong hydrochloric acid is ordered by measure in one case and by weight in the others. Strong acetic acid is ordered in each case to be measured. Syrups are measured. Valerianic acid is ordered by measure in making valerianate of ammonia, and by weight in making valerianate of quinine. Solution of subacetate of lead is ordered by measure in ceratum plumbi acetatis, but by weight in linimentum plumbi subacetatis.

This must be very perplexing to those who have to recollect the forms and strengths of the preparations, as the strengths would vary considerably, according to the ounce being weighed or measured in any particular case.

The British *Pharmacopæia* has stated under each substance the strength of the preparations into which it enters, and under the preparation the dose. We think this would have been serviceable in the present state of the United States *Pharmacopæia*. The terms "pound" and "gallon" have been discontinued in the United States *Pharmacopæia*, and the desired quantity expressed in ounces and pints. We think the term "pint" might have been advantageously discontinued and the quantity expressed in ounces: the American pint being sixteen fluid ounces, the English pint twenty fluid ounces.

[To be continued.]

THE FELLOWSHIP OF THE COLLEGE OF PHYSICIANS OF LONDON.

At the meeting of the College of Physicians on Tuesday, the 18th instant, the following report of the Council was presented.

In accordance with the resolution of the College of October 18th—namely, that the question of the mode of nomination of Fellows be referred to the Council for consideration and report—the Council begs leave to state that the subject referred to it has been most fully and carefully considered, and its report is now submitted to the College. The Council considers it desirable, in the first place, to remind the Fellows of the bye-law at present in force having reference to this question. It is as follows.

"The Council shall annually, to the last Thursday in July, nominate, from the members of the College of not less than four years' standing, those who, in their opinion, have sufficiently distinguished themselves in the practice of medicine, or in the pursuit of medical or general science of literature, to be proposed for election as Fellows at the next ordinary general meeting of the College; and no member shall be so nominated who has not received the votes of at least ten members of the Council."

In order to secure the attendance of the members of Council at the meeting when the nomination takes place, the bye-laws of the College impose a fine of one guinea on each absent member of Council; and the Council now recommends, as a further security for the fuller consideration of the merits of members, that the number required to form a quorum at the meeting of Council be raised to fifteen, the number of votes required for a nomination remaining as at present. The College will readily believe that the Council, in the fulfilment of the difficult

and responsible duty assigned to it, is most anxious that, at the meeting or meetings held for nomination to the Fellowship, the claims of every member of the College should receive the most liberal consideration, and that no member should have the slightest reason for supposing that his claims to the Fellowship have been either overlooked or neglected. With this view, the Council recommends the following plan.

1. That it be an instruction to the Council, in determining the fitness of members for nomination to the College for election to the Fellowship, to take into consideration—in accordance with bye-law, chap. xi, sec. 4—standing in the College; academical honours; distinction in literature or science; professional eminence; public appointments; and social position.

2. That in each year, three months before the meeting of the Council for the nomination of members for election to the Fellowship, a notice to the following effect shall be sent to each Fellow.

It is the duty of every Fellow to assist in the nomination of fit and proper persons to the Fellowship. The duty thus devolving upon every Fellow has respect both to the College and to its members: to the College, since it is only by the election of fit and proper persons into the Fellowship that the College can be advantageously extended and perpetuated; to the members, since every member ought to have full ground for believing that his claims to the Fellowship will not be overlooked or neglected. Your attention is, therefore, directed to the following regulation of the College.

"Any two Fellows of the College may propose, for the consideration of the Council for nomination for the Fellowship, any member of the College of at least four years' standing who has distinguished himself in the practice of medicine, or in the pursuit of medical or general science or literature. The grounds of the recommendation must be fully stated in writing for the information of the Council, and be forwarded to the Registrar on or before the 24th June."

The Council, in conclusion, begs leave to inform the College that, as an additional security against the claims of members being overlooked, it has adopted the following mode of proceeding.

In future, the selection of members to be nominated to the College by the Council for election as Fellows shall be conducted in the following way. A month before the usual time of nomination, a preliminary meeting of the Council shall be held, at which a list shall be drawn up of those members who are selected for consideration. During the interval between the meetings, the Council shall carefully inquire into the merits or disqualifications of those members whose names have been thus selected, so that at the final meeting of the Council for nomination it may be provided with more exact information than has hitherto been attainable.

In the discussion on the Report, it was moved as an amendment that a majority of the Council present at a meeting should nominate, instead of ten as at present. The clause as it stands in the Report was carried, four only voting for the amendment.

An amendment was also moved, to omit reference to the "social position" of candidates for the Fellowship. The clause of the Report was carried by 26 votes against 20.

An amendment was carried by a majority of 25 to 6, that, in place of any *two* Fellows, any *one* Fellow may propose a candidate for the consideration of the Council for nomination to the Fellowship.

Dr. C. J. B. Williams had given notice of his intention to propose the following resolution.

"That the list of members to be proposed by the Council for election to the Fellowship be laid before the Fellows before the end of May, and that it shall be open to the Fellows to add to the list the names of any other members whom they may deem deserving promotion to the Fellowship, provided that each member so proposed be recommended by at least three Fellows, with a statement of the grounds of their recommendation. That the list be then suspended in the hall of the College until the midsummer quarterly meeting, when the members nominated shall be balloted for, and those shall be elected to the Fellowship who have a majority of votes of the Fellows present."

He said, however, that approving in general of the alterations that had been made, he would withdraw his notice for the present, in order that time might be allowed to observe the working of the new system.

PROFESSOR BRUECKE of Vienna, after an illness of five weeks from scarlet fever, resumed his lectures on Physiology in the University of that city on Monday last.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, February 27th, at half-past Seven o'clock; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, }
E. C. BOARD, } *Honorary Secretaries.*

Bath, February 11th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE next meeting will be held in the Midland Institute, Birmingham, on Friday, February 28th.

VINCENT JACKSON, Wolverhampton, } *Honorary*
ROBERT JOLLY, Birmingham, } *Secretaries.*

Birmingham, February 20th, 1873.

METROPOLITAN COUNTIES BRANCH.

An ordinary meeting of this Branch will be held at 32A, George Street, Hanover Square, on Wednesday, March 12th, at 8 P.M.; when Dr. Aveling will read a paper on "the Instruction, Examination, and Registration of Midwives."

A. P. STEWART, M.D. }
ALEXANDER HENRY, M.D. } *Honorary Secretaries.*

London, February 19th, 1873.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held at the Wynnstay Arms Hotel, Ruabon, on Thursday, March 20th, at 1 P.M.; R. CHAMBRES ROBERTS, Esq., President, in the Chair.

Gentlemen having papers or cases to communicate, will please to forward the titles of the same a few days before the meeting.

The dinner, to which members may invite friends, will be at 3 P.M. Tickets 6s. 6d. each, exclusive of wine.

D. KENT JONES, *Honorary Secretary.*

Beaumaris, February 12th, 1873.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ORDINARY MEETING.

AN ordinary meeting of this Branch was held at the Castle Hotel, Brecon, on January 31; present: T. J. DYKE, Esq., President, in the chair, and twenty-five members and visitors.

New Members.—Ten gentlemen were elected members of the Branch.

The Committee of Council.—The PRESIDENT, in reference to the resolution of which he had given notice, respecting the constitution and mode of election of the committee of council, inquired whether, in view of the appointment by the Committee of Council of a subcommittee to consider and report on the question, the members considered it would be desirable to discuss it. The majority considered it was not, and the notice was thereupon allowed to drop.

Papers.—1. Dr. HEARDER read a paper on a case of Poisoning by Carbolic Acid taken suicidally.

2. Mr. EVAN JONES read details of an outbreak of Puerperal Fever occurring at Aberdare in the course of 1872.

3. Mr. MOWAT read notes on two cases, in which Chloroform-vapour had been very usefully administered in two cases of Eccentric Convulsions occurring in Children.

4. Mr. TALFOURD JONES related a case in which recovery had followed Tracheotomy in a case of Diphtheritic Croup.

5. The PRESIDENT read a paper on "Who shall be the Medical Officer of Health?"

6. A case of Popliteal Aneurism treated successfully by Compression, was exhibited by Mr. S. C. NORTH, M.B.

7. Mr. A. DAVIES exhibited for Dr. T. D. GRIFFITHS a Fœtus, which, though apparently blighted about the fourth or fifth month, had been removed from a patient whom he had been called to attend when in labour at the full term. When examination *per vaginam* was first made, a mass, which proved to be the fœtus referred to, protruded through the os. The labour was very lingering, the pains unfrequent, and no other presentation could for many hours be made out. At length it became clear that there was another fœtus, with the feet pre-

sented. The os was now relaxed, and the blighted one was easily removed, and the mature child subsequently, but with some difficulty.

8. Mr. DAVIES also showed some specimens of Diphtheritic Exudations of oval shape collected from the conjunctivæ of a child, who subsequently died from similar disease of the tonsils and pharynx.

9. Mr. TALFOURD JONES exhibited a Stethoscope which had been presented by the late Dr. Lucas to the Brecon Infirmary, and which had originally been the property of the illustrious Laennec.

Dinner.—The members subsequently dined together.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, FEBRUARY 4TH, 1873.

Sir WILLIAM JENNER, Bart., K.C.B., M.D., President, in the Chair.

Embolism producing Gangrene.—Dr. JULIUS POLLOCK showed a specimen of embolism of the abdominal aorta, with obstruction of both iliac arteries on the right, and of the external iliac on the left. The patient, a girl, aged 19, had been admitted with rheumatic endocarditis. The auricle of the heart was found to contain numerous flocculent clots. The spleen was stuffed with embolisms. There was gangrene of the right foot. There was no local plugging.—The PRESIDENT remarked that the structure and cause of formation of the growths in the heart were very interesting. He accordingly referred them to the Morbid Growths Committee.—Dr. GREEN, who had made the necropsy, remarked that the wall of the auricle was covered with wart-like bodies.

Hairy Moles.—Dr. JOHN MURRAY showed a child aged 7, who had been under his care at the Hospital for Sick Children with extensive and rapidly increasing hairy moles affecting the back, and progressing anteriorly towards the mammæ. Dr. Murray, in reply to Dr. CAYLEY, said that there was no hereditary taint.—Dr. WILTSHIRE remarked on an interesting feature in the case; viz., the continued increase of the growth.—Mr. BUTLIN referred to the effect of the application of carbolic acid a year previously to a part of the affected skin. There had been destruction and no return of the pigment.—Dr. MURRAY, in answer to the PRESIDENT, said that the structure of the hair appeared to be normal.

Hairy Mole becoming Epitheliomatous.—Mr. LAWSON showed a drawing of a hairy mole in a man covering the back. A congenital nævoid growth on the affected surface had become an epithelioma, and was removed. The liver, however, became affected with secondary growths, and ultimately proved fatal.

Simple Stricture of Hepatic Ducts associated with Vitiligoidea.—Dr. MOXON exhibited a specimen from the body of a patient who had vitiligoidea affecting the scrotum, back, face, and other parts. The patient had been an intemperate seaman, and had presented shortly before death symptoms of gall-stone, and latterly purpura. There was found, after death, a simple stricture of the hepatic duct an inch above the union of the cystic and hepatic ducts. The ducts behind were distended, and filled with clear colourless fluid free from bile. There was no leucine or tyrosine in the urine; but in the liver the hepatic cells were breaking down. The fluid in the peritoneum contained bile. The case, he thought, threw doubt on the accepted cause of jaundice from obstruction. He thought that the bile was perhaps formed in the tissues, and only excreted by the liver.—Dr. WICKHAM LEGG pointed out the importance of examining the liver very soon after death in jaundice, because twenty-four or forty-eight hours afterwards it is often not possible to recognise the liver-cells. At St. Bartholomew's Hospital for some time past, obstruction to the ducts has been observed in all cases of jaundice, and in these there have been freedom from colour below and bile above the stricture.—Dr. MOXON, in reply to the President, Dr. DOUGLAS POWELL, and Dr. LEGG, said that the ducts were thickened, but there was no evidence of inflammation; that the specimen was fresh when examined. He further observed, in reply to Dr. Legg, that the muscularity of the ducts was greatest at the duodenal end, and thus muscular contraction and obstruction of the ducts often resulted.—Mr. HULKE referred to an article by Virchow on the character of the fluid in long obstructed cysts, in which it is pointed out that the secretion in the gall-bladder is partly of itself and partly of the liver. The latter, in long obstruction, disappears, and the clear fluid of the mucus-secreting glands of the gall-bladder remains.

Cancer of the Ileum causing Dilatation.—Dr. MOXON exhibited a lymphosarcoma of the ileum and mesentery, taken from the body of a man who had suffered from obstinate diarrhoea. The calibre of the intestine was not materially lessened. Lymphosarcoma led rather, he thought, to a dilatation than to a narrowing of the bowel.

Aneurism of Arch of Aorta partially Cured.—Dr. C. THEODORE WILLIAMS exhibited a specimen of partially cured aneurism of the arch of the aorta, taken from a man who came to him in March 1871 with a pulsating tumour, pointing in the second right intercostal space. He had suffered from pain on stooping for two years, and from dyspnoea and dysphagia for two months. The patient continued his trade of shoemaker, and worked hard at the last for seven months, till he was admitted into the Brompton Hospital. The tumour was then found to have diminished in size, and to have become so hard and firm that the man struck it without hurt to himself. The dysphagia had disappeared, and the dyspnoea had lessened. He became impatient of the hospital restraint, returned to work, and became rapidly worse, the tumour increasing and again pointing. It did not, however, burst, the patient sinking worn out with suffering. After death, a large sacculated aneurism of the ascending aorta was found, which had eroded the sternum and upper ribs; the greater part of the sac being filled with firm fibrin—some of old date—a portion of which had recently softened. Dr. Williams drew attention to the fact that in this case the filling up of an extensive aneurismal sac took place under seemingly unfavourable circumstances, and certainly the reverse of those generally considered necessary for the process. He exhibited sphygmographic tracings taken at different times of the patient's illness, to show that the changes in the aneurism exercised little or no effect on the radial pulse.

Aneurism of Subclavian Artery, showing Process of Natural Cure.—Mr. BUTLIN showed a specimen taken from the body of a woman aged 39, demonstrating natural cure of a subclavian aneurism. The aneurism had suddenly ceased to pulsate during life. It occupied the second and third portions of the artery; it was filled with laminated clot, and there was an embolus in the vessel beyond. There was an embolus also in the left femoral. There were large vegetations in the aortic valves. The patient died of exhaustion. Mr. Butlin, in answer to the PRESIDENT, said that no history of rheumatism or syphilis had been obtained.

Sarcoma of the Lung and Brain.—Dr. GREEN showed a recent specimen of sarcoma of the lung and brain taken from the body of a young man aged 19. In 1870, his thigh had been amputated for a large tumour of the condyle of the right femur. In October 1871, convulsions and other grave cerebral symptoms commenced; and in November, when he came under observation at Charing Cross Hospital, he presented double optic neuritis, and three weeks before death hemiplegia. Three tumours (one of the size of an orange) were discovered after death in the brain, and a tumour apparently of earlier date and partly calcified in the lung. In the brain-tumour there were a large number of myeloid cells.—Dr. MOXON said that Mr. Hutchinson and he had shown original myeloid tumours in the brain.—Mr. HULKE referred to a case of Mr. Carr Jackson's, in which spindle-celled sarcoma affected the tibia, and developed secondarily in the brain.—The PRESIDENT thought the lung-tumour might have occurred at the same time as the tumour of the femur.—Mr. ARNOTT thought that the calcification of the lung-tumour probably went on with the growth of the tumour. The occurrence of such a change was not uncommon, and differed from calcareous degeneration.

Secondary Sarcoma of the Lung and Mediastinum.—Dr. POWELL exhibited a sarcoma of the lung and mediastinum removed from the body of a female aged 20. The patient had received an injury to the knee, which led to the growth of a tumour, and ultimately the necessity for removal of the limb. A year afterwards, she went successfully a second time under treatment for sinuses in the limb. Symptoms of thoracic mischief soon afterwards appeared, and she died with an osteosarcomatous tumour compressing the lung backwards, invading the left auricle and left pulmonary vein.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, FEBRUARY 5th, 1873.

E. J. TILT, M.D., President, in the Chair.

Specimens, etc.—Dr. J. A. THOMPSON exhibited a wax model of the head of a monster belonging to St. Hilaire's order of *cyclocephaliens*.

Dr. ROUTH exhibited an ecraseur made by Krohne and Sesemann, which he believed to possess advantages over those at present in use.

Dr. BARNES exhibited a recent specimen of a dermoid cyst.

Case of Abortion. By J. T. MITCHELL, Esq.—The foetus died at or about the period of two months' gestation. After this the ovum was retained for at least three months, when it was expelled with profuse flooding, leaving extreme anæmia. The membranes of the expelled ovum were preserved intact and distended with the liquor amnii. The preserved ovum was exhibited.

President's Address.—The PRESIDENT delivered the annual address.

He congratulated the Society on its flourishing condition, and particularly on the fact of its numbering many colonial medical men. The Society was the highest representative of obstetric medicine in the British Empire. He suggested that the contents of future volumes of the *Transactions* should be diversified by occasional contributions on infantile diseases and diseases of lactation, and promised to call the attention of the society to the progress which pelvic pathology had made during the last twenty-five years. The President complimented the Obstetrical Societies of Edinburgh and Dublin on the noble work they had done, and proposed that the London Society should seek to be incorporated as the Royal Obstetrical Society of London. He concluded by observing that, although as a science, medicine was absolutely one and indivisible, it must ever be divided for practical purposes in populous countries into medicine, surgery, and obstetrics, the only three divisions of the healing art that are coequal in importance and in dignity.

Delivery by the Forceps in Face-presentation in the Mento-lateral Position, with a Cast of the Fœtal Head. By J. BRAXTON HICKS, M.D., [F.R.S.—During traction, attempts were made to direct the chin forwards, so as to imitate nature, but without effect, and the face emerged from the outlet as it had entered the inlet. The author believed that it was not advisable in every instance of face-presentation to blindly insist, when using the forceps, on imitating nature in ordinary cases.

Delivery by Cephalotripsy; with Cast of Fœtal Head. By J. BRAXTON HICKS, M.D., F.R.S.—The delivery was easily effected by the author's cephalotribe, and he showed that the extreme width of the closed empty blades, an inch-and-a-half, was just the same when the head was enclosed between them. He believed them to be sufficiently strong and narrow for all the demands of delivery. If they could not be passed, the case was not suitable for delivery *per vias naturales*.—Dr. J. J. PHILLIPS felt convinced that the cephalotribe would come into much more general use. He considered Dr. Hicks's instrument a most efficient one.—Dr. HARRIS had used at the Government Lying-in Hospital at Madras, with complete success, an instrument called the "Calcutta craniotribe." Its blades resembled those of the ordinary forceps, and its crushing power was consequently not so great.—Dr. BRAXTON HICKS thought it best to have an instrument equal to any demand. Nothing could be more unpleasant than to find one's tools too weak. His own instrument he found easy of application, and he had used it without assistance frequently.

Treatment of post partum hæmorrhage by the intra-uterine injection of Perchloride of Iron. By HEYWOOD SMITH, M.A., M.D. Oxon.—A patient was admitted into the British Lying-in Hospital, January 26th, 1872, and delivered that day by a pupil-midwife of a male child, after a labour of twelve hours. The placenta came away easily in twenty-five minutes. On the third day, the patient complained of severe pain in the hypogastrium. On the tenth day, hæmorrhage occurred, and continued the next day, when a solution of one part of strong liquor ferri perchloridi to eight of water was injected. On the sixteenth day the bleeding continued and the injection was repeated. On the eighteenth day a mixture of one part of liquor ferri sesquichloridi in four of water was injected, and on the twentieth day a mixture of equal parts of the liquor ferri and water was used. On the twenty-first day, strong liquor ferri perchloridi was injected into the uterus with an intra-uterine syringe, holding about two drachms. This produced severe pain, but completely stopped the hæmorrhage, which never amounted to flooding, but oozed continually of a bright red colour. On the twenty-third day the patient was delirious, and the discharge was brown and offensive. On the twenty-fifth day she had occasionally great dyspnoea, and picked at the bed-clothes. On the twenty-eighth day she died. The uterus was removed and examined by Dr. Snow Beck and the author. It was nearly five inches long and four inches broad, and its walls were three-fourths of an inch thick. Its anterior and posterior surfaces were marked with black streaks; the tissue was soft, but otherwise apparently healthy. Its inner surface was covered with a dark reddish black fluid, and at the junction of the upper third with the lower two-thirds, was a depression stained black. Near the centre of it an artery hung out more than one-eighth of an inch. Near the depression, and fitting into it, was a rounded mass of placenta, about the size of a small filbert. A small portion of the end of an artery showed the free extremity slightly puckered, its margins rounded, and the canal unobstructed. The author believed that this case taught: 1. That *post partum* hæmorrhage happening after complete contraction of the uterus, and therefore after the uterine sinuses have been emptied of blood, is evidently arterial; 2. That, when a solution of the perchloride of iron is injected into the uterus, the sinuses take it up and carry it up into the veins, the tissues also immediately surrounding the sinuses becoming stained; 3. That the perchloride of iron

does not produce contraction, nor, by coagulation of blood, blocking of the orifices of the uterine arteries; and 4. That the perchloride of iron is a styptic, the use of which, in the cavity of the puerperal uterus is not innocuous.—Dr. ROUTH had suspicions that the injection of iron was not so innocuous as believed. Some time ago he called in Dr. Barnes to assist him in treating a case of *post partum* hæmorrhage, in which Dr. Barnes injected a solution of the weak tincture of steel and water in equal parts, with the desired effect. On the third or fourth day puerperal fever set in, and the patient died. He did not say the death was due to the injection, but he thought it might be so. In Dr. Heywood Smith's case no mention was made of the complete escape of fluid injected; perhaps some had been retained. If so, the symptoms might be due to retention of the fluid giving rise to peritonitis, rather than to the nature of the fluid injected.—Dr. GRAILY HEWITT had seen one case where injection of perchloride of iron had been used to restrain hæmorrhage, and the patient had subsequently died. A solution (one in four) of the tincture was injected, and restrained the bleeding. After three days, pain set in, the lochia became arrested, and the patient died from puerperal peritonitis and other grave complications five weeks after delivery. Whether this result was in any way due to the action of the iron, was a question.—Dr. BRAXTON HICKS thought that the injection which Dr. Heywood Smith had used was too strong, and that it would have been well in his case to have diluted the cervix for the purpose of investigating the interior of the uterus. He had employed the perchloride of iron injection a great number of times, and had made inquiries largely amongst those who had also used it, without having seen or heard of any serious result. The only case in which he had seen any trouble was one of severe flooding after twins. The injection was used with complete success. Twenty-four hours afterwards, pains arose, and it was found that the uterus contained hard blackened coagula which it could not expel. These were broken up and washed out, and the patient did well. He believed pyæmia might result from depression after severe hæmorrhage, where no injections of perchloride of iron have been used.—Dr. SELL (of New York) said that his experience regarding the use of perchloride of iron was obtained in Vienna. There it was used in *post partum* hæmorrhage, where ergot and injection of cold water did not arrest bleeding. A weak solution of the sesquichloride of iron (one ounce in a pint of water) was gently injected and repeated till the hæmorrhage ceased. He had never seen any bad results from this treatment.—Dr. J. J. PHILLIPS, while admitting that there were certain dangers connected with the injection of a solution of perchloride of iron, believed there was no valid argument against its use in suitable cases. He had used it several times, and death had occurred only in one case, which he could not in the least degree connect with the use of the iron. He generally diluted the liquor ferri perchloridi (not the strong one) with about half its bulk of water.—Dr. PLAYFAIR would much regret if the case brought before the Society should have the effect of throwing doubt on the safety of astringent injections in severe cases of *post partum* hæmorrhage. He had used the perchloride of iron in many cases, and only once unsuccessfully, nor had he ever seen any evil consequences. Dr. Heywood's Smith's case was one of secondary hæmorrhage, caused by the presence of a piece of retained placenta, and the strong undiluted liquor ferri perchloridi had been injected—a proceeding which Dr. Barnes had not sanctioned.

MEDICAL SOCIETY OF LONDON.

MONDAY, FEBRUARY 10TH, 1873.

THOMAS BRYANT, Esq., President, in the Chair.

Specimens.—The PRESIDENT exhibited a drawing of a case of Periosteal Sarcoma of the Lower Jaw. The operation for removal was not difficult, but it was found necessary to disarticulate the jaw. The periosteum was separated, and the whole bone was taken out with great facility. At the end of five weeks the patient could masticate, and new bone was found to have been formed.

The PRESIDENT also showed drawings of a case of Ivory Bone-growth of the Orbit. The patient was brought before the Society a few weeks ago. Mr. Bryant operated without difficulty, and removed a large mass of growth. The patient had done very well.

Treatment of Hemorrhoids and Prolapse of the Rectum.—Mr. HENRY SMITH read a paper on the Treatment of Hemorrhoids and Prolapsus of the Rectum by the Clamp and Cautery, with the results furnished by three hundred cases and upwards. He had already laid before the profession two instances where death had taken place after the operation, and since that period a third fatal case had occurred in the instance of a gentleman in broken-down health, on whom he had performed a somewhat severe operation. Severe vomiting set in and continued for

thirty-six hours, and then intense jaundice followed, the patient dying on the fifth day. There was no *post mortem* examination, and thus it was impossible to say whether death was caused by the chloroform or by some latent liver-disease which been aroused into activity by the operation. Only in two instances had anything like severe constitutional disturbance arisen after the operation. Hæmorrhage was pronounced by some to be a grave objection to the operation; but he had not met with one single case where he had to plug the rectum, and only one instance where it was necessary to inject iced water. This immunity from bleeding he considered to be due to the great care with which he applied the cautery, using it very freely, and with instruments of various shapes and size. The results were highly satisfactory to him in all respects. With regard to the mechanism of the instruments used, it was most necessary that the blades of the clamp should be perfectly parallel when closed; and it was very important after the cautery had been applied, to unscrew the blades very gradually, lest any vein should have escaped the influence of the cautery.—Mr. BOND had used the cautery in fifty cases very successfully, and without hæmorrhage. He only used cautery in severe cases, preferring ligature in simple cases.—Dr. VINE expressed his preference for ligature.—Mr. ALLINGHAM thought the clamp and cautery a good method of operation; but the ligature, used as it ought to be, was better. In 3,000 cases operated on at St. Mark's Hospital by ligature not one case of pyæmia occurred, and tetanus in one case only. He had not had a single death in 500 cases operated on by ligature by himself. As regarded hæmorrhage, perhaps he had not at first applied the cautery so freely as Mr. Smith had, but of late he had used iron freely, and had had no hæmorrhage. If patients were sent out too soon after the use of the clamp and cautery, severe ulceration ensued inevitably. The susceptibilities of patients to pain differed greatly, but he thought there was no more pain after ligature than after the clamp. He thought that the ivory wings of the clamp were too broad, and prevented the due removal of sufficient tissue. The pile should be removed down to the cellular tissue if a radical result was aimed at.—Mr. ALFRED COOPER had had many cases of hæmorrhoids under his care, and had used the ligature and the clamp about equally. He had never any reason to be dissatisfied with the ligature, but with the clamp he met with severe secondary ulceration, and much greater pain was caused by the clamp than by the ligature. He had never seen hæmorrhage after the ligature.—Mr. DUNN and Mr. R. DAVY also made remarks.—Mr. W. ADAMS said that the *écraseur* had given him satisfactory results in cases of disease of the rectum.—Mr. WIBLIN (of Southampton) formerly used the ligature, but of late he had used the clamp, which he much preferred.—The PRESIDENT for many years dealt with piles by means of ligature, as taught at Guy's, but had not been quite satisfied. For the last eight or ten years he had used the clamp and cautery, and had been well pleased with the results.—Mr. HENRY SMITH, in reply, said that the cautery should be applied at a black heat. If there had been so much ulceration as had been spoken of, surely he would have heard of it. Mr. Allingham's observations were valuable. As regarded pain, except in a very few cases, he had not met with it, and this he attributed to the use of ivory plates, for which suggestion he had to thank Dr. Vine.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, DECEMBER 4TH, 1872.

JOHN GALT, Esq., President, in the Chair.

Readaptation of a Nose Removed by Accident.—Mr. WHITEHEAD mentioned the case of a domestic servant whose nose had been completely scraped from the nasal bones and adjacent structures, by falling downstairs and coming into contact with the sharp edge of an uncarpeted step. The upper and lower lips were cut through at the same time. By the immediate use of silver sutures and hare-lip pins, perfect readaptation was obtained. The dressing consisted of cotton-wool.

Removal of the Uterus for Fibroid Enlargement.—Mr. WHITEHEAD showed a large fibroid tumour of the uterus which he had removed the week previous. The operation was undertaken as a *dernier ressort*, at the earnest solicitation of the patient. The abdomen refilled after tapping within four days. The operation was tedious and prolonged; the chain of Chassaignac's *écraseur* broke, and the division had to be completed with the knife. Direct pressure on the aorta arrested the hæmorrhage, which threatened to become alarming, until ligatures were applied to the bleeding vessels. The patient sank from shock within twelve hours.

Extirpation of the Entire Tongue for Cancer by the Galvanic Ecraseur.—Mr. WHITEHEAD showed the tongue of a patient, aged 69, which he had successfully removed for epithelial cancer. The platinum wire

of the *écraseur* was passed into the mouth from below the jaw through the interspace between the genio-hyoid muscles, and conveyed over the tongue by the forefinger of each hand into the sulcus in front of the epiglottis, and there retained by the fingers until the screw of the *écraseur* had a firm grasp of the base. The *écraseur* was worked at intervals of half a minute, the galvanic current being interrupted during each pause. There was no hæmorrhage, and the patient made a rapid recovery, regaining his power of speech and deglutition at an early date.

Cystic Tumour of the Labium.—Dr. LLOYD ROBERTS showed a cystic tumour of the size and shape of a very large pear, removed from the left labium of a woman about forty-two years of age, the mother of several children. It had been several years in growing. It gave her great pain and uneasiness by its weight. It was removed by excision. She made a good recovery.

Embolism of the Arteria Centralis Retinae.—Dr. SAMELSON introduced a patient, aged 20, a baker by trade, whose case presented most of the features held to be characteristic of embolism of the central artery of the retina. He had never had anything the matter with either of his eyes. After a very slight hurt, by a finger, to the right eye on November 21st, which resulted in conjunctival ecchymosis, he quite suddenly, on the evening of November 27th, noticed his left eye to become "dark." There was barely perception of light remaining. There was considerable attenuation of the extrapapillary retinal arteries, and a very conspicuous red stain in the situation of the macula lutea; the latter was marked in and beyond its circumference by a whitish infiltration, within the area of which, betwixt macula and pupilla, a number of vascular streaks were seen. All this, conjoined with the presence of a systolic murmur and an intermittent pulse, appeared to justify the diagnosis. Pronounced loss of tension in the affected eye, and an occasional dizziness, momentarily incapacitating the patient, alleged to have been perceived within the last six months, were further mentioned as points of interest in the case.

Typhoid Fever Treated by Cold Baths and Dr. Roberts's India-rubber Pad.—Dr. HADDON stated that he treated typhoid fever by cold baths since 1869 with success, but that in this instance the treatment had failed. The cold baths lowered the temperature in the case related, but it soon returned to a high point. On the thirteenth day, the wet sheet was substituted for the bath with, however, no more satisfactory effect. In the evening of the same day, when the temperature was 105 deg. and the pulse 135, Dr. Roberts's water-pad was placed lengthways on his chest and abdomen, with the result of lowering the temperature a degree. The next day he was delirious, and died with a temperature of 109 deg. Dr. Haddon remarked that, though the treatment by cold baths was in many cases excellent, in this instance it was really hurtful.

Paracentesis Thoracis.—Dr. HADDON related the case of a man aged 63, from whose chest he had withdrawn by aspiration thirty-six, forty-eight, and fifty-two ounces of bloody serum. His breathing was much improved by the operation, but he was sinking fast from the state of his digestive system.

Paracentesis Thoracis.—Dr. MULES mentioned the case of a patient who came under his care with the usual symptoms of pleuritic effusion. A fine trocar drew off two drachms of pure pus; but, upon the introduction of a large trocar, with the object of evacuating the whole of the collection, no further fluid could be obtained, notwithstanding the instrument being well within the cavity of the thorax and the cannula quite clear. Two days later, the same trocar was introduced with a like negative result. Within fourteen days, the dulness on the affected side had disappeared, and the patient was convalescent.

Pulmonary Embolism.—Dr. MULES gave the details of a patient aged 61, who for two years had suffered from phlebitis in his right leg; he had also mitral stenosis and tubercular deposits throughout the whole of the anterior lobe of the left lung. Three days from the commencement of his last attack of phlebitis, a clot separated and plugged a large branch of the right pulmonary artery; this was followed by symptoms of great dyspnoea and blueness of face. Fourteen days later, a second clot separated, and occluded the remaining branch of the pulmonary artery, causing death in fourteen minutes. A *post mortem* examination revealed, amongst other lesions, the posterior branch of the pulmonary artery plugged with a short thick decolorised clot, and the anterior branch containing a long clot doubled upon itself.

Excision of the Hip-joint.—Dr. HARDIE read a paper on this subject. The special object of his paper was to discuss the question of the period in the course of hip-disease in early life at which the operation should be performed; and, in support of his views, Dr. Hardie related the histories of six cases upon which he had operated. In all the cases, the femur was divided transversely between the trochanters. The results were briefly summarised as follows. Two were never able to be out of bed, and died of amyloid degeneration of the viscera; one had the

use of his limb for some months, but succumbed at the end of fifteen months with amyloid degeneration, the sinuses never closing; one had an useful leg, with the sinuses healed, but, when last seen, he was quite helpless, with caries of the cervical vertebræ; two had useful limbs, and were in good health, though the sinuses had not closed. Dr. Hardie concluded by remarking that, to secure as good results in this operation as in others of the same class, it was necessary to operate at a much earlier period than is usual; in fact, to adopt the recommendation of Sayre of New York, and Fock of Magdeburg, to operate as soon as caries of the bone had become established. Delay after this was only to be justified by exceptional conditions of the patient.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

FEBRUARY 5TH, 1873.

P. D. HANDYSIDE, M.D., President, in the Chair.

Horse-shoe Kidney.—Dr. TUKE showed a specimen of horse-shoe kidney which he had lately obtained. The concavity of the curve was downwards, the upper ends of the kidneys being united. He also showed another specimen belonging to the University Anatomical Museum, of the same malformation, but in which the concavity was in the opposite direction.

Morbid Specimens.—Mr. ANNANDALE showed a leg which he had cut off for a small cancerous tumour, and an arm which he had also had to amputate in consequence of gangrene after a simple fracture; also a malignant tumour of jaw with considerable involvement of the skin, which he had recently removed.

Morbid Histology of the Brain and Spinal Cord in the Insane.—Dr. BATTY TUKE read a paper on the morbid histology of the brain and spinal cord as observed in the insane. His researches included observations made on ninety-two human bodies—eighty-six insane, six not insane, and also some on the lower animals, especially cats. His observations were made—1, on fresh brains within twenty-four hours after death by means of sections, also on the *versali* and *pia mater*, after treatment with no other reagent than distilled water; and 2, on sections of the different parts of the brain after hardening for six or eight weeks in chromic acid, and after Dr. Lockhart Clarke's method. The results of his observations were given under the following heads:—1. Dilatation of brain-substance round the vessels. (He thinks that the perivascular canals are always, or nearly always, abnormal, and are the results of emptying of the vessels in cases where great congestion had often taken place. They are seen especially in cases of epilepsy and of general paresis). 2. The condition of the tunica adventitia. 3. Deposits on the tunica adventitia—(a) the result of transudation in cases where brains have been often congested; (b) masses of hæmatoidine tending to aggregate in certain places. (These are not observed in animals or sane, but are found in every case of insanity). 4. Hypertrophies of the muscular coat of the arteries, seen only in two cases of epilepsy and general paresis. 5. Atheroma, frequent in the base, rare in the interior. 6. Minute aneurism in three cases. 7. Abnormalities of the vessels in the various directions of straightness, tortuosity, and kinking. 8. Abnormal pigmentation. 9. Changes in membranes of the spinal cord, deposits of crystals and lymph deposits. 10. Changes in the central canal: colloid deposits.—Dr. SANDERS and Dr. HANDYSIDE made remarks on the interest of the paper and the amount of labour involved in it.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, JANUARY 11TH, 1873.

GEORGE H. KIDD, M.D., President, in the Chair.

Fracture of the Neck of the Thigh-bone.—Mr. WHARTON showed the upper portion of the left thigh-bone of a spare woman, aged about 65, the subject of lateral spinal curvature, who was thrown down in a crowd. When seen in hospital, she had very slight shortening of the limb, eversion of the foot, and some slight power of flexion. She died about a week afterwards. There was a complete fracture of the neck of the thigh-bone, which formed almost a right angle with the shaft. The circular ligament was intact posteriorly.

Aneurism of the Basilar Artery.—Dr. GRIMSHAW exhibited the brain of a man who had become suddenly insensible on December 23rd, and was admitted to Steevens's Hospital. The left pupil was dilated, the right apparently normal; neither was sensitive to light. The breathing was abdominal. There was no paralysis of the bladder. The patient was quite insensible, and died without convulsions. An aneurism of a mixed character was found to spring from the left side of the basilar artery. The other cerebral arteries were healthy. No signs

of heart-disease existed during life. Extensive hæmorrhage had taken place at the base of the brain and into the ventricles, especially the fourth, in which a large clot was found.

Erectile Tumour of Nipple.—Mr. F. T. PORTER presented a specimen which he had removed from the apex of the left nipple of a woman. It was originally as large as a walnut. Its growth was attended with pain, and it first appeared a year ago.

Fracture of Spine at Ninth Dorsal Vertebra.—Dr. BENNETT showed two casts illustrative of the visible signs of fracture of the spine. A man was admitted into Sir P. Dun's Hospital last March, having fallen from a house of three storeys on his feet and nates. Paraplegia was complete. There was little collapse; but intense priapism, with anaesthesia from the level of the umbilicus downwards, existed. Reflex movements could be easily excited, especially on the right side. There was an obscure projection at the lower part of the central dorsal region. Respiration was almost entirely diaphragmatic on the second day. Over the chest mucous râles were audible, all efforts to expectorate being ineffectual. The lower ribs were somewhat drawn in. On the right side, the ninth rib projected remarkably over the tenth. The urine was drawn off by a catheter, and, the bladder being paralysed, pressure had to be applied over the pubes. The axillary temperature was at this time 99.0 deg.; that of the perinæum, 100.0 deg.; and that between the great and second toes, 99.8 deg., the paralysed parts being thus almost a degree warmer than the body generally. Tympanitis persisted for some days. On the eleventh day after the accident, sensation became temporarily restored from the umbilicus to the pubes, but it again disappeared. On the fourteenth day, pain on passing the catheter was complained of. A large vesicle, two inches long and one inch wide, appeared beneath the right outer ankle. Up to the sixteenth day the urine was acid or neutral, but mucus then appeared, and cystitis became developed. On this day, also, œdema of the left leg set in, soon followed by signs of phlebitis of the left external jugular vein. The latter vessel afterwards became occluded. The right leg subsequently swelled in a similar manner to the left. The patient, who was still under treatment, had never suffered from bed sore. He was placed on a water-bed immediately on admission to hospital. Sensibility was lost up to a level—one vertebra higher on the right than on the left side. Talipes equinus existed in the left foot, while the right lay as it was placed. Reflex movements could readily be excited, especially in the right limb. The fracture was now perfectly united. Its seat was the ninth dorsal vertebra, and in this position the patient was sensible of crepitus for two months after the accident. He enjoyed good health, and when he sat up complained only of a sensation of weakness without pain or feeling. Respiratory distress left him in a month. He passed urine without a catheter, but was conscious of the action only from hearing the fluid drop into the urinal. His bowels were moved but once a week, always by purgatives. The spinal cord seemed to be quite disorganised on the right, and partially so on the left side.

CORRESPONDENCE.

THE TRAFFIC IN DIPLOMAS.

SIR,—A short time ago, a circular was sent to me from a certain person who obtains degrees *in absentia* from American so-called universities, for gentlemen who have written any small book. I was, I am sorry to say, quite taken off my guard at the time, and was persuaded to take two degrees, the M.D. and the LL.D. I foolishly parted with £42 for that purpose, and sent the MS. of a small book which I am thinking of publishing. Since I have had the same returned to me, together with the two diplomas, I have found, to my great disgust, that the latter are not worth the parchment on which they are written. The so-called degrees were pointed out to me in the *Medical Directory*, which turned out to be for the year 1871, and not for 1872, as I was led to suppose. The same titles are also displayed in several medical journals, which are apt to mislead the unwary; and any unsuspecting student like myself may be made a fool of, as well as

Yours, etc.,

A VICTIM.

* * We cannot profess to feel much pity for a gentleman who thinks it well to endeavour to decorate himself with purchased titles of honour and insignia of learning; nor do we clearly understand what he supposed they would be worth. English and American journals have repeatedly warned those who might be so shallow-minded and so little scrupulous as to propose to purchase such titles, that the vendors were, as might be expected, anxious only for their money, and had nothing but emptiness to offer in return for it.

A PERSONAL EXPERIENCE OF NITROUS OXIDE GAS.

SIR,—Having witnessed the harmless effect of nitrous oxide on others, I had no hesitation in taking it myself on the occasion of the extraction of a tooth; but the experience of its action on my nervous system will never be effaced from my memory, and from it I conclude that its influence varies with different individuals. I put myself into the hands of the dentist one morning after my breakfast, and, after inhaling the gas for the average time, soon became insensible, that is, to physical pain; but my mental tortures during that short period were beyond endurance. It was a nightmare of the mind pure and simple, in which no earthly objects took part. I was like Blake, or any other madman you might name, trying in that exquisitely painful moment to solve the insoluble and grasp the illimitable; I was now endeavouring to conceive what lay beyond all space, and now trying to realise the condition of nothing. Then came a spiral winding from an infinite distance into a point, when I exclaimed to myself, "I can bear it no longer; I am going mad," and at that instant I awoke.

I was perfectly collected, asked if the tooth was out, and declared that I had felt no pain. I rose and was about to leave, when, being faint, I again sat down, and was placed in a horizontal posture. Some brandy was given me, and in about half-an-hour I revived. I again rose to leave; but on reaching the street door I became faint once more, and was obliged to return. In another hour I was assisted home, a few yards, feeling exceedingly ill, and was compelled to lie down again when I reached my study. Presently I thought I could see a patient who was waiting to consult me: but, after conversing with him a short time, the faintness again came over me, and I took once more to my couch. This state of things continued for four or five hours, and was then succeeded by a severe headache, which lasted for the rest of the day. On the following morning I rose very "seedy," as if I had just come off a sea-voyage, and for a week afterwards I was exceedingly unwell, feeling low and depressed, as if my whole nervous system had received a severe shock, which indeed it had.

With this personal experience I have never been able to get rid of the conviction, that anaesthetics may sometimes play an important part amongst the causes which are at work towards an unfavourable result after an operation. It may be true, and I believe it is, that chloroform often produces a soothing effect, which is highly beneficial to the patient; but at the same time there may be conditions where an opposite result is induced, and, indeed, it can never be forgotten that there are a variety of temperaments in which anaesthetics, like stimulants, produce marvellously different effects. Sickness, fainting, headache, and long-continued depression must have been observed by everyone as a not uncommon result of chloroform inhalation. I am, etc., S. W.

London, February 14th, 1873.

ST. GEORGE'S HOSPITAL AND DELIRIUM TREMENS.

SIR,—I perfectly agree with you that the "extraordinary resolution" on the subject of delirium tremens "cannot certainly be medically inspired, and has obviously been proposed in ignorance."

Perhaps no one has a better right than myself to speak upon this subject, as I especially brought this matter, fourteen months ago, before the weekly board of the Hospital. As a *governor* of the Hospital, I sent a patient suffering from delirium tremens—a first attack, made the more interesting from its being complicated with epilepsy, also primarily—on the taking-in day, with a note explaining the *urgency of the case*, in addition to the ordinary admission letter. The case was refused, because the new (and still) treasurer of the hospital forbade the house-surgeon to receive or admit cases of delirium tremens. I was perfectly astonished; the man had to return home, and I attended him till he was cured; but I at once wrote and complained that I had never before known a case of delirium tremens to be refused, nor when house-surgeon had I ever refused to admit such a case, or turned it away as "improper."

It seems the new treasurer had chosen to overrule the usual laws of the hospital, and unjustifiably taken upon himself to inhibit the house-surgeon from admitting cases of delirium tremens, "because it was a disease which people brought upon themselves." My complaint was referred by the Weekly Board to the Medical Committee, and at the end of three weeks I received an ample apology, *both oral and written*, in which the Weekly Board confessed that my case had been improperly refused. I explained in my letter to the Board that such a procedure was not only detrimental to the hospital, but was visiting the patient's faults upon the families in the neighbourhood; and, as a rule, butlers in large families (perhaps chiefly or altogether females) are in this neighbourhood, according to my experience, the most likely people to be thus affected. The hospital, therefore, with every appliance and

means for treating this disease (padded rooms, etc.), would, if the treasurer's whim is to be followed out, inflict upon many quiet families all the difficulties and anxieties of having to provide a male nurse or nurses, etc., to restrain a noisy and violent patient in their own houses.

I am, etc., CHARLES HUNTER,
A Governor of St. George's Hospital.

30, Wilton Place, Belgrave Square, S.W., February 18th, 1873.

THE FIRST OPERATION IN ENGLAND UNDER AN ANÆSTHETIC.

SIR,—In your report on æther inhalers at page 174 of the JOURNAL for February 15th, a mistake, originating with Dr. Richardson, is repeated, which allow me to correct. It was I who first “demonstrated the value of the anæsthetic in several capital operations performed by Mr. Liston.” On the memorable Saturday when Liston received the first account of ether from America, a patient was under my charge in University College Hospital (soon after my first appointment as dresser), who, worn with exhausting discharge and the night suffering, occasioned by a disorganised knee-joint, had not the resolution to undergo the necessary amputation of the limb, and said, “I must die with it on.” Liston, doubting whether ether, if sufficient for a tooth extraction, would serve in such a case, induced me to try its effects upon myself; and the next day, with the aid of such an arrangement as that figured at page 174, a volume of vapour was obtained, enough to produce an insensibility sufficiently profound and of sufficient duration for the object in view. On the Monday, I had the satisfaction of demonstrating this upon my patient, Liston performing amputation of the thigh in twenty-four seconds; the necessary vessels were secured, and, quiet sleep continuing, the stump was dressed as usual. On the return of consciousness, the poor man's first words were, “I must die with it on.” The surprise and pleasure shown when convinced that he was freed from his disease without the dreaded pain of the operation, is not readily to be forgotten. His subsequent convalescence was rapid and continuous.

I am, etc., WILLIAM SQUIRE, M.R.C.P.

6, Orchard Street, Portman Square, W., February 15th, 1873.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

MR. CEELY ON HEALTH OFFICERS.*

WE reprint the following important article from the *Pall Mall Gazette*. It is unnecessary to say that we concur in every word of it.

Many things are well done which had been better done if done sooner. If this little pamphlet had been published, and well considered by official readers, before Mr. Stansfeld had committed himself to that erroneous project of sanitary organisation which was first recommended by the Royal Sanitary Commission, the result might have been more creditable to the Government than its statutory malformation of 1872 has proved to be. No one in the provincial districts is more competent than Mr. Ceely, of Aylesbury, to speak on this subject. He has been for many years surgeon to the county hospital and to the county prison—a man of great experience, and distinguished both as an operator and a pathologist. He is at the summit of consulting practice in Buckinghamshire, yet he has never left the ranks of general practice, and still works humanely and beneficially as a poor-law medical officer. He is eminent also as an authority in both preventive medicine and comparative pathology, in proof of which we need only mention his original researches, of European fame, into the relation between small-pox and cow-pox,† and his able report to the Privy Council on the anthrax fever among cattle in Lincolnshire in 1863.‡ To these general and scientific qualifications for writing on the health-officer question, Mr. Ceely adds that of having devoted special attention to the sick-poor department of public medicine, as shown by his evidence before Poor-law Committees of the House of Commons in 1838 and 1844. Respected and trusted by all classes in his own county, he is well-known for the moderation of his judgment, the modesty of his opinions, and the painstaking and philosophical spirit in which he handles every subject investigated by him.

* Health-Officers, their Appointment, Duties, and Qualifications; being a reprint of official documents long out of print. With prefatory remarks by Robert Ceely, F.R.C.S., Surgeon to the Bucks County Infirmary, etc. London: T. Richards. 1873.

† Observations on the Variolæ Vaccinæ. *Transactions of Provincial Medical and Surgical Association*, vols. viii and x.

‡ Sixth Report of Medical Officer of Privy Council, pp. 758-768.

It would, therefore, have been difficult to find any medical man more thoroughly qualified to treat the question of medical employment under the new Act in the districts to which alone that Act applies.

Mr. Ceely unhesitatingly condemns the system of organisation proposed by the Sanitary Commission and adopted by Mr. Stansfeld. He marshals authorities and arguments against the Government measure with great force and effect, and reproduces for public instruction official documents of great importance which were inexcusably passed over by those who have attempted to legislate on the subject. Whatever might be the mistakes of that General Board of Health which existed from 1848 to 1858, no one can accuse its members of not having spoken plainly respecting the duties and necessary conditions of the health-officer appointment. With such a weight of opinion against him, Mr. Stansfeld had far better have listened to the older sanitarians who urged him not to settle the question by Act of Parliament until after a thorough and complete local inquiry, and at all events to omit the compulsory clause (10) of the Bill, a provision which, having unfortunately been enacted, proves the main cause of perplexity to his legal inspectors, and of annoyance to the numerous local boards of the provinces.

Six months have now elapsed since Parliament unwisely decided that each of these boards and councils, however small the area and population of the district, should be compelled to appoint a health-officer. The whole of this period has been consumed in ineffectual efforts on this very point. Real sanitary improvement is at a standstill. The health-officer stops the way. It appears that in only a small proportion of districts has the “five years” experiment authorised by the Act led to even a provisional settlement of the question. The Poor-law inspectors themselves are as much at sea as the local boards. Hardly any two of them agree on the same course; nor is the same inspector always consistent with himself. One urges the formation of “union” counties as spheres for these appointments. Another promotes the grouping of districts on a smaller scale for the same purpose, without the slightest regard to county boundaries. Most agree to set aside the union medical officers as unfit for the post; while another recommends the sole appointment of these district officers under a superior inspector of nuisances. The letter accompanying the general order of the Local Government Board (November 11, 1872) proposes a course which, although permitted by the Act, is manifestly opposed to its original design and to the advice of the Sanitary Commission. Parliament having enacted that every sanitary authority, whether urban or rural, shall appoint a medical officer of health, it looks like making a joke of the Act to tell these authorities, three months afterwards, that they had better not do so, but rather combine for the purpose in groups, formed at the suggestion of the legal inspector and altered at their own fancy. The repayment of half the salary offered by the Government for conformity has not in a multitude of cases proved a sufficient inducement to them to surrender their independence. The satisfaction which each little authority seems to feel at having its own health officer—a local practitioner, under control, to hold office only so long as he is not troublesome—evidently outweighs the temptation of a grant from the national funds with its inevitable conditions. So the local boards, not less ignorant of the duties of the office than the inspectors themselves, often reject the advice given, and determine, not always in the most courteous terms, to act separately. Some decide on appointing only one practitioner as health officer for the whole union, to the disgust of the many district officers, his neighbours and rivals. Other boards appoint all their district officers, fit or unfit, with a paltry addition to their salaries. We hear of another group resolving to appoint all the district officers without any fixed addition to their salaries, and to pay them a guinea for every sanitary report they may be required to make!

The Local Government Board is evidently prone to anomalies. The formation of extended areas for health officers, where local boards permit it, has been exclusively committed to the original Poor-law inspectors, holding many objectionable traditions, and aided only by the new non-medical assistant inspectors. The medical inspectors under Mr. Simon have been rigidly limited to what are called “sanitary inquiries,” yet these gentlemen are the only inspectors who know practically what is the work of a health officer, how often he should visit localities, what investigations he should make, by whom he should be supplied with facts and materials, what should be the purview and particulars of his reports, what time he should devote to a given population, etc., etc. But Mr. Simon's inspectors do not belong to the legal or military professions, and their medical knowledge and experience are held at Gwydyr House to bar their employment in making arrangements for the performance of medical duties.

Few there must now be who do not see that Parliament ought to have defined, or to have laid down rules for defining, the areas of local administration, accepting, in the first place, the largest existing provincial area—viz., the county; then to have laid down the conditions of the

health officer appointment; and, lastly, to have provided some machinery for testing and conferring the special qualifications necessary for the due performance of these duties. Local boards would have submitted, however unwillingly, to the express directions of an Act of Parliament, though they rejoice in resisting the same measures attempted to be enforced by Government officials. One of the questions which the original promoters of a Royal Commission of Inquiry held to be an indispensable element in that inquiry was—What would be the most convenient area and population of a district for the work of a health officer? The Government recognised this necessity in their instructions to the Commission to include “in such inquiry and report..... the formation of areas proper to be controlled by local authorities.” Yet that instruction was virtually ignored. Instead of offering definite suggestions respecting the extent and population of those areas, and the manner in which existing districts might be utilised, corrected, and combined, the Government and legislature have thrown the whole of this responsibility upon the new central authority. We are, therefore, encountering a repetition of the unfortunate error made in 1834 by the Assistant Poor-law Commissioners, who, in utter disregard of our largest and most respectable sphere of local administration—the shire—mapped out the country arbitrarily into new divisions, at variance with every existing system. The same sort of “fortuitous concourse of (parochial) atoms” was sanctioned by the Highway Acts, although the county was thereby recognised as an organising authority. Hence it is rare to find in the same locality any two kinds of jurisdiction with conterminous boundaries. Each object of administration requires its peculiar map of the country, and few inhabitants know the various local centres to which they may have to appeal in matters of justice, litigation, probate, registration, taxation, highways, and public health, to say nothing of the comparatively harmless discrepancies between the old hundreds, the subdivisions of lieutenancy, and the rural deaneries. A grand opportunity was afforded to the Sanitary Commission—if, indeed, it was not a duty—to propose some revision, some harmonisation, of the principal conflicting areas of local jurisdiction. But it has been thrown away; and the confusion is now aggravated by the casual and irregular formation of new combinations of unions for health objects.

The medical profession has not appeared to advantage in these discussions, if we may judge from articles and letters in its newspapers. Each class of medical men seems to think more of its claims to employment than of the public interests. Consultants are gaining the day in a few counties, where larger areas are being formed; general practitioners will take office in the majority of districts. Most of the hypothetical 4,000 Poor-law medical officers paraded on paper by the Sanitary Commission, were seduced into the belief that they were to occupy new positions of profit and importance, but they are still out in the cold; for under the arrangements which most of the inspectors are urging upon the guardians and local authorities at county meetings, probably not more than a fourth part of the total number (far less than 4,000) will be employed in the provinces. While Mr. Stansfeld is politely acknowledging their approval of his scheme, if scheme it can be called, he is working against their employment as health-officers. The consolidated areas which some inspectors are endeavouring to form will, moreover, seriously interfere with any future amendments and extensions of county administration; yet Mr. Stansfeld was distinctly requested so to modify the 26th and following clauses of the Bill that the districts to be united should be contained in the same old county. Every proposal to provide by statute for the mutual adjustment of county and district areas was rejected; and, unless Parliament should unexpectedly reverse the present course of action, and compel a proper county organisation, with superintending health officers, engineers, and analysts, the Public Health Act in this respect will prove an impracticable and even an obstructive measure. It is to be hoped that the justices of every county in quarter sessions will petition Parliament for the necessary amendment of the Act.

The conclusions with which Mr. Ceely winds up his introduction to the minutes of the old General Board of Health are of such importance as axioms of sanitary legislation that we here present them to our readers.

“First, the necessity for utilising county authorities, present and future, in the administration of sanitary law, especially in the appointment of health officers and analysts. Secondly, the superiority of the county area to any casual agglomeration of districts formed under the Act, as having a governing body of independent and well-informed men ready to act. Thirdly, the inconvenience (involving the conflict of authority) of substituting ‘union’ counties for the present county areas of administration. Fourthly, the analogy between the county police under its chief constable and a skilled staff for sanitary advice under a

chief officer. Fifthly, the absolute necessity of making every possible use of the Poor-law medical staff under such officers, the fact being, as the Poor-law Medical Officers’ Association has urged, that they, if encouraged and protected, can tell the authorities much more about local sanitary defects and necessities than a single officer, whom some have advised over a large area ‘without their assistance.’ Sixthly, the advantage of consolidating ordinary sanitary functions and authorities within the provincial unit of area—viz., the registration district. Seventhly, the necessity for two orders of medical officers of health—the one engaged in practice, as union medical officers or certifying factory surgeons; the other, debarred from general practice, receiving reports from the former, and acting over counties or first-class boroughs; with the prospect of promotion from the lower to the higher order as a stimulus to good service. Had this been made compulsory, all minor matters might have been safely deferred. It may be proved, contrary to the presumption of some, that such a plan would not be more expensive than the haphazard arrangements now inaugurated, different under different inspectors, and incomplete everywhere.”

THE PUBLIC HEALTH ACT.

PETERBOROUGH.—Dr. Thomson has been appointed Medical Officer of Health for Peterborough, at a salary of £50 *per annum*.

TAUNTON.—Dr. Henry J. Alford, of Taunton, has been appointed Medical Officer of Health for the urban and rural district of Taunton, with a salary of £600 a year. He must devote his whole time to the work. There were forty-three candidates. The area of the district is 69,383 acres, and the population is 35,522.

OBITUARY.

VALENTINE DUKE, M.D., DUBLIN.

THE late Dr. Valentine Duke was the eldest son of Dr. Alexander Duke of Lucan, Co. Dublin. He was born in 1812, and studied under Dr. Cusack in Dublin, became M.D. of Edinburgh in 1836, and a Fellow of the Royal College of Surgeons in Ireland. His first public appointment was to the Ballitore Dispensary, Co. Kildare. He afterwards removed to Dublin, and became Physician to the Friends Lunatic Asylum, Bloomfield Retreat, Donnybrook. He was author of *An Essay on Cerebral Affections of Children*, which obtained the prize of the Provincial Medical and Surgical Association in 1848, and of *Physiological Remarks upon the Causes of Consumption*. He also contributed various papers to the medical journals. In 1868 Dr. Duke’s health began to fail, and in consequence he was obliged to retire from practice. He died on January 22nd, at his residence at Black Rock.

FREDERICK DOUGLAS, M.D., SURGEON-MAJOR, ROYAL ARMY.

WE regret to announce the death of Surgeon-Major Frederick Douglas, M.D., of the 87th Royal Irish Fusiliers, at Halifax, Nova Scotia, on January 5th, from “valvular disease of the heart.” His age was nearly 50. He was born in February, 1823. He entered the army medical service in March, 1849, when he was appointed assistant-surgeon to the 26th Foot. He was promoted to the rank of surgeon in October, 1857, and served on the staff till January, 1858, when he was appointed surgeon to the 10th Foot. He became surgeon-major in March, 1869, and served again on the staff till July of that year, when he was appointed to the 87th Foot. He was a general favourite, and is much regretted.

GEORGE BURTON PAYNE, M.D.

WITH regret we record the death of Dr. George Burton Payne, at his residence, Charlwood Street, Belgravia, on January 31st. He studied at Queen’s College, Birmingham, and at Charing Cross Hospital; and was at each distinguished, having obtained several medals at Birmingham, and the silver medal for obstetrics at Charing Cross. He took the license of the Apothecaries’ Hall in 1847, and became graduated M.D. and M.A. of King’s College, Aberdeen, in 1855. Among his contributions to medical literature may be mentioned a paper “On Puerperal Convulsions and Hæmorrhage” in the *Obstetrical Record*, and two “On Ulceration of the Stomach,” and on “Cholera,” in the *Lancet* for 1848-1849. His practice had steadily increased and improved from the time when he commenced; and it is in consequence of his conscientious and unremitting attention to his duties that his family and friends mourn his premature demise.

* See Memorial, May 1868. Third Subject of Inquiry.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, February 15th.

THE CATTLE-DISEASE.—Mr. C. S. Read moved for the appointment of a select committee to inquire into the operation of the Contagious Diseases (Animals) Act (1869), the Cattle Diseases Act of Ireland, and the constitution of the Veterinary Departments of Great Britain and Ireland. Mr. Forster assented on behalf of the Government, and the motion was agreed to.

Monday, February 18th.

SANITARY LEGISLATION.—Sir C. Adderley, in answer to Mr. Raikes, said he hoped that those who were members of the Sanitary Commission would be permitted to reintroduce their measure relating to the public health this session, with the view of collecting in one Bill such powers and duties of the local authorities throughout the kingdom as were now scattered over 19 or 20 Acts of Parliament. He also expected, from what had fallen from the Prime Minister the other day, that they would have the assistance of the Government in dealing with the subject.

Thursday, February 13th.

SANITARY ACTS.—Mr. Stansfeld, replying to Sir C. Adderley, stated that he should be glad to introduce a measure this session amending the Sanitary Acts imposing duties on local authorities, but whether he should be able to do so depended on the progress of business.

COMPULSORY REGISTRATION OF BIRTHS.—In reply to a question from Dr. L. Playfair, Mr. Stansfeld said that a measure for the compulsory registration of births and for the better verification of the causes of death had been prepared, and would, he hoped, be introduced in a few days.

BASTARDY LAWS AMENDMENT BILL.—This Bill was read a second time.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was duly admitted licentiate of the College on January 30th.

Hope, Samuel Wilson, Berlin House, Dulwich

The following gentlemen were admitted licentiates on February 18th.

Atthill, William Eyre Blennerhassett, Muswell Hill

Brown, James, Leeds

Chicken, Rupert Cecil, Guy's Hospital

Groves, Henry Joseph Firth, 36, Oakley Crescent, Chelsea

Hopper, Arthur Richard, 31, Arundel Street, Strand

Richmond, Onslow Robert, Hornsey

Snell, Simeon, 26, Belitha Villas, Barnsbury

Williams, Henry, Guy's Hospital

Zimmermann, Richard, M.B., St. Thomas's Hospital

The following candidate, having passed in Medicine and Midwifery, will receive the College Licence on his obtaining a qualification in Surgery recognised by the College.

Pilkington, William Binns, Crawshawbooth, Lancashire

NAVAL MEDICAL SERVICE.—List of naval medical candidates who were successful at the competitive examinations held at London in August 1872, and at Netley in February 1873, after having passed through a course at the Army Medical School, Netley, and who will receive commissions in Her Majesty's Navy. [Maximum number of marks, 6900.]

Order of merit and names.	Studied at	No. of marks.
1. Sparrow, T. F.	..... Dublin	..... 4337
2. Boland, W. H.	..... Dublin	..... 4165
3. O'Keefe, J. L.	..... Dublin	..... 4105
4. O'Neill, J.	..... Cork	..... 4103
5. Spencer, W. F.	..... Dublin	..... 3921
6. Williams, R. W.	..... Glasgow	..... 3832
7. O'Donnell, T. A.	..... Dublin	..... 3752
8. Allen, J. H. L.	..... Dublin	..... 3665
9. Queely, A. C.	..... Dublin	..... 3487
10. Browne, O. P.	..... Dublin	..... 3467
11. Thompson, E. C.	..... Dublin	..... 3358
12. Adams, A.	..... Dublin	..... 3332
13. Loftie, F. R. M.	..... Dublin	..... 3290
14. Thornhill, H.	..... Dublin	..... 3145
15. Gibson, G.	..... Dublin and Edinburgh	..... 3020
16. Smith, G. W.	..... Aberdeen	..... 2966
17. Scott, J. W.	..... London	..... 2848
18. Kelly, A. H.	..... Dublin	..... 2788
19. Ferguson, W. C.	..... Dublin	..... 2628

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, February 13th, 1873.

Ward, Joseph, Warwick

The following gentlemen also on the same day passed their primary professional examination.

Clunn, Thomas Robert Hood, Guy's Hospital

Eastall, Henry Francis, Guy's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ATCHAM, Bridgnorth, Church Stretton, Cleobury Mortimer, Clun, Forden, Ludlow, Madeley, Newport, Shifnal, and Tenbury combined Rural Sanitary Districts—Medical Officer of Health: £800 per annum.

BASINGSTOKE UNION—Medical Officer for District No. 2: £85 per annum, and fees.

BINGHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum

BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.

CAHERCIVEN UNION, co. Kerry—Medical Officer for the Derrynane Dispensary District: £80 per annum.

CHORLEY RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire—House-Surgeon and Dispenser: £100 per annum, board, and residence.

DONEGAL COUNTY LUNATIC ASYLUM, Letterkenny—Consulting and Visiting Physician.

GENERAL DISPENSARY, East Grinstead—Resident Medical Officer.

GENERAL HOSPITAL, Nottingham—Resident Surgeon Apothecary: £150 per annum, furnished apartments, board, and washing.—Assistant House-Surgeon: £80 per annum, board and lodging.

HORTON INFIRMARY, Banbury—Resident Dispenser and Secretary.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.

KINGSCLERE UNION—Medical Officer for the Kingsclere District and the Workhouse: £100 per annum, and fees.

LEEDS GENERAL INFIRMARY—House-Physician and House-Surgeon: £100 per annum each, with board, residence, and washing.

LETTERKENNY UNION, co. Donegal—Medical Officer for the Letterkenny Dispensary District: £100 per annum and fees.

LIVERPOOL DISPENSARIES—Honorary Medical Officer to the North Dispensary.—Assistant House-Surgeon: £108 per annum, furnished apartments coal, gas, and attendance.

LIVERPOOL ROYAL INFIRMARY—House-Surgeon: £100 per annum.

MEATH COUNTY INFIRMARY, Navan—Apothecary and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.

MUCH WOOLTON URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.

NEWCASTLE, Staffordshire—Medical Officer of Health.

NEWCASTLE UNION, co. Limerick—Medical Officer for the Abbeyfeale Dispensary District: £100 per annum, and fees.

NEWCASTLE-UPON-TYNE DISPENSARY—Four Physicians.

NEW ROSS UNION, co. Wexford—Senior Medical Officer for the Fethard Dispensary District: £80 per annum.

NEWTON HEATH URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—Resident Medical Officer.

RATHDOWN UNION, co. Dublin—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Glencullen Branch of the Dundrum and Glencullen Dispensary District: £110 per annum, and fees.—Ditto for the Powercourt Dispensary District: £110 per annum, and fees.

ROYAL AGRICULTURAL SOCIETY, Ireland—Chemist: £50 per annum, and fees.

ROYAL INFIRMARY, Dundee—Resident Medical Superintendent: £200 per annum, bed, board, and washing.—Medical Assistant: £50 per annum, bed, board, and washing.

STOCKTON-ON-TEES DISPENSARY—Medical Officer to Visit and Dispense: £130 per annum first year: £140 second.

TOXTETH PARK URBAN SANITARY DISTRICT—Medical Officer of Health: £25 per annum.

WALLASEY URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

YORK DISPENSARY—Two Resident Medical Officers: £130 per annum, furnished apartments, coals, and gas.

YORK RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

*GRIGG, William C., M.D., appointed Physician to the In-patients of Queen Charlotte's Lying-in Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

GOODMAN, Claudius Erskine, Esq., Surgeon, at Shrewsbury Road, Paddington, aged 51, on February 12th.

*HAYNES, John B., Esq., Surgeon, at Battleton Lodge, Evesham, aged 70, on February 17th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAYSt. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Teevan, "Cases of so-called Irritable Bladder"; Dr. Tilbury Fox, "Practical Notes on Acné, and its Treatment."

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. W. H. Dickinson, "On Disseminated Suppuration of the Kidney secondary to certain conditions of Urinary Disturbance."

THURSDAY.—Hunterian Society, 7.30 P.M.: Council Meeting. 8 P.M.: Dr. Hilton Fagge, "On some points in the Etiology of Diseases of the Valves of the Heart."

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Burney Yeo will exhibit a Patient with Congenital Absence of a Portion of the Pectoralis Major Muscle. Report of the Committee appointed to examine the Brain in Dr. Glover's Case of Aphasia. Dr. Clifford Allbutt, "On Overwork and Strain of the Heart and Aorta"; Mr. Barwell, "On a Case of Foreign Body impacted in Right Bronchus."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. SHIELDS.—No such reports have appeared.

WE are compelled by great pressure of matter to postpone the publication of communications from Dr. Humphry, Mr. W. G. Lumley, Dr. Handfield Jones, and many other correspondents. We have, however, added this week, as last, four pages to the JOURNAL, to meet the increasing demands on space; and we would beg our correspondents to bear in mind that delay in publication by no means implies want of appreciation of the value of their communications.

THE HARTLEPOOL HOSPITAL.—We entirely concur in the terms and opinions of the protest of the medical officers of the Hartlepool Hospital, assuming, as we have a right to do, that the premisses are accurately stated.

DRIITT TESTIMONIAL.

MR. HAYNES WALTON, the Treasurer, begs to acknowledge the receipt of the following subscriptions since Wednesday, January 29th.

£ s. d.	£ s. d.
Sir W. Jenner..... 5 5 0	Miss Reed 2 2 0
Mr. H. Cheswright 5 5 0	Dr. John Harley 1 1 0
Mr. C. F. Oldham 5 0 0	Mr. R. N. Hitchings 1 1 0
Dr. G. H. Evans, Birmingham 3 3 0	Mrs. H. Hitchings 1 1 0
Messrs. Jolley and Co. 3 3 0	Dr. Parker 1 1 0
Mrs. Houchen 3 3 0	Mr. Sydney Jones..... 1 1 0
The Hon. W. Cowper-Temple 2 2 0	Dr. Charles Taylor 1 1 0
Dr. Basham 2 2 0	Mr. Royes Bell 1 1 0
Mr. S. Cartwright..... 2 2 0	Mr. John Houchen 1 1 0
Mr. John Brady, M.P. 2 2 0	Mr. Henry Houchen 1 1 0
Mr. B. Holt 2 2 0	Dr. Ed. Seaton 1 1 0
Mr. J. Hutchinson 2 2 0	Dr. Fred. T. Roberts 1 1 0
Mr. S. Lane 2 2 0	Miss F. B. Dickson 1 1 0
Dr. Radcliffe 2 2 0	Dr. D. King 0 10 0

Subscriptions may be sent to the Treasurer, Mr. Haynes Walton, 1, Brook Street, Hanover Square; to the Secretary, Mr. A. Norton, 6, Wimpole Street; or be placed to the account of the "Druitt Testimonial Fund", Union Bank, Argyle Place, Regent Street, W.

Amounts received will be acknowledged in the Medical Journals.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

VENTILATION OF SEWERS.

A. L. C. publishes an excellent article on Ventilation of Sewers and Drain-pipes in the *New York World* of February 2nd. It is well illustrated, and sensible. This ventilation is the more necessary in New York, as the practice there prevails of furnishing the bed-rooms and dressing-rooms in all the best houses with basins connected with the general water-supply and provided with waste-pipes, so that sewer-gas thus penetrates into every room of the house.

TREATMENT OF PYROSIS.

SIR,—Having a case of waterbrash which resists every variety of treatment which I can suggest, such as alkalies, oxide of silver, etc., I shall feel obliged if any of the readers of the JOURNAL will say if they have found any treatment but that of alkalies useful. I am, etc., PLATO.

LITHATES IN THE URINE.

SIR,—I should deem it a favour if some of your readers would kindly help me in the following case. A gentleman, aged about twenty-five, while in London two years ago, contracted a gonorrhoea. Under treatment, he soon got better, but, before quite recovering, persisted in his reckless kind of life. The result has been that a gleet has remained up the present time. He has lived in the country for some time, and has a healthy out-door avocation. His urine every morning contains large quantities of lithates, as tested microscopically and otherwise. He eats and sleeps well, but is languid and mentally weakened. I have tried tonics—iron and quinine, nuxvomica, acids, and cinchona, etc., with various kinds of injections. What is the pathology of the presence of lithates? I may state that he is very moderate in his living now, though he does not abstain altogether from beer and wines. I am, etc., LITHATES.

THE ARCUS SENILIS.

SIR,—If "Arcus" will refer to pp. 169 and 170 in Dr. J. Milner Fothergill's book on *The Heart and its Diseases*, he will find the following: "It may be found as a clear, bluish ring, giving a peculiar expression to an eye still bright and vivacious. The owner of this eye may be old or elderly, but is active in mind and body, and it is often found allied to hale, active old age—green old age, in fact, both mentally as well as corporeally. The ring is not of bad prognostic import. It is perhaps as much calcareous as fatty, and is homologous with the osseous ring found normally here in the bird." I am, etc., JAS. CLAPPERTON.

SIR,—Your correspondent "Arcus," has raised a most interesting and important question, and one which, I hope, will receive a thorough ventilation in your columns. The significance of the arcus senilis has been so differently estimated by different authorities, that is difficult, nay impossible, to arrive at an satisfactory conclusion from the various theories laid down in our books. Every medical man is driven therefore to solve the question in the best way he can, from his own experience. I have no faith in the dogma "the arcus senilis is an indication of proneness to extensive or general fatty degeneration of the tissues;" and I should no more consider myself justified in making an additional premium on a life, because the applicant was the subject of an arcus senilis, than I should because he had lost his hair, or some of his teeth, provided always that he were a good life in other respects. I am, etc., A SURGEON.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Feb. 15th; The Manchester Guardian, Feb. 19th; The Aberdeen Daily Free Press, Feb. 15th; The Bath Express, Feb. 15th; The Birmingham Daily Post, Feb. 17th; The Hampstead and Highgate Express, Feb. 15th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Prescott Hewett, London; Mr. A. Prichard, Clifton, Bristol; Dr. George Johnson, London; Dr. Lauchlan Aitken, Rome; Mr. J. W. Langmore, London; Dr. Frederick Page, Newcastle-upon-Tyne; Mr. Eassie, London; Our Paris Correspondent; Dr. Samuel Wilks, London; Dr. Southey, London; Dr. Julius Althaus, London; Dr. Parry, Caersws; Dr. Allan, Fort William; The Secretary of the Royal Medical and Chirurgical Society; Dr. Myrtle, Harrogate; The Secretary of the Clinical Society; Mr. Poole, London; Dr. Aveling, London; A Member; Messrs. Churchill, London; M.D.; Mr. T. H. Bartleet, Birmingham; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Yeats, Coton Hill, Stafford; The Secretary of the Pathological Society; M.R.C.S.; Dr. Nunneley, Derby; Dr. J. Ford Anderson, London; Mr. Richard Davy, London; Dr. J. F. Smith, Aberdeen; Mr. Henry Arnott, London; Dr. A. Edis, London; Dr. Moxon, London; Mr. W. J. Nixon, London; The Medical Secretary for India; Mr. V. Jackson, Wolverhampton; The Secretary of the Hunterian Society; Mr. A. Myers, London; Mr. E. Noble Smith, Crawley; Mr. Gowans, South Shields; Mr. Whiteway Williams, London; The Registrar of the University of London; Mr. P. H. Holland, London; Mr. W. G. Lumley, London; Dr. H. J. Alford, Taunton; Dr. W. R. Smith, Huddersfield; Dr. Humphry, Cambridge; Dr. W. Squire, London; Mr. R. J. Sprakeling, Bootle; Mr. C. Hunter, London; Dr. Kelburne King, Hull; Mr. Marshall Monckton, Hurstpierpoint; Dr. Robinson, Leeds; Dr. Hearnden, Sutton, Surrey; Mr. Fairlie Clarke, London; Mr. Brabrook, London; Mr. Berkeley Hill, London; Dr. C. M. Campbell, Staunton, Gloucester; The Registrar of the Royal College of Physicians; Mr. Spencer Wells, London; Dr. Bastian, London; etc.

REMARKS

ON

M. PETTENKOFER'S VIEWS ON CHOLERA
IN INDIA.By JOHN MURRAY, M.D.,
Inspector-General of Hospitals.

I HAVE had an opportunity of seeing a translation, by Dr. D. Cunningham, of Professor Max von Pettenkofer's last book, "On the Diffusion of Cholera in India", in the *Calcutta Annals of Medical Science*, No. xxix. Any work on cholera, proceeding from the pen of this celebrated professor, deserves the most serious attention. The present calls for especial notice, as, after a most elaborate and searching inquiry into the reports on this disease that have lately appeared in India, he arrives at the conclusion that cholera is not contagious, and advances the opinion that quarantine is not only most vexatious and expensive, but also useless. As this is a practical question, it is highly desirable that the soundness of the opinion should be scrutinised, lest the powerful influence of the author's name should cause the neglect of precautions indicated to restrain the dissemination of this most fatal disease. Precision in the definition of all the terms employed is essential to philosophical discussion. In the present argument the word "contagion" appears to be understood in a different sense by M. Pettenkofer and by myself. That in which I employed it in my Report on Cholera in India is the same that has been assigned to it by some of the most eminent medical writers in England—viz., the property of transmission or communication of a specific disease directly or indirectly from a sick to a healthy person. The table in my Report, criticised by the professor, shows that this was my meaning, the various columns under the heading "Contagion" indicating the different channels through which the disease might be communicated: this is also implied by the recommendation of isolation of the infected, and employment of special hospitals for the sick under the heading "Precautionary Treatment".

In order to estimate the force of M. Pettenkofer's argument, that cholera is not contagious, it is essential that he also should define the meaning he attaches to the term "contagion", that it may be seen in what respect his views differ from mine. In one table (No. vii) I abstracted the opinions expressed or implied in the answers which I received from the officers of the British and Indian medical services to the queries which had been circulated under instructions from the Indian Government. It was on seeing the facility of thus recording opinions, and the economy of space and time both to the writer and to the compiler, that the formula of this table was subsequently circulated, with a request that the answer should be returned by filling it up, and be accompanied by memoranda on any point worthy of notice by the officer who replied. Numerous extracts from these answers are given in the appendix to the Report, and advantage was taken of the receipt of several of these abstracts, while the Report was passing through the press, to raise the numbers in the table from 481 to 505. I have now the register of each individual name, with the detailed opinions of which Table No. vii is an abstract. This table shows the opinions of five hundred and five intelligent and experienced medical officers on the most important questions in the history of the disease and its treatment, and more especially on its contagious nature. Their opinions on this point range in the affirmative from 99.6 per cent. who decide on the necessity of isolation, to 90 per cent. who agree in the communicability of the disease through the person. The ratios vary in the other channels from 94 to 99 per cent. of those who give a decided opinion. The professor, being himself a non-contagionist, considers these opinions as opposing instead of concurring with each other, and says that as "no" is a more decided opinion than "yes", it would be more correct to count the negatives as determining the opinions of the Indian service. To me this reasoning is incomprehensible, the affirmatives being so numerous as to attain almost to unanimity. Neither do I understand his subsequent statement that the contagionist view now only maintains a struggling existence in India, unless he wish us to conclude that the members of the profession there have meant "no" when they said "yes".

I concur with M. Pettenkofer in thinking that human intercourse is the main channel through which cholera is diffused over the world. We only differ, first, as to the development of the germ (or active agent, or poison) in the human body; and secondly, as to the necessity of the germ passing through certain changes in its existence outside the body before it can excite the disease. M. Pettenkofer considers that it can only develop and multiply in the subsoil-water, and not in the human body. I consider that it does develop and multiply in the body, and that it may be transferred, unchanged, from a sick to a healthy body, and there be developed and multiplied; but that it is more generally developed and diffused outside the body in the locality, in various extraneous media, such as impure air, or water, or moist soil, and that the influence of the subsoil-water in the latter case is often great, but not essential. If the professor's views be correct, so would be his conclusion that quarantine is vexatious, expensive, and useless. Should my views be correct, the arrest of the dissemination of this most fatal disease by human intercourse should be attempted, even though quarantine is vexatious and expensive. That the means hitherto employed under this name have only been partially successful, and have not been effectual in all situations in attaining the desired result, is a lamentable fact. That they are practically inapplicable in some circumstances is apparent; but it is equally true that the extension of the disease has been restrained by them in many instances, as shown in the Indian reports in reference to gaols and cantonments. Instead of abolishing quarantine, as recommended by the professor, I consider it the duty of government to improve the laws now in force. The foundation of such improvement should rest on increased knowledge of the history of the poison, when outside the body, in reference to such influences as promote or retard its development, or destroy it entirely. In reference to M. Pettenkofer's opinion of its development in the subsoil-water only, it is highly probable that it exerts a decided influence in this direction; but it is exceedingly difficult to isolate this from concomitant influences generally associated with its development, particularly season; besides, there is always subsoil-water where there is land, though sometimes it lies three hundred feet beneath the surface, and is not likely to exercise much influence on a passing disease. The observations that have lately been instituted in India have not hitherto shown any marked connection between the diffusion of cholera and the change in the level of the subsoil-water; and the careful investigations of the sanitary commissioner of the central provinces, Dr. Townsend, tend towards an opposite conclusion.

The history of the disease on board emigrant ships from England to America, and coolie ships from India to the Mauritius and West Indies, appears to me incompatible with any connection with the subsoil-water. M. Pettenkofer's explanation, that the poison was imbibed from the soil previously to embarkation by all those who were afterwards attacked, and that it remained dormant, or incubating for unusual periods, and then, simultaneously developing, broke out in a large number of cases, is not impossible; though it is more probable that the disease was kept up by succession of slight cases, not proceeding beyond the stage of diarrhoea till the bad hygienic state of the vessels brought other influences to bear in rendering the disease more severe, and causing it to assume a more intense form and spread more rapidly. Or again, the disease may have originated in the ship from the exposure of those on board to infected clothing. M. Pettenkofer's idea of protracted incubation requires that the ship should have sailed from a tainted locality, which could generally be said of all Indian ships; but in the case of those emigrant ships which did not sail from tainted ports, there is evidence that part of their passengers had lately come from places where cholera existed; and these suffered first, but the disease spread most virulently amongst the other emigrants who had not come from a tainted locality. The professor considers that the subsoil-water is the paramount agent in the dissemination of the disease. I am not aware on what authority he states that the profession in India assume the communication through the air of a soil-born miasm as described by Dr. Bryden. If by this be meant that human beings could not communicate over the world without the air, doubtless he is correct in his view, but not in saying that the direction of the wind influences the spread of the disease. If M. Pettenkofer means that cholera does not spread in the earth where there is no subsoil-water, he would not be far wrong; but till he can show an instance where the disease spread from one country to another through the subsoil-water where there was not human intercourse, the force of his objection to quarantine has no more power than that of Dr. Bryden's theory of the wind.

It was thought in India that the question of contagion was settled by the history of the Hurdwar epidemic. The daily progress of the disease was recorded by all the civil surgeons of the upper provinces and the Punjab, by orders transmitted from me three days after the dis-

ease had appeared at Hurdwar. Their reports from the various districts showed that the first cases of cholera were in pilgrims, but that the disease spread from them to the inhabitants, causing great mortality, amounting during the first two months of the epidemic to 30,000. In the civil divisions of Meerut, Rohilkund, Umballa, Delhi, Hissar, and Agra, there died in the month of April 6,932, in May 11,072, in June 9,269; and in the Punjab there died in the month of April 703, in May 2,619, and in June 5,231. These are not the ordinary seasonal months for cholera in these parts of India. The total of deaths in the European hospitals in these divisions of the North-West Provinces during the previous fifty-five years, deducting the years of the mutiny (1857 and 1858), was in April 43, in May 54; and in June 59; and in the Punjab for the previous twenty years, in April 5, in May 10, in June 7. [I quote these numbers from the European Hospitals, because Dr. Bryden considers them typical of the disease in the country.] This gives an annual average of one death for each month in the North-West Provinces, and one death in three months for the Punjab. The seasonal months for these longitudes, as indicated in the returns now quoted, are July, August, and September. There was, therefore, no seasonal complication at the time of this epidemic; and as it was an ordinary year, there was no unusual variation of the subsoil-water, so these elements may be eliminated from the causes which probably induced it.

M. Pettenkofer considers that the pilgrims imbibed the poison at Hurdwar, and that it lay incubating for various periods, which in some instances—as in those who went to Cashmere, Peshawur, and Jellalabad—must have extended from one to two months, which is most improbable. I consider that the disease was kept up and carried on by fresh pilgrims encamping on ground vitiated by parties who preceded them on the road. The inference is, that the disease which affected the inhabitants was communicated to them by the pilgrims, as it was proved to be synchronous with their arrival. This is the general opinion of the medical officers who had the opportunity of tracing the disease through their districts. The incidents detailed in the report on the Hurdwar epidemic show the various channels through which the poison was in some instances transmitted, and throw great light on the obscure theories engendered by imperfect knowledge. The wind theory is inadequate to account for this epidemic, as it would have required a wind to blow at once in all directions of the compass; neither can it be explained by the seasonal theory, which in that locality should have been July and August, instead of April and May. The subsoil-water theory also fails to account for it, as it was a normal year, and the subsoil-water varied from five feet to three hundred feet from the surface of the ground without appreciably influencing the progress of the disease. As this official report cannot be generally known, I may quote two instances, which I consider valuable typical cases of cholera being communicable through water.

1. From the Report of W. G. Blyth, Esq., Deputy Commissioner of Montgomery, between Lahore and Mooltan. A pilgrim was taken ill of cholera at noon on the 28th April, at a well in the village of Jooghkullun; he died next day, and his soiled clothes were washed in an adjoining pool. Other parties who afterwards visited the well and the pool for water and ablution caught the infection; the disease broke out on the 30th, and up to the 15th May fifty-three were attacked, of whom twenty-seven died. There had been no cholera in this village for the previous twenty years.

2. From Dr. Gardner, Civil Surgeon of Bijour. At the village of Bisakee, two men who had returned from Hurdwar Fair died of cholera on the 30th April, and their clothes were not burned according to orders given, but were washed in a pond near the village, the water of which was used for domestic purposes. On the 1st and 2nd May, in this village, sixteen attacks occurred. There had been no cases previously during the year.

The great difference in the mortality among the European and native troops, shown in Dr. Bryden's tables to be among the European troops 53.8 per 1,000, among the native troops 4.11, is attributed by M. Pettenkofer to race, and supposed to be unconnected with latrines, as believed by me. He has omitted to notice Dr. Bryden's returns of the mortality among the native prisoners. I most fully concur in the high eulogium passed on Dr. Bryden's zeal and energy, and in the professor's estimation of the great value of the statistical tables which he has drawn up. They extend from 1826, and I have tested their accuracy and found them correct. In addition to these, I have returns of the mortality in the European troops in the Bengal Presidency since 1814. I have also returns from the civil population since 1867 (with the exception of Bengal proper). These latter returns are less reliable than those from the military and civil hospitals, and extend only over a short period. From these returns, I have formed four tables showing the monthly mortality in each class, and also the

relative sickness during the seasonal period of cholera. As this varies in so large an extent of country, I have divided it into two sections, that lying to the east and that to the west of Allahabad. From these tables, it appears that the mortality among the native prisoners was higher than among the European troops in the stations east of Allahabad, and that in the stations west of Allahabad, though lower than amongst the European troops, it was much higher than amongst the native troops or inhabitants of the country. The seasonal period for cholera in the country east of Allahabad is the three months, March, April, and May, and in that to the west, July, August, and September. The following shows the relative mortality.

	EAST.	WEST.
European troops	58.5	66.5
Native troops	13.9	4.6
Native prisoners	64.8	24.0
Native population	—	1.4

The mortality during the cold season is trifling in all classes. This table shows a striking coincidence in the high mortality among the European troops and native prisoners, and in the low mortality among the native troops and civil population. The only points in which there is a resemblance in the circumstances of the European troops and native prisoners which were not common to the native troops and inhabitants, were that the former lived congregated in large rooms or barracks and used public latrines; doubtless both these had an influence on the result. The native troops and inhabitants live in small rooms and have no public latrines. Race has here no appreciable influence; and if the effect of personal contact be excluded (in accordance with M. Pettenkofer's views) the influence of the latrines alone remains as the probable cause of the higher mortality. As the atmosphere and subsoil-water in cantonments are the same for the troops, both European and native, and generally in this flat alluvial country for the jails and surrounding districts also, they must act equally on all.

In section 10, M. Pettenkofer treats of change of locality as carried out in the removal of troops in India, and arrives at the conclusion—"That, on the whole, it is manifest that every change of locality is not *per se* of benefit, but the result is dependent on how the abandoned locality is related to the local cholera-generating process at the time of departure, or how soon or late the locality is abandoned, and in the same way on the condition of the place which is had recourse to, for it is possible to pass from a better to a worse in such a change of locality." This sounds like an echo of the opinions of Dr. Bryden, who is opposed to removal and a non-contagionist, and who ignores the danger of contracting the disease from the person or place vitiated by the person. I differ in opinion from both, and consider that removal from a tainted locality is *per se* a benefit; and in this I am supported by 99 per cent. of the medical officers in India, who are of opinion that there is danger in a place where cholera exists, and recommend removal from it. The professor is under a misapprehension in supposing that the sick accompany the removal. On the contrary, the sick are left in cantonments on moving out, and only those in whom the poison is in a state of incubation, or the stage of *malaise*, where it is not recognised, accompany the detachment. When the disease subsequently advances to the more active stages in camp, the men are treated in separate hospitals. It is my opinion that a considerable portion of the detachment often have the disease in this stage which is thrown off through the natural channels without advancing even to diarrhoea, and that in this form it is capable of contaminating the ground. The guiding principle of this important measure is to avoid danger from those infected by the disease and the locality vitiated by them. This is carried into effect by removing the men into tents and encamping on high, dry, and well-drained ground, avoiding the vicinity of swamps or streams. Care should be taken to avoid exposure to the sun, and over-fatigue from long marches, and the camp should never be formed in any place where cholera has lately existed. Cholera cases appearing in camp should be treated in special hospitals. The result of the practice of removal since it was introduced in 1860 has been considered highly satisfactory. Out of 80 removals of troops and prisoners, which took place in 1867, in 34 instances there was no case at all after change into camp; in 7 instances there were no cases after the first day; and in 4 instances there were none after the second day. It thus appears that in more than half these removals the disease was left behind. Removal is a most delicate, expensive, and disagreeable operation, especially in the hot and rainy seasons in India, and only resorted to as the lesser of two evils. If judiciously directed, it removes panic and inspires hope, and also checks the progress of the epidemic. If injudiciously managed, it is attended with danger, and sometimes followed by most disastrous results, as mentioned by M. Pettenkofer in the case of the 104th Regiment at Peshawur, in 1869. I shall repeat the history of this case, as it illustrates

the views which I have expressed regarding the danger of encamping on ground that has been vitiated by previous parties suffering from cholera. The left wing of the 104th, after the occurrence of five cases of cholera, removed on the 13th September to Chum Kunnie, and marched next day *en route* to Cheraat, and they only lost two more cases, which is a highly favourable result of removal. The remainder of the regiment continued to suffer daily from cholera till the 17th, when it also marched to the same ground at Chum Kunnie, and followed the same route. It had 3 cases on that day, 15 the next, and 27 the following day, and the disease continued amongst them for ten days longer. The only way to account for this different result is by the fact that the ground had been vitiated by the left wing before the passage of the right wing over it. Strong theoretical views blinded those who afterwards endeavoured to trace the cause of this disaster, and prevented their detecting the danger that lay in the infected ground. The necessity of prompt removal is deemed so urgent that it is strictly enforced by the orders of government. It is made imperative after the occurrence of more than two fatal cases in one barrack, and is independent of the opinion of the local military authorities or theoretical medical views. Recent experience has shown the soundness and necessity of these stringent orders, and the disastrous result of neglecting them.

So long as philosophical musings on theoretical questions are the relaxation of zealous students, those of M. Pettenkofer on the possible or probable changes of the cholera-germ in passing through the subsoil stage of its transition existence must give pleasure to all true investigators of disease. There is an important element in the human organisation, which has been omitted or overlooked by the professor and some other recent writers, which has unquestionably a decided influence on the propagation of this disease and its action on the human body. This influence was formerly called the *vis medicatrix nature*—a vital power by which inanimate substances are converted to the use of the body, which controls the natural processes of decay called fermentation and putrefaction, and without which both the food and the body itself would progress through these natural courses to decay. It may be said that this is speaking vaguely, but it leads us to consider how these processes are regulated, and by what means they are conducted in the healthy body, and how their absence or removal would influence the natural changes in food or poisonous bodies introduced into the system. It would be well to follow up the investigation by searching out by what means these agencies in the body are generated, and how they act in preventing the entrance of the cholera poison into the body, or in modifying its action when there, and expelling or removing it from the system. This forms one of the most important points under discussion, more important even than a knowledge of the history of the poison outside the body, to which attention has been chiefly directed by the professor.

The sanitary inquiries of recent times have been principally directed to the history of the dissemination of the disease. Such investigations are of great value, but they are merely preliminary to the main question of curing the disease when the poison has entered the system. In this branch of the inquiry the opinion of so profound a thinker as M. Pettenkofer would be of great value, and to this subject I trust he may turn his attention.

CLINICAL MEMORANDA.

ERYSIPELAS AFTER VACCINATION.

As some accidents will occur in vaccination, I think it would be well if all were recorded, so that public vaccinators and others might have some idea of the real statistics of such occurrences as vaccino-syphilis, erysipelas, etc. The case which I wish to bring under notice, unfortunately, ended fatally on the seventh day after vaccination.

D. A. L., a strong healthy-looking child, aged three months, was vaccinated on January 20th, 1873. Nothing unusual occurred till the evening of the 24th, when the mother noticed a slight blush round the spots where the arm had been scratched. This was but little noticed, the mother thinking it was but the natural result of the vaccination. The child passed a restless night; in the morning, the circle of inflammation had increased, and the arm began to swell. The inflammation soon spread over the entire arm. The parents became alarmed, and sent for me in the evening. On examining the child, it was evident the case was a severe one of erysipelas. The inflammation having spread over the entire chest and abdomen, I prescribed small frequent doses of the muriated tincture of iron and a small alterative powder. In spite of all our endeavours the inflammation spread, and on the 27th the child died exhausted.

W. T. BOLTON, Public Vaccinator for the Western District of the Lanchester Union, etc.

CLINICAL LECTURE ON CASES OF PARALYSIS AGITANS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
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GENTLEMEN,—A clinical lecturer ought not to give too much prominence in his discourses to the rarer and more peculiar cases that present themselves, but neither ought he to pass them by. We had some while ago in the wards two cases of paralysis agitans—one of them a very striking and interesting example. I propose to relate them to you, together with two other cases from my private practice; and then to offer some general remarks on this somewhat rare disorder.

CASE I.—P., aged 47, a coachman, was seen March 6th, 1871. About nine months previously, he was knocked down by a blow at the back of his right shoulder; he was not at all stunned, and no bruise nor anything amiss could be detected at St. George's Hospital. He was out with his carriage the same day, but was unable to put his hand behind him, though he could on admission. He had never intermitted his occupation of driving. He was not at all a nervous man, and was of robust make. Directly after the accident, his right arm began to be affected with tremor, which increased very much, and extended to the right leg, which shook like the right arm—sometimes one, sometimes the other, sometimes both together. He had less tremor while he was engaged in doing anything, but had more when he was speaking to any one. He could stop the tremor by an exercise of volition, as when he grasped some object strongly. The tremor seemed to affect the forearm most; the arm much less; the shoulder and side of the trunk least. The tremor was sometimes very marked in the muscles between the thumb and index finger; at other times, it was not. It consisted of movements of abduction and adduction, much more than of flexion and extension; but the extensors at the back of the forearm trembled notably. The tremor was made worse by cold, or if he became chilled; but wine, or beer, or tea, or fatigue, had no effect at all upon it. Whiskey and water, however, he said, made the tremor worse. All the movements of the arm were perfect, but he could not shave himself with his right hand. He could grasp strongly with his right hand. There was no numbness whatever in the right hand or leg. He had not the least tenderness about the spine, or on pressing the head downwards. The tongue was put out straight. The interrupted current was felt much more in the left arm than in the right, but the muscles of the affected arm responded to it. He slept well and quietly, was perfectly temperate, and had good general health. His sight had failed the last two months; he could not see to read the newspaper, but with the aid of a convex lens he could read No. 2 of Snellen. His hair was not half so thick as it used to be; it had become quite thin within the last two months. His left eye was injured by a kick twenty-five years ago, but he had still some sight in it. His parents were very healthy; they died of old age. No brothers or sisters had suffered as he did. There was no blue line on the gums. The bowels were right; his appetite was good; pulse 64, soft. He was ordered to take fifteen grains of bromide of potassium three times a day.—March 13th. No effect from the medicine was observed. His hand shook so that I could not feel the pulse; his foot shook as he sat. He said now that “brandy and water at night stopped the working of the nerves”. He was ordered to have two grains of valerianate of zinc and a third of a grain of extract of belladonna three times a day.—March 30th. He was no better. He said that the pills brought on pain and tightness at the xiphoid region. The spine was curved, and convex to the right in all the dorsal region. The left shoulder was lowered. There was good breathing at the back on both sides. There was a patch of tenderness about the insertion of the right deltoid. I applied a continuous current to the spine and the arm and hand. After the application, while he was dressing, he declared that he felt better, and so he appeared the following day; but the good effect soon ceased to be produced, and the remedy was discontinued. Conium was next given, but in too small doses, and was too soon abandoned. He then had small doses of nitrate of silver, but without any decided benefit. Subcutaneous injection of morphia was performed a few times, and had a marked tranquillising influence; he was quite free from any tremor for twenty-four hours after the first injection, and was much more easy and comfortable for two days after the second and

third; but after April 23rd I lost sight of him, and I cannot report that any permanent improvement was obtained.

CASE II.—E. B., aged 17, laundress, was admitted September 11th, 1872. Nearly two weeks previously, while out walking, she noticed her left arm begin to move about, and she did not seem to have any control over it. Since then, she had grown gradually worse, and now both arms were constantly on the move as she lay in bed. The right arm sometimes became quiet; it was so while I was examining her; but when I took hold of her left hand and kept it still, which was not difficult, the right arm began to be agitated, and continued so as long as I was with her, even after I had let the left arm go. The movement in the left arm was a rapid pronation and supination; in the right it was similar, but partook also of flexion and extension. The movements were not extensive; they occurred at the rate of 180 per minute. The tremor ceased during sleep. She seemed able to control the right arm, but not the left. The catamenia were regular; the bowels were constipated. No rheumatism or scarlet fever had occurred, nor had she been frightened. She used to have worms when a child, but did not know whether she had any now. The heart's sounds were normal. The diet ordered was simple—milk and beef-tea. She was ordered two drachms of succus conii three times a day, and, after the 14th, four times a day.—September 16th. She was weak when she got up. Both hands were now almost perfectly quiet and steady as she held them out. The urine was normal.—September 19th. Diarrhoea came on in the night, and she had vomiting this morning. Pulse 75. She had pain now and then in the left side.—September 22nd. The diarrhoea had ceased. She was ordered twenty grains of saccharated carbonate of iron three times a day, and ordinary diet.—September 30th. The hands were steady, but her head had been aching all yesterday and to-day. Her eyelids “twittered” while she was asleep. She took food well. The bowels were costive. The carbonate of iron was continued, and she was ordered to have twenty grains of bromide of potassium in camphor mixture three times a day.—October 3rd. She was unsteady at times. The left hand was now affected with tremor as before; the right was steady. Her feet in walking moved in a disorderly way, and her gait was more or less running (*festinans*). She had pain extending up the left leg. The head was better. She said that on September 28th her speech became affected; she stuttered so that she could hardly articulate. Now “it was gone into her hands and feet, and she could speak better.” The bromide of potassium was omitted, and she was ordered three drachms of succus conii four times a day.—October 7th. She was quite steady, and could walk quite well; but her speech was a little impaired.—October 10th. She was quite well, and went out.—December 9th. She had a little recurrence since she went out, but with conium and carbonate of iron has got right again.

CASE III.—T. S., aged 40, a tanner, was admitted September 3rd, 1872. The previous Christmas, having been quite well previously, he suddenly felt as if a brick had fallen on his head. He did not become unconscious, but had for fourteen days pain at the fore part of the head and in the left shoulder. After that time, his head began to shake, twitching round in rotation backwards and forwards from the median line. This disorder lasted three weeks, and then his hands became affected as they were on his admission, but less severely. Two months before admission, his feet and legs became affected; the right leg used to move as fast as his arm, especially when he was lying down. This affection of the lower limbs had ceased during the last three weeks. He had always been temperate. He never suffered any sudden shock. He never had a blow on the head. His head was large; the cheeks and lips red; the chest broad; the belly protuberant. On his admission, both forearms were in frequent movement from the elbow; there was a to-and-fro movement of small extent while the arms lay quietly folded on his chest; but when his arms were extended, as in shaking hands, the movements became very rapid and extensive, and were so forcible that they could scarcely be controlled by any power that I could exert. The rate of the movements while he was lying quiet was 240 per minute. If he raised even one hand, the agitation came on very violently. The hands began to be affected on March 2nd, and had continued to be agitated until his admission, except that his left arm had recovered now and then for two or three days. He could feed himself with his left hand by snatching morsels rapidly and carrying them instantly to his mouth. Any forcible attempt to stop the agitation aggravated it extremely. If he stretched out his arms as he lay in bed, and laid them by his side, they were agitated immediately much more than before, and I could not control the movement at all. He had gained two stone in weight since his illness commenced. The muscles of his arms did not appear large. The sounds of the heart were quick and weak; there was no *bruit*. The bowels were regular. He had been in Guy's Hospital twice, and in

St. Thomas's once. In Guy's, his left hand became quiet, but not his right. He was ordered three drachms of succus conii three times a day.—September 4th. Pulse 54. He was quieter; his hands hardly moved at all.—September 5th. The left hand was quite quiet; he could raise it and move it about in any way. The right was also better, but shook if he moved it about; and there was pain at the knuckles of the index and mid fingers. He had not been so well as he was now since he was first attacked. Pulse 72, quiet.—September 7th. He could move the right hand and arm without tremor; but, if he squeezed another person's hand, the tremor came on. He was allowed ordinary diet.—September 9th. His right and left hands were both steady now; he could move the right quite well, and grasp my hand without any tremor ensuing. There was still some soreness about the knuckles. The urine was quite aqueous, without sediment; specific gravity 1004.—September 14th. He had never been so free from tremor and pain as now, since he had been ill. He experienced great sense of rest from the cessation of the tremor; he used to feel as if a rope were round his shoulders. The only symptom which he had now was a sort of burning about the right elbow and down the arm. He said that his abdomen felt less distended than it did.—September 16th. The urine was yellow, of specific gravity 1031, not albuminous. He could hold out a kitchen-chair at arm's length with the left hand without tremor; but, when he did it with the right, it shook considerably.—September 19th. He was ordered two drachms of cod-liver oil daily.—September 23rd. The conium was omitted, and he was ordered a scruple of saccharated carbonate of iron three times a day.—He was made an out-patient on October 3rd.—October 17th. The disorder returned on the 12th. He could keep the right arm still, unless he exerted it. After some exertion, both hands went off into tremor. He had been unable to wash himself the last week. He had pain on each side of the neck and nose, as if some one were pulling at these parts; the pain extended down to the left side of the chest. He was ordered five drachms of succus conii three times a day, and galvanisation; but, by mistake, was faradised. October 24th. He was decidedly better; his arm shook for about six hours after faradisation, but was better afterwards. The left arm was quite steady; he could hold out his hand with a little tremor.—October 31st. The tremor now was very considerable, as he had just been faradised; but the tremor thus excited did not last so long now as it used. His abdomen used to swell much, but had not at all the last week. He was ordered to continue the mixture, with six drachms of succus conii three times a day; and to be galvanised.—November 15th. He was so much better that his neighbours could not believe he was the same man.—November 18th. He was now better than he was when he left the hospital. He could hold out a kitchen-chair at arm's length with both arms, but had some tremor in the right after holding it out a few seconds. He thought that he was steadier after galvanisation than after faradisation.—November 28th. He could work now seven hours a day. The mixture was continued twice a day.—December 2nd. He did not grasp very powerfully; the arm trembled a great deal when it was raised straight up.—December 9th. He could hold out the chair at arm's length notably longer than he could before his power failed and tremor came on. He continued at work.—December 23rd. He could hold out a chair now without any tremor. He was discharged.

CASE IV.—Mrs. H., aged 62, was seen on September 27th. She had been suffering slightly in the same way for nine years, and had been worse since she had an attack of diarrhoea five weeks previously. Lately she had had some difficulty in speech and some pain in the head. She had slept very badly the last two or three years. Both hands and forearms were in continual movement—a sort of tremor; the hands moving to and from the side, and the upper arm being apparently at rest. The movement was very rapid. On close examination, the movement seemed to be produced by alternate actions of the pectoralis major and deltoid muscles adducting and abducting the arm. If the forearm were held still, these movements were replaced by others of flexion and extension of the wrist. She could not keep her hands still for even a moment by voluntary effort. Her feet and legs moved in the same way; but, as she sat, I saw little more than the feet moving at the ankles. If she stood five minutes, she had pain in her back, and wanted to sit down. When she walked, she took short quick paces, leaning forward and tending to run. She could not go up and down stairs, nor walk more than a few yards. She had great want of control over the muscles of the thigh. Any excitement or mental agitation aggravated the tremor. The left arm and leg were first affected; the right two years afterwards. If she had a good night from chloral, she was much better the next day. She never had any fall to speak of. Her head was quite steady, but her lips at times twitched a good deal. Her general health was good. The heart and

lungs were sound. She had taken a great variety of tonics and sedatives, but had become worse. The patient was seen in consultation with Mr. White, who, at my request, gave a full trial to conium, but without any benefit ensuing. She took five drachms or more of the succus three times a day. Subsequently, she had a fortnight's trial of one of Pulvermacher's large chains; but this was equally inefficacious.

In Case I, the tremor could be arrested by an effort of volition; in Case IV, it could not; in Case III, it was aggravated. In Case II, it could be arrested in one arm, but not in the other. Some sensory disorder was present in Cases III and IV, but scarcely at all in the others. The affinity of the disorder with chorea was very evident in Case II; in fact, I have no doubt the condition was essentially identical with the choreic; but some slight modification of the state of the nerve-cells rendered the symptoms different. The circumstance that Case III gained two stone in weight during his illness is noteworthy. I suppose the exhaustion of nerve-force induced asthenic obesity, just as an acute illness may do during the period of convalescence. It is also remarkable that his abdomen lessened in size considerably as he improved—probably from the intestinal muscles regaining their tone and preventing the accumulation of flatus. The alternation of the limb-affection with impairment of speech (vocal) in Case II is good evidence of the purely neurotic character of the disorder.

[To be continued.]

RECURRENT SYPHILITIC KERATITIS.

By JAMES DIXON, F.R.C.S.,

Consulting Surgeon to the Royal London Ophthalmic Hospital.

WE are wholly indebted to Mr. Jonathan Hutchinson for our knowledge of the special keratitis resulting from inherited syphilis; and he it was who distinctly pointed out the peculiarities of complexion, features, and teeth, which are invariably associated with this form of corneal disease. Among his reports (*Clinical Memoir*, etc., 1863), I do not find an instance of this keratitis recurring in a severe form after an interval of several years, and I have observed only one such case in my own practice; it may, therefore, be worthy of record. I do not mean to assert that recurrence of this affection is in itself very uncommon. One often sees it return after a short interval, when the first attack has been a slight one, and the recovery of corneal transparency not quite complete. The severity of the two attacks, the perfect recovery from the first one, and the long interval of quietude, form the peculiarities of the following case.

H. C., aged 12, came to me January 1st, 1866. He had a pale complexion and very light hair. The teeth were characteristic of inherited syphilis, especially the middle upper incisors, which had what I have called the "screw-driver" shape. The right eye was healthy; the left cornea had a crescentic plexus of vessels along its lower edge, and was so hazy that the pupil could scarcely be traced; No. 20 Jäger being only noticed on black marks. Early in February the right eye began to be irritable, and in the course of three weeks the cornea was as opaque as the left had been. No. 20 type was now not read with either eye. The left eye steadily improved under treatment, and by the end of April could even read No. 1. During May the right eye improved also, and No. 4 could be read; in October, No. 2; and on the 14th December, both corneæ were clear, and No. 1 could be read with either eye.

For more than three years the patient remained well; but about the middle of 1870 he became subject to attacks of epilepsy, and was placed under the care of a physician. At this time sight was excellent, and the corneæ were brilliantly clear. They remained so till May 1872, when the left eye became irritable, the right soon suffered in the same way, and by the middle of June both corneæ were so opaque that all reading power was lost. Under treatment the corneæ slowly began to clear—the clearing commencing, as it always does, at the circumference, through which portion the pupil could be discovered, while the central opacity still remained dense. When I last saw the patient, in December, the corneæ were not yet clear, but he could read No. 12, and was steadily improving.

The treatment on which I rely in this disease is iron, given in those small doses in which alone I believe it is ever beneficial, with only a little mercury; a grain of calomel once in ten days or so, to prevent the iron from injuriously affecting the liver; the only local application, except occasional fomentation with warm water, being atropine. Good diet, and all other means to improve the patient's general condition, are essential in these cases; and I think that blistering, issues, and all so-called counterirritation, only do harm, by weakening the patient and interfering with rest.

ON COLLES' FRACTURE OF THE RADIUS, AND ITS TREATMENT.*

By J. ALEXANDER MACDONALD, M.D.

OF all the injuries which come under the care of the surgeon in ordinary practice, it has been observed by a modern writer on the subject, "few fractures have had so many ingenious splints devised for their treatment; yet, in spite of the utmost care, most cases of this fracture turn out unsatisfactorily, and many are the actions of damages that have been raised on its account."

When we consider the frequency of the lesion, it must appear strange that it was not until the year 1814 that an accurate description of its pathology was given by the eminent surgeon whose name it bears; while in Sir Astley Cooper's classical work on *Dislocations and Fractures*, edited by his nephew, which appeared in 1842, in describing the symptoms of this fracture, Sir Astley remarks: "I have seen this accident frequently, and at first did not exactly understand the nature of the injury; indeed, dissection alone taught me its real character."

Eight years previously, the celebrated Dupuytren, in his *Leçons Orales*, had expressed his belief that what had up to that period (1834) been described as dislocations of the wrist, were in reality fractures of the radius; and, still further, that, in the numerous dissections of wrists which he had made with a view to determine the question, he had never met with dislocation as the consequence of a fall on the palm of the hand, but solely as the result of disease, or to be otherwise explained. (*Vide* Sydenham Society's translation, by Mr. Le Gros Clark, p. 120.) In a foot-note at p. 138 of this volume appears the germ of Gordon's apparatus—viz., "convex splints, adapted with their convexity towards the centre of the arm."

In 1850 was published a *Treatise on Fractures in the Vicinity of Joints*, by Dr. R. W. Smith of Dublin, in which appear Colles' description of the accident, quoted at length from the *Edinburgh Medical and Surgical Journal*, and the author's opinion that Sir Astley Cooper had confounded the injury in question with luxation of the carpus; his words (p. 494) denoting an evident rupture of the radio-carpal ligaments—to wit, "an evident projection of the radius and ulna on the dorsal surface, and of the carpus on the palmar surface of the forearm."

According to the several authorities alluded to, the seat of the fracture is about an inch above the styloid process, and generally transverse; occasionally, however, presenting some degree of obliquity in its course, either downwards and inwards or downwards and outwards.

Referring to the bones of the forearm as they appear *in situ*, we observe the normal concavity of the radius anteriorly; the direction of its carpal extremity forwards and inwards; and the difference in length between its anterior and posterior surfaces, amounting, on an average of specimens, to nearly half an inch.

On the occurrence of the accident, we have the following results; viz., the natural concavity of the radius is lost; its distal extremity, with the carpus attached (in consequence of the unopposed action of the supinator and long extensors) is carried backwards, outwards, and upwards; while the length of the bone anteriorly is augmented in a ratio corresponding to the interval between the fragments, and the interosseous space diminished by the approximation of the upper fragment towards the ulna by the pronator quadratus.

Accepting the above as the pathological conditions presented to us, we have to consider by what means we may best obviate them in endeavouring, first, to restore the form of the radius; second, to bring back its carpal extremity to its proper aspect, *forwards and inwards*; and, thirdly (as a consequence of the preceding steps), to remove the obstacles to the reunion of the opposed surfaces, and, if possible, secure the normal length of the bone (radius) before and behind. How difficult of accomplishment this last point is, may be inferred from Dr. R. W. Smith's testimony that, out of twenty cases of fracture of the lower end of the radius, in none had the normal length been restored; in all, the anterior surface exceeded the posterior (p. 150). These several desiderata have been met by the apparatus known as Gordon's splint, in which the normal curve of the bone is taken as a guide, and the radius thereby forced to assume its proper form and relations; while the carpal surface is directed downwards, the hand being moderately adducted, and midway between pronation and supination finally. They are easy of application; and the feeling of comfort experienced from the support thereby afforded is marked, when contrasted with any other form of splint in ordinary use. To them the motto "*Cito, tuto, et jucundè*," seems especially applicable; and by their employment the

* Read before the South Midland Branch.

opprobria of stiffness, etc., are almost entirely unknown. For additional testimony to their value since Dr. Gordon's paper first appeared in the *Dublin Medical Journal* in 1865, I would refer to a communication to the *Medical Times and Gazette* in the year following by Mr. Lawson Tait, by whom they were again brought under the notice of the profession. In a recent letter to me, he repeats his favourable opinion, fortified by increased observation of more than fifty successful cases, and the too frequently unsatisfactory results of ordinary treatment.

The splints are made by Sloan, Israel Street, Belfast.

NITRATE OF POTASH AND QUININE AS FEBRIFUGES.

By H. MACNAUGHTEN JONES, M.D.,
Extra-Physician to the Cork Fever Hospital.

HAVING for some years past frequently employed nitrate of potash and quinine, in large doses, in diseases where the temperature maintained a high range, and almost universally with success, I determined to select a few cases out of many, which add to the mass of evidence already adduced, to prove their efficacy in febrile conditions.

CASE I. *Pneumonia*.—James Borny, aged 18, was admitted on April 14th. His temperature was 105.4; pulse, 92; respiration, 30. He had great distress of countenance, slight delirium, viscid expectoration, dulness over the lower lobe of the right lung, with moist crepitation and some bronchial *râles*. I ordered for him on the evening of the 14th a saline aperient draught, and a mustard cataplasm to be applied over the lung for twenty-five minutes. On the morning of the 15th, I commenced giving nitrate of potash in fifteen-grain doses every third hour. The respirations were now 36; pulse, 112; temperature, 106 deg. Fahr. That evening there was a slight fall in the temperature; the pulse and respiration remained the same. The nitrate was not given during the night. On the morning of the 16th, I was surprised to find the thermometer (which was about seven minutes in the axilla) up to 108.3. I continued the nitrate every third hour, with the addition of one grain of ipecacuanha. He had on the day previous a blister and constant warm linseed-poultices kept over the dressing; these were continued for the next few days. I visited late on the evening of the 16th, and found the temperature fallen to 104.4; the pulse and respiration remaining the same. The temperature I took but once daily from this date, about midday. On the 18th, I reduced the nitrate of potash and ipecacuanha to one dose every six hours; on the 19th, I omitted them at night; and on the 20th, discontinued them, and commenced a senega and ammonia mixture. The pulse now was slow and irregular; the temperature 97.3; the respiration easy and free. On the 25th, he was allowed to sit up. His diet throughout consisted of claret, chicken-broth, beef-tea, and milk.

The following table shows the variation in the pulse, respiration, and temperature.

Date.	Day of Disease.	Pulse.	Respiration.	Temperature.
April 14	5	92	30	105.8
" 15	6	112	36	106.
" 16	7	112	36	108.3
" 17	8	96	30	104
" 18	9	64	30	100.2
" 19	10	62	30	97.4
" 20	11	60	28	97.3
" 21	12	64	28	97.8
" 22	13	62	24	97.8
" 23	14	63	20	99.5
" 24	15	76	20	99.8
" 25	16	65	18	99

CASE II. *Pneumonia*.—D. Sullivan was admitted on February 25th. Fifteen grains of nitrate of potash, with one of ipecacuanha and James's powder, were given every third hour, after a saline aperient. A vesicant and linseed cataplasms were applied as in the last case. This case was complicated with icterus, strongly marked. On the 28th, there was a return of respiration over the lung, and the icterus was declining. The nitrate was now given every twelve hours. On the 29th, the pulse was slow, the heart's action feeble. I omitted the nitrate, and commenced to give a mixture of liquid extract of bark, ammonia, and chloric ether.

On the 3rd March, he was allowed to sit up. The diet was as in the last case.

The following table gives the pulse, respiration, and temperature, as observed.

Date.	Day of Disease.	Pulse.	Respiration.	Temperature.
Feb. 25	4	102	33	104.8
" 26	5	108	50	105
" 27	6	88	43	105.3
" 28	7	56	28	99.6
" 29	8	56	30	99
Mar. 1	9	44	24	98.5
" 2	10	56	20	98.5
" 3	11	52	20	98.5

CASE III. *Pneumonia, with Typhoid Symptoms, Diarrhœa, and persistent high range of Temperature to the twenty-first day, reduced by Quinine*.—Michael Donovan was admitted, on the ninth day of illness, on April 23rd. His pulse was 120; respirations, 40. He had bloody expectoration, an anxious countenance, and was delirious. The temperature was 104. There was profuse sweating. For the first four days he took alternately doses of mineral acid, and bark and ammonia; and he was supported with claret, beef-tea, and mistura vini gallici, made with milk. On the 27th, he got fifteen-grain doses of nitrate of potash, with ipecacuanha; the mineral acid was omitted. From this date to May 2nd, his temperature continued high; pulse rapid; respirations frequent. Diarrhœa, which had been threatening for some days, now became urgent; it was controlled partly by aromatic sulphuric acid and warm astringents: the nitrate had on this account to be stopped. On May 4th, as his temperature was persistently rising, I determined to give him ten grains of quinine every third hour. There was no apparent effect to the night of the 5th, save that the pulse fell some beats. On the 6th, I increased the dose to fifteen grains every third hour. A fall of three degrees took place during the night of the 5th, and the quinine was continued to the night of the 7th. On the 8th, he got mineral acid with liquid extract of bark. From this date, with little variation, he continued to improve, and was sent into the convalescent ward on the 14th May.

Date.	Day of Disease.	Pulse.	Respiration.	Temperature.
April 23	9	120	40	104
" 24	10	...	...	102.5
" 25	11	...	...	104.4
" 26	12	...	...	104.5
" 27	13	...	...	103
" 28	14	...	...	103
" 29	15	...	...	103.4
" 30	16	...	...	103
May 1	17	...	...	101.5
" 2	18	...	...	101.8
" 3	19	...	...	102.3
" 4	20	108	36	102.6
" 5	21	96	36	103.2
" 6	22	88	40	100.3
" 7	23	88	32	98
" 8	24	96	36	99.5
" 9	25	84	36	98.5
" 10	26	96	36	98.4
" 11	27	84	36	96.7
" 12	28	76	36	99.5

CASE IV. *Intermittent Fever after Small-pox*.—Bridget Culhane, aged 10, was admitted on April 5th. Her pulse was 120; respirations, 36; temperature, 101.2. She had copious diaphoresis, which continued all through her illness, requiring frequent changes of linen. This had been a most severe case of confluent small-pox; she had been discharged from hospital three weeks previously. Her mother asserted that she had been going on well and running about up to a few days before admission, when she took a severe rigor, and the feverish symptoms set in. On the night of her admission, she had a deep mottling over her body, a rash somewhat resembling measles, disappearing on pressure, and giving her face a livid look. This rash disappeared in about forty-eight hours. At times she was delirious, and had a vacant stare on being

spoken to. On the morning of April 7th, seeing the temperature at 105, her pulse 120, and respirations 48, I determined to commence quinine in large doses. A glance at table No. 4 will show the progress of the case. The quinine was administered day and night perseveringly, in ten- and fifteen-grain doses. On the night of the 9th and part of the 10th, also on the night of the 12th and part of the 13th, it was omitted, producing on these occasions vomiting and great straining. The usual dose was ten grains every four hours, occasionally every third hour. She had no other medicine throughout her illness. The quinine was administered with spirit of chloroform and aromatic sulphuric acid. She was taken into the convalescent ward on April 26th, and was ultimately discharged cured. She was liberally supported throughout with brandy mixture and claret.

Date.	Day of Disease.	Pulse.	Respiration.	Temperature.	
April 5...	5	120	36	102	
" 6...	6	114	28	101.3	
" 7...	7	120	48	105	Quinine commenced.
" 8...	8	112	36	100.6	Do. repeated.
" 9...	9	126	38	102.4	Do. do.
" 10...	10	130	36	102	No quinine.
" 11...	11	132	36	103.2	Quinine given.
" 12...	12	132	40	105	Do. do.
" 13...	13	120	40	101.5	No quinine.
" 14...	14	120	36	105	Quinine given.
" 15...	15	120	36	102	Do. do.
" 16...	16	108	30	102.4	Do. do.
" 17...	17	120	30	105	Do. do.
" 18...	18	120	30	103.5	Do. do.
" 19...	19	120	30	102.9	Do. do.
" 20...	20	114	30	102.2	Do. do.
" 21...	21	100	28	100.2	Do. do.
" 22...	22	84	26	91.2	

This last case is an example of a form of intermittent fever, of which I saw many examples during the late epidemic of small-pox, with high temperature, relapses, and copious diaphoresis. It occurred during convalescence, and often when the patients had left hospital.

REMARKS ON PSORIASIS.

By A. S. MYRTLE, M.D.,

Consulting Physician to the Harrogate Bath Hospital.

THE communication of Mr. Balmanno Squire on the Etiology of Psoriasis deserves notice, as everything bearing upon that most inveterate disease must, so long as we know so little regarding its pathology and treatment. As a very considerable number of chronic skin-diseases come under my care every year, I trust the observations I am about to make may be found worthy of a place in the JOURNAL.

I do not agree with Mr. Squire in his supposition that psoriasis (lepra vulgaris) is the disease meant in Scripture when the word leper, or any of its derivatives, is employed. It ought to be borne in mind that where the appearance of the skin is spoken of as being "as snow" (the word white does not occur in the original, and is never used by eastern nations as it is by us), there are only three cases mentioned—Moses's hand, Miriam's case, and Gehazi's. Now these were not examples of disease in the ordinary sense or natural course, but instances of miraculous interference with healthy skins, and we, therefore, cannot take them into account. I suspect that all cutaneous diseases, scabies, favus, porrigo, herpes, eczema, psoriasis, and elephantiasis (true leprosy) are spoken of in the Bible under the general name of leprosy; and, as the treatment adopted by the priests was the same in each, and certainly is not such as we would think of resorting to, even were it lawful, we need not speculate whether psoriasis was the disease for which such stringent regulations were enforced among the Jews or not. One thing strikes me as worthy of remark; namely, that whereas the word "white" is applied to the hair and spots of the leper, and "snow" to the three miraculous cases above-mentioned in the Old Testament, in the New we have no mention of the colour of the skin, each case is simply spoken of as "a leper." Doubtless the term leprosy was frequently made use of to indicate that the man, garment, house, or article of furniture was unclean, contaminated, capable of conveying infection; in fact, anything but "white," which is generally associated with purity.

In common with others, I have been struck with the number of cases where the disease is confined entirely to parts of the body which are always under cover, and often its existence is only known to the individual, who keeps his secret even from his ordinary medical attendant as well as his relatives. When anything affects the skin, it seems a law that the individual shall strive to hide it as long as possible, and when it can no longer be hidden, often the first person who is made acquainted with matters is the specialist. Accordingly, we may reckon that psoriasis is much more frequent than is known even to the profession. There can be no doubt as to its being hereditary, but it is by no means always so, and is perpetually occurring spontaneously. It cannot be traced to any diathesis except its own, and is more prone to attack the "blooming and healthy," as Hebra states, than the pale and weedy. Race, country, climate, diet, as far as I have been able to ascertain, have nothing to do with it, and even the habits of the individual seem incapable of affecting his condition; every now and then we find cases where symptoms become worse or better at certain seasons—some in spring, others in autumn or winter, but these, for the most part, are exceptional.

As for treatment, I feel satisfied from extensive personal observation, that protracted oft-repeated courses of arsenic, mercury, and iodine, whilst they undoubtedly relieve local symptoms, do so in the great majority of instances only temporarily, whilst they permanently exercise in many a baneful influence on the general health or condition of certain viscera.

The depressing effect of this disease on the spirits, especially of the young, is great and constant; in the male this is not so much the rule as in the female. With her, psoriasis too often proves a barrier to all that makes life desirable; she cannot go into society and dress like other girls, from whom she is virtually set apart; she may be admired, have offers of marriage, but all is a mockery. Under these circumstances we need not be surprised that she should grow melancholy, and ere long fall a victim to decline; this is all the more likely to happen after often promised cures and as often repeated disappointments.

External applications of the various preparations of coal-tar, creasote, carbolic acid, and mercury or iodine, singly or in combination, are most useful, and cannot with ordinary care be injurious. The internal and external use of mineral waters frequently exert a most beneficial influence where other means have failed, but in old standing cases no good need be looked for unless these are steadily persevered in for months. I have now several boys and girls under my care who have been sent to Harrogate, for the double purpose of trying the effect of its waters and allowing their education to go on at the same time at one or other of the many schools with which the place abounds; and I am not only satisfied but the patients and their friends are delighted with the result, contrasting, as they do, most favourably with that obtained from all other methods of cure previously adopted.

ON THE INDUCTION OF PREMATURE LABOUR.

By JOHN BASSETT, Esq.,

Professor of Midwifery in Queen's College, Birmingham.

THE induction of premature labour is one of the established operations in midwifery. The various circumstances which necessitate its performance, and the different methods by which the operation can be accomplished, are set forth in detail in the text-books on midwifery, but nowhere so concisely and clearly as in Dr. Barnes's well-known and inestimable treatise. I do not propose in this note to travel over the whole subject, but to draw attention to what Dr. Barnes has laid particular stress upon; viz., the different treatment which is required in the varying degrees of contraction. If the pelvis measure from three inches and a half to three inches in the conjugate diameter—the operation having been undertaken at the right time, the child's head being of average size, and with no unusual ossification, and the uterus of normal power—then, the uterus having been set in motion, the case may be left to nature, and it will usually terminate without interference; but when the pelvis measures three inches only in its conjugate diameter, and the same circumstances as indicated above are present, then the child's head will be so long delayed at the brim that its life will be very likely to be sacrificed. Therefore it is proper, as soon as the soft parts are sufficiently dilated, to perform the operation of turning, unless during the stage of dilatation the head have so far entered the brim of the pelvis as to permit the forceps to be applied with facility. Where the third degree of contraction exists, the conjugate diameter measures less than three inches; here, under ordinary circumstances, both turning and craniotomy will be required. I have recently had under observation a case in which the pelvis measures three inches only in its antero-

posterior diameter at the time appointed. The uterus was set in motion by the passage of a bougie; in twenty-four hours, an insufficient amount of dilatation being present, the case was allowed to go on another day. The head not having then entered the pelvic brim, and the parts being sufficiently dilated, chloroform was administered and the operation of version performed. This was my patient's fourth confinement. In the first instance, I had to perform the operation of craniotomy, the forceps having failed to effect delivery; on the second occasion, the os was fully open twenty-four hours after I inserted the bougie. The head not being within reach, I passed my hand and turned with facility. In the third confinement, labour supervened spontaneously the day before I had appointed to visit the patient to bring it on. The child's head was arrested at the brim of the pelvis, and required the application of the forceps. In each of these three instances the children have been born alive and have thriven well, a circumstance which has not always happened where children have been born prematurely; for in several instances they have remained weak and puny, and this has, to my mind, seemed a drawback to an otherwise most beneficial proceeding.

In closing this note, I would make two other remarks. The first is, that I have tried nearly all the methods of inducing premature labour that have been advised by authors, and find no other so efficacious as the introduction of the bougie; secondly, the capacity of the pelvis may be accurately measured by Dr. Earle's pelvimeter, the one figured at page 297 of Dr. Meadows's *Manual*. The use of this instrument is much more satisfactory than the employment of the hand, which has long been the guide of British accoucheurs; it is easy to introduce, and, when manipulated with care, gives little pain, and yields an accurate and satisfactory result. This I had occasion to test last spring in the case of a lady who came from London to reside in this town; she was of small stature, had been delicate all her life, and had had some serious illness. Her former medical attendant wrote to me expressing his fear as to the size of her pelvis, and requesting me to make a careful examination of it when she had completed the eighth month of her pregnancy. I did so, and found that it measured four inches in its antero-posterior diameter, that it was normal in all its proportions, and also that the long bones of her body were free from any sign of curvature. She completed her term, and passed through a natural labour.

CARBOLIC ACID AS A CEREBRO-SPINAL POISON.

By DAVID J. HAMILTON,

Junior House-Surgeon to the Northern Hospital, Liverpool; formerly Resident Surgeon to the Royal Infirmary, and Chalmers Hospital, Edinburgh.

SINCE carbolic acid has come to be extensively used in surgery and for ordinary disinfecting purposes, instances of poisoning by it have become much more common than before; indeed, several remarkable records of death from tetanus in a few hours after the application of pure carbolic acid or a strong solution to a wound, which have been published within the last two years, were due, I feel convinced, to poisoning by carbolic acid. Several instances of poisoning from the absorption of carbolic acid have come under my notice. The symptoms were the following.

S. R., a female child, aged four years and six months, had an operation performed on the arm, requiring an incision through the skin about four inches long. The wound was covered with lint soaked in pure carbolic acid—actual contact, however, being prevented. In an hour after the operation I was called to see the patient, as the nurse thought that she was suffering from the effects of the chloroform. I found, on examination, that the conjunctivæ were almost quite insensible; the skin was cold and clammy, and the face of a slightly livid colour. The pulse was slow and depressed. Thinking that very probably the chloroform might have something to do with the production of these symptoms, I resorted to the ordinary restorative measures; but, notwithstanding this, the patient was evidently becoming more comatose. The dressings were now removed, and it was found that a large quantity of carbolic acid had melted and run down into the wound. The wound was now washed with water and rectified spirit, and artificial respiration was commenced and steadily kept up. The natural respiration at this time occurred at intervals of about half a minute. Injections of brandy were administered, and hot fomentations were wrapped round the patient. In three hours after this, the respirations ceased entirely when artificial aid was not employed. The pulse at the wrist had disappeared, and the face became more livid. At the same time, the coma was complete. Half an hour afterwards, the child died.

THERAPEUTIC MEMORANDA.

POTASSIUM CHLORATE IN CATARRH.

A NOTICE in the *London Medical Record* of February 19th, on "Borax and Nitrate of Potass in Loss of Voice", suggests to me the seasonableness of drawing attention to the immense value of potassium chlorate in catarrh. If taken early and taken frequently, it will stop many a cold. The best form is the lozenge, eight or ten or more in the twenty-four hours. It should be sucked very slowly, for its action is chiefly, if not altogether, local. It always quickly relieves the stuffing of the nose, the rawness of the throat, the thickness of the voice, and, if begun soon enough, speedily cures the cold.

LEONARD W. SEDGWICK, M.D.

OBSTETRIC MEMORANDA.

CHLOROFORM IN INFANTILE CONVULSIONS.

ON noticing in last week's JOURNAL Mr. Mowat's cases of convulsions in children treated successfully by chloroform-vapour, it occurred to me that a few months ago I treated successfully a very severe case of convulsions—rather of a tetanic type—in a child five months old, with repeated large doses of spirit of chloroform. For two or three days, others measures had been employed; but, finding the convulsions becoming almost continuous, I gave twenty minims of spirit of chloroform every hour, with the effect of soothing the patient, and in about twelve hours completely arresting the convulsions. The child is now quite well.

HENRY M. MADGE, M.D.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

KING'S COLLEGE HOSPITAL.

OPERATIONS, FEBRUARY 1ST.

Excision of Knee-joint: Convalescence in eight weeks.—Mr. Henry Smith brought forward a patient whose knee had been excised exactly eight weeks that day. She was a scrofulous girl about eighteen years old. When a child, she had suffered from acute inflammation of the knee-joint, the result of an accident. Firm bony ankylosis of the joint finally took place; but, unfortunately, the limb was flexed at an angle of about 120 deg., so that she could make no use of the leg in standing. The toes just touched the ground as she walked, and were liable to catch in any obstruction. She had applied at one of the metropolitan hospitals, when extension under chloroform was attempted, but the union was too firm to be broken down by a reasonable amount of force. Amputation was then proposed, but the patient would not consent. She was admitted into King's College Hospital for strumous iritis, which proved very obstinate; it required a month's treatment, including mercurial salivation, before it was cured. At the patient's own request the knee was then excised, and, in spite of the unfavourable antecedents, the result was most successful. Bony union took place in five weeks, and in eight weeks was firmly and soundly united in most excellent position; the shortening was only one inch.

Excision of the Knee.—Sir William Fergusson excised the knee of a man who had suffered for twelve months from disease of the joint of a somewhat acute character; constant and severe pain had been a prominent symptom, and the patient was evidently greatly reduced. Sir William Fergusson observed that he preferred to open the joint by a straight transverse cut. In this case he made a lunated incision on account of some sinus in front of the head of the tibia, which it was desirable to lay open as far as possible. He was rather surprised to find that there were still some surgeons who questioned the expediency of removing the patella. He could only say that five and twenty years' experience of the operation had left no doubt on that point in his mind. If the patella were not evidently diseased at the time of the operation, it was liable to become so afterwards; and if it remained sound, its function was abolished as soon as bony ankylosis occurred; it did not strengthen the limb materially, was, in fact, of no use, and to leave it was only to increase the risk of a recurrence of disease. The compara-

tive mortality of excision and amputation was another vexed question. He thought that there were as yet scarcely sufficient data to determine this point at all accurately; but, to speak merely from his own practice and experience, he could only say most emphatically that the difference in the mortality after the two operations was not nearly so great as had been asserted by some surgeons. Allowing, however, that excision was somewhat more fatal, supposing that one life was lost for every six legs saved, was not the gain worth the risk? It was partly a question for the patient. Instrument-makers had certainly contrived some most ingenious and elegant limbs of cork, willow, and ash; but people, as a rule, still preferred the old-fashioned flesh and blood article, and were willing to run some risk in order to retain it.

Disease of Os Calcis: Syme's Amputation.—Sir William Fergusson removed the foot of an old woman upwards of sixty years of age by Syme's operation. She had suffered from caries of the os calcis for several years; some diseased bone had been removed by gouging, but the disease had continued to extend; latterly she had suffered from increased pain, and there was reason to fear that the disease was extending beyond the bone originally involved.

Sir William Fergusson remarked that to remove the whole foot on account of disease of one bone appeared rather a severe proceeding; it did not seem to be in accordance with the conservative spirit of modern surgery; but, in comparison with the practice of a few years back, that of the present day was eminently conservative. Until within the last quarter of a century, the rule in cases of obstinate disease of any of the tarsal bones, was to amputate immediately below the knee; sometimes the head of the fibula was removed. Either from leaving too thin a partition of bone, or from communication between the bursa under the head of the fibula and the knee, acute inflammation of this joint was not uncommon, and a second operation became necessary. Certainly, thanks were due to Mr. Syme not only as the inventor of the operation which had been named after him, but also as having been one of the first who introduced Pirogoff's valuable operation into England, and as having by his teaching and practice greatly contributed to its general adoption. Had this patient been younger, something more might possibly have been done locally by gouging, etc., with the hope of arresting the disease; but, considering her age and strength, a recurrence of operation was to be avoided.

Nævi: Subcutaneous Ligature.—Among the minor operations were the ligature of three large nævi; they were tied by Sir William Fergusson's ingenious subcutaneous method, now happily generally known and practised. One of these cases was a good example of the extraordinarily rapid growth often seen in these structures. The child, only thirteen weeks old, had an oval mass of the left cheek reaching from just in front of the ear almost to the ala nasi, two inches long by three-fourths of an inch in width; yet the mother declared that it was a mere speck at birth.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

CASES OF EXOPHTHALMIC GOITRE (GRAVES'S DISEASE).

(Under the care of Dr. DOBELL.)

THE notes of this case are reported by Mr. Henry Harris, Resident Medical Officer.

Elizabeth W., aged 23, widow, was admitted as an in-patient on December 19th, 1872. She presented in a moderate degree each and all of the characteristic symptoms of Graves's disease; viz., general anæmia, prominent eyeballs, enlarged thyroid, excitable and rapid heart's action, and disturbance of the generative organs. In addition, there were extensive chronic catarrhal signs throughout both lungs, with some disintegration of the left upper lobe, accompanied by mucopurulent sanguinolent sputa. There was no loss of flesh. The catamenia had been absent for eight months. Her father died of paralysis, at the age of 48; her mother of consumption, aged 35. Her husband died nine months ago, of consumption, at the age of 25. No disease of the heart or thyroid body was known in the family. The patient was born at Lea Bridge, but had never had ague. At seven years of age, she had enlarged tonsils, which were removed by operation. She remained weakly up to 14, and at that time both tonsils were again excised. The catamenia appeared at the age of 14, continued regular up to 16, and then disappeared. At the age of 16½, she married, became pregnant, and during pregnancy had two attacks of "inflammation of the lungs". Her first confinement was prolonged and difficult, followed by jaundice and by "inflammation of the womb", which laid her up three months. The cough from which she suffered ever since began at this time, generally being worse in autumn and winter, and better in summer. The second confinement occurred three years after the first;

a month afterwards, she had "inflammation of the lungs", succeeded by "gastric fever", which laid her up two months. At this time, general swelling of the body and legs occurred, and also slight swelling of the thyroid gland. About six months after the gastric fever (eight months after confinement), she miscarried at two months, with considerable flooding; and this was followed by inflammation of the lungs. It was after this that the thyroid enlargement, previously very slight, began to increase; and the eyes were first noticed to protrude, especially during violent coughing. At this time (December 1870), she was treated by Mr. Gay, and thought she was much benefited by a mixture containing two and a half grains of sulphate of quinine for a dose twice a day; the swelling of the throat disappearing. In April 1870, being again in general bad health and suffering from cramps in the hands, she again applied to Mr. Gay, and was treated with ammonia, rhubarb, calumba, peppermint, and compound tincture of lavender, with only slight relief. She became a patient of Dr. Eustace Smith at the Metropolitan Dispensary—without, however, getting much benefit. After this, about twelve months ago, she was under Mrs. Garrett-Anderson for inflammation of the lungs, and derived some benefit. Three months afterwards, she became an out-patient at Victoria Park Hospital, but without much improvement.

Dr. Dobell admitted the patient with the special object of fairly trying the effect of veratrum viride upon the heart's action. She had been already taking syrup of iodide of iron in drachm doses three times a day (as an out-patient), with advantage to her general health. This was continued; and inhalations of conium and carbolic acid were used for the lung-complication. At this time, the pulse varied from 92 to 120, according to whether the patient was quiet or a little excited, never sinking below 92 even in sleep, and generally being over 100. Aconite was given (the patient being kept quiet in bed), at first in two-minim doses of the tincture every four hours (begun on December 20th), and increased to three minims on the 23rd, and again to five minims on the 30th. These doses were followed by headache and swimminess, but had no effect on the rate of the pulse, or on the excitability of the heart. The aconite was then stopped, with relief to the headache and swimminess, but with no alteration of the pulse and heart. After an interval of twelve hours, the veratrum viride was begun on January 3rd. Five-minim doses of a tincture prepared by Messrs. Hanbury were given three times a day. The dose was increased to seven minims on the 5th; to ten minims every four hours, night and day, on the 8th; and increased to ten minims every three hours on the 10th. This produced some nausea; and the dose was therefore not further increased, but persisted in until, on the 21st, severe sickness continued for several hours, when, on the 22nd, it was thought advisable to stop the remedy, as no material effect had been produced upon the rate of pulse throughout, except during the intervals of vomiting, when the nausea depressed it to 80, as might have been the case from any ordinary emetic; and it rose again to 120 immediately afterwards. Except the nausea and vomiting, no appreciable effect was observable from the veratrum. The syrup of iodide of iron was continued, and also the inhalations of conium and carbolic acid. The temperature remained normal, and the measurement of the neck stationary. She remained in hospital till February; and during her stay menstruation returned naturally for the first time after a cessation of eight months, and again at the normal interval. Her general health and strength, and the lung-symptoms, were much improved. The patient was removed to the London Infirmary for Epilepsy and Paralysis, where the galvanic treatment is now being sedulously pursued.

Dr. Dobell remarked that this case agreed with all the cases of exophthalmic goitre he had yet seen in having a history of causes of nervous perturbation connected with the generative system. In a case now under his care in private practice, in which the eyes were so protruded that the lids were continually slipping behind the globes, and the heart's pulsations seldom less than 130 to 140 per minute, the symptoms came on rapidly after a severe fright, accompanied by prolonged anxiety, during the first week of a honeymoon.

REPORT ON THE ADMINISTRATION OF ETHER.

[Continued from p. 142.]

NEWCASTLE-UPON-TYNE INFIRMARY.

THE following note on ether-inhalation has been forwarded by Dr. FREDERICK PAGE, house-surgeon.

Ether has lately been used here twelve times for various operations, and sufficient has been seen of its action to recommend its more extensive employment, particularly in those cases where chloroform would be considered dangerous, owing to cardiac disease or depression. In no case have more than two-and-a-half ounces of ether been used; and in one,

where tracheotomy was performed upon a lad suffering from œdema of the glottis, accompanied with irregular and intermittent action of the heart and great feebleness, an ounce only was expended. In another case, one of removal of diseased bone from the tibia of a man who had well marked arcus senilis, an ounce and a half was used. The longest time required to produce anæsthesia has been six minutes; and in that case—an intermediate amputation of the thigh—owing to it being the first where ether was employed, and to the circumstance of the man being very low, half an ounce only was given at once. The shortest time required has been a minute and a quarter. In two instances (excision of the superior maxilla and epithelioma of the lip) the patients were rendered insensible with ether and the operations completed under chloroform, from the difficulty experienced in giving ether during an operation about the mouth. The anæsthetic was employed successfully to reduce a dislocation of the shoulder-joint of three weeks' standing.

The method adopted has been to pour, at first, an ounce of ether, and at each revival half an ounce, on to a small sponge placed in the apex of a cone, formed by folding a towel; covering this towel with another, and, as far as possible, excluding all air. There has been very little excitement in any case, and in the majority none, either at the time or after the administration. Sickness has never supervened, although the ether has twice been given on a full stomach. The ether used has been that recommended by Dr. Richardson for the production of local anæsthesia. Calculating the value of one fluid ounce of ether as equal to that of one fluid drachm and a half of chloroform, the use of the former will not be found more expensive than that of the latter.

SUSSEX COUNTY HOSPITAL.

MALIGNANT DISEASE OF THE KIDNEY: NORMAL CONDITION OF THE URINE.

(Under the care of Dr. FUSSELL.)

A MAN, aged 25, was admitted as an out-patient, suffering from debility and pain in the loins, especially after walking. His general health appeared good. On the most careful examination, no cause for this could be discovered. On two or three investigations of the urine, it was found to be healthy. Being somewhat improved by tonics the patient ceased to attend, but returned in about two months, when a tumour of the size of a large orange was found in the right hypochondrium. It was rather hard, without tenderness or fluctuation; there was no bowel in front of it. The abdominal parietes were freely movable over it, but it was apparently adherent to the subjacent structures. There were no friction-sounds, and no hydatid fremitus. The tumour gradually increased more towards the mesial line of the abdomen than into the right loin. He was then admitted into the hospital, but he only remained a few days, being alarmed by the suggestion of an exploratory puncture. He became a patient of Dr. Wooldridge, who saw no objection to the operation; and, in a few weeks from this, the tumour having considerably increased, and become much softer, giving to the touch a deceptive sense of fluctuation, a small trocar was inserted to the depth of about three inches, when a few drops of thick bloody fluid exuded, which, under the microscope, gave no definite signs. Emaciation, which had been slowly coming on, soon became very marked, owing to his inability to retain any food, and he gradually sank, just seven months from the time of his first application to the hospital.

POST MORTEM EXAMINATION.—The right kidney could not be found; in its place was an enormous mass of soft cerebriform-looking matter, in which no remains of the structure of the kidney could be detected. The cyst was adherent to the edge of the liver, and in the anterior border of this organ similar deposits existed. The lower part of the right ureter was attached to the bladder. The left kidney appeared quite healthy, and but little increased in size. Circumstances prevented other cavities from being opened. The disease, under the microscope, showed numerous rounded compound cells, such as usually characterise an encephaloid growth. Dr. Fussell remarked that it was almost impossible to make an accurate diagnosis, for the following reasons. There were no symptoms pointing to a derangement of any particular organ, such as repeated vomitings—save towards the end—jaundice, anæmia, bronzing of the skin, or unhealthy alvine evacuations; but especially, though the tumour might possibly be referred to the kidney, yet the secretion, on repeated examination, presented no indication of disease in any part of the urinary tract. This fact of disease of one kidney coexisting with a normal state of the urine had been occasionally recorded, specially by Dr. Bright when relating a case of fungoid disease of the kidney. Chronic abscess occurred to one's mind, but there were no symptoms indicative of such

an affection. In many respects, to the sight and touch, it resembled an hydatid cyst of the liver, particularly as the fingers could not be inserted deeply between it and the edge of the ribs. The trocar furnished valuable information. The fluid withdrawn was not clear, as pertaining to a non-suppurating hydatid cyst; nor did it contain urinary elements, as indicating cystic disease of the kidney. The latter test could not always be relied on. A few years ago, at a metropolitan hospital, an operation was performed in a case of cystic disease of the kidney, under the supposition that it was an ovarian tumour.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

DR. DOBELL'S NEW TONGUE-HOLDER AND SPATULA.

It has long been a great desideratum to find an efficient and painless means of drawing out and holding the tongue. The instrument here figured completely answers these ends. The shape of the upper and lower blades allows the required amount of pressure for secure holding and traction to be applied to the tongue without exciting spasm by touching the dorsum far back, and protects the frænum and under surface of the tongue from injury by the teeth during protrusion. The fenestrated surfaces of the blades give an extraordinarily firm grip without any uncomfortable sense of pinching. The length of the handle enables the operator, or an assistant, or the patient, to hold the instrument without having the hands in the way of the mouth. When the blades are closed, they form a conveniently shaped spatula for ordinary use.

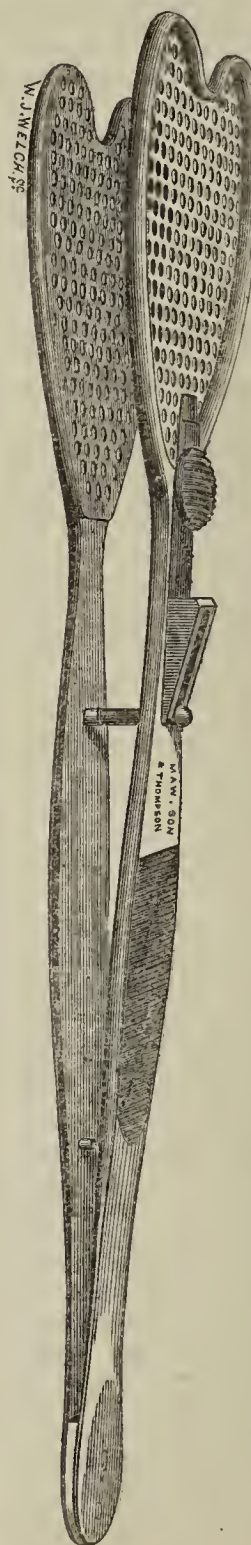
The best way of using the tongue-holder is to pass the short blade above the bottom teeth along the under surface of the tongue as far as the frænum; then close the long blade upon the upper surface of the tongue, and wedge both together by means of the slide, until the tongue is securely grasped. It is to be pulled straight out of the mouth as far as necessary, keeping the lower blade between the tongue and the teeth. When the patient is *conscious and willing*, he should be asked to put out his tongue far as he can upon the lower blade before the upper one is closed, and, if old enough, may apply the instrument altogether for himself, and thus avoid any chance of too tight compression, or too much traction. The instrument is strongly coated with nickel, and cannot, therefore, rust, and can be washed after use. A smaller instrument is made for children, and it enables the throat to be examined and applications made with remarkable ease.

This simple but valuable contrivance is intended to be used especially in the following cases.

1. Laryngoscopy.
2. The application of medicaments to the throat and larynx.
3. Operations on the larynx, throat, and mouth.
4. Restoration in chloroform accidents.
5. Ordinary examination of the pharynx.

Specimens of the instruments were exhibited by Dr. Dobell at a recent meeting of the Royal Medical and Chirurgical Society.

The manufacturers are Messrs. S. Maw, Son, and Thompson, Aldersgate Street.



SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 1ST, 1873.

THE MEDICAL EXAMINING BOARD IN ENGLAND.

THE following letter from Sir James Paget was read at the last meeting of the Senate of the University of London.

Sir,—I have been requested by the Committee of Reference for a Medical Examining Board in England, to state to you that considerable progress has been made by the Committee in preparing the necessary means for carrying the scheme for an examining board into effect. I am further to express the earnest desire of the Committee that all the medical authorities in England should take part in the scheme; and it would be very gratifying to them to learn that steps have been taken, or are intended to be taken, by the Senate of the University of London, to remove those legal difficulties which it is understood prevent the University's co-operating in the proposed scheme with the other medical authorities in England.—I have the honour to be, Sir, your obedient Servant,

JAMES PAGET, Chairman of the Committee.

The Vice-Chancellor of the University of London.

It was resolved that the letter be referred to the Committee on Examinations in Medicine. With the desire that the University of London should join in the formation of an examining board, we thoroughly sympathise. But the perusal of the letter is calculated, nevertheless, to raise certain doubts. What are the powers under which the Committee of Reference assume powers of treaty and the right of negotiation? These are sovereign acts; and the Committee of Reference is very far from being a sovereign body. It is a delegation limited by a very strict definition of its duties. We will recall the wording of its powers.

1. To determine the number of examiners to be assigned to each subject of examination. 2. To nominate the examiners for appointment by the several co-operating medical authorities. 3. To arrange and superintend all matters relating to the examinations, in accordance with regulations approved by the co-operating medical authorities. 4. To consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by any of the co-operating medical authorities, and to report their proceedings to all the said authorities.

We cannot find here anything that justifies the Committee in entering upon a correspondence of the first instance on a matter such as this, not referred to them. The Committee are acting *ultra vires*; and there is great reason for regarding with jealousy any such attempts, and for checking them at the outset.

THE THEORY OF FEVER.

As a commentary on the observations of Hüter on the condition of the blood-vessels in fever, of which an abstract was published in the JOURNAL of February 15th, Dr. Senator has published a summary of the results of some experiments which he has made.

1. In order to ascertain whether in fever, especially during the so-called hot stage, there is a general relaxation and distension of the vessels, as most authors assume, or a permanent contraction of the arterioles (Traube), or a periodical contraction of the vessels varying in time and place (Senator), he has compared the appearances presented by the vessels of the ear of the albino rabbit in the healthy and in the febrile conditions. His observations, continued for many hours, and conducted with all necessary care, have led him to arrive at the following conclusions. 1. Immediately after the injection of fever-exciting substances under the skin of the back, all the vessels of the ear become contracted, in consequence of which the part becomes pale and cold.

This contraction is followed by dilatation at one or more points. It is also produced by other causes, such as frightening the animal. 2. Some time after the injection, when the temperature in the rectum presents an increase from 1.4 to 2.7 deg. Fahr. or more above the normal, and the body of the animal feels hot, the vessels of the ear often remain contracted for hours; but, from time to time, sometimes without any evident cause, sometimes as a result of an external influence, such as fright or touching the body roughly, alternate contractions and dilatations set in and continue for some time, apparently exceeding both in duration and in degree the rhythmic movements of the vessels in healthy animals. 3. After the febrile condition has continued several days, or when the animals have been weakened by repeated attacks, spontaneous dilatation rarely occurs, and is of diminished duration and intensity. 4. During the dilatation of the vessels, pulsation is readily felt in the principal trunks, which is not the case when the dilatation has ceased.

Similar conditions—namely, paleness consequent on contraction of the vessels, and redness attended with pulsation—may be observed during the last stage, but less distinctly, on the inner part of the lobe of the dog's ear, where it is uncovered by hair. Both ears are not always affected in the same manner. Observations on the retinal vessels led to no distinct results, on account of the irritation to which the animals were necessarily subjected in the examination.

From his observations, Senator infers that febrile heat is not attended either with paralysis or with a permanently tetanic state of the vessels. He arrives at the conclusion which Heidenhain had reached in another way—"that there are pathological conditions in which the irritability of the vaso-motor nerves, especially those of the arteries of the skin, is abnormally increased." He thinks these observations do not form any ground for a new theory of fever, but that they only support the opinion which he expressed several years ago, that, in fever, the contraction of the cutaneous vessels from time to time leads to a diminished lowering of the temperature.

II. Following up the observations made by Wittich, Liebreich, E. H. Müller, and others, he has mixed purulent fluids (especially sputa, as he could not obtain pus in sufficient quantity) with glycerine. The mixture is allowed to stand, and the fluid is poured off or filtered: it can be kept for months without being decomposed or losing its activity. When some of it is injected in sufficient quantity under the skin, it produces for some days a remittent increase of temperature (amounting to 3.6 deg. Fahr. above the normal), but only slight general disturbance (thirst and moderate diarrhoea), and, as far as can be seen with the naked eye, no local inflammation or abscess.

The glycerine extract used by Senator contained no or very few monadic organisms. This is in accordance with the statement of Hüter, that the increase of temperature in fever is not necessarily dependent on the presence of these bodies. That the action of monads is not necessary to produce a rise of temperature, is perhaps further shown by the observation made by Klebs in 1868 on the pyrogenic action of fresh cow's milk.

With reference to the observations of Dr. Hüter on the obstruction of the small vessels, of which notices have lately been given in the JOURNAL, it is worthy of remark that, four years ago, Dr. Charlton Bastian published in this JOURNAL, and also in the *Philosophical Transactions*, some very interesting remarks on the plugging of minute vessels in the grey matter of the brain, considered as a cause of delirium and stupor in severe febrile diseases. He found the vessels plugged with white corpuscles, and also with masses of what he regarded as an albuminoid material, separated, as if by a process of crystallisation, from the blood-plasma. Commenting on the pathological relations of this phenomenon, Dr. Bastian made the following remarks. "These" (delirium and other so-called typhoid symptoms) "are likely to result, not alone, or so much, from the mere presence of an increased number of white corpuscles in the blood, as from this increase in quantity, together with some altered condition of the blood-plasma, which acts upon the corpuscles in such a way as to excite their independent action, and

leads them to show that same amount of amœboid activity which they are wont to display within irritated or inflamed areas of tissue. Then they no longer pursue a quiet routine course, in which their individual action is slight, or, at all events, duly subordinated to the necessities of healthy nutrition; but, stimulated into rebellious activity and combining together, they disturb and obstruct the ordinarily facile flow of the nutritive fluid. The mere increase in quantity of white corpuscles in the blood, we meet with in leucocythæmia and other morbid conditions, in which their presence is less hurtful, and comparatively free from risks of this kind, because there is no febrile elevation of temperature in these diseases; whilst, at the same time, we may presume that no special conditions of blood exist which tend to arouse the amœboid excitability of white corpuscles. The conditions of blood which seem to me most likely to produce this effect, are such alterations as are brought about in it by an extensive inflammation of any organ or part of the body, combined with an elevated temperature, or perhaps the highly elevated temperature alone of certain specific diseases, such as typhus, which are marked by an increase in the number of the white corpuscles in the blood." It will be seen that, while Dr. Hüter ascribes the increase of temperature in febrile diseases to the blocking up of the arterioles, Dr. Bastian regards the aggregation of the white corpuscles and the consequent obstruction of vessels by them as a result of heightened temperature.

MEDICAL LEGISLATION IN THE COLONIES.

THE different provinces of the dominion of Canada have each differing legislative rules as to the conferring and recognition of diplomas qualifying for practice. A Bill for unifying the practice in this respect was presented to the Canadian Medical Association, but withdrawn at last after five years of wordy discussion. The *Canada Medical and Surgical Journal* has an article on the subject, in which, after reviewing the facts, it makes the following remarks.

The fact is, as a profession we do not want a general Act. Individually, we should like to see it; but what will answer the province of Quebec will not do for Ontario, and what Ontario asks will not suit Quebec; so that sooner than put up with half a loaf we prefer to go without our bread. There appear to be conflicting interests which will interfere with the passage of a general Act. We have good reason to believe that the province of New Brunswick will obtain an Act at an early date, somewhat similar in its provisions to that passed by the Nova Scotia legislature, and then will we be in the very anomalous position of forming part of a confederacy, with separate and distinct legislation in matters medical; so that a votary of the liberal profession of medicine will find himself, when in any other province but his own, debarred from practising his calling unless he submit, at the discretion of the board of examiners of the province in question, to a further test of proficiency. The province of Quebec forms a single exception to this rule, as we are governed by an Act passed in the tenth and eleventh year of Her Majesty Queen Victoria, whereby it is provided that "every person who has obtained, or who may hereafter obtain, a medical degree or diploma from any recognised university or college in Her Majesty's dominions, shall be entitled to such certificate without examination as to his qualifications." As far as our own province of Quebec is concerned, we have no power to recognise foreign and American degrees; and, as we possess the power of prescribing a curriculum, no degree hailing from an university or college, even in Her Majesty's dominions, that does not come up to the curriculum prescribed can be recognised, nor can its graduates obtain our licence without a further test by examination. In Ontario, British degrees or diplomas are unrecognised; all candidates for registration are obliged to submit to examination. We are unable to state the provisions of the Nova Scotia Act, as we have not received a copy of that document; but we believe that it is in a great measure similar to our own, which would exclude all American and foreign graduates. The liberality of the Quebec Act recognises all British degrees and diplomas for what they set forth; but if a British graduate presented himself for licence, and his certificates were defective in any particular, he would have to satisfy the Board of Examiners, by examination, as to proficiency on subjects upon which he did not appear as having passed any examination. In this province we all hold the double qualification, there being no distinction between physicians and surgeons. No foreign or Ame-

rican degrees are recognised, and a candidate hailing from an American university or college is required to satisfy the Board that he had fulfilled a curriculum similar to the one prescribed by the college. This will entitle him to an examination; and if he pass it successfully, he will then receive the licence to practise his profession in the province of Quebec. This is substantially the practice in Ontario. In both provinces it is held that two sessions of American colleges are equivalent to one in our own institutions, inasmuch as the sessions of the colleges of the United States are, with few exceptions, barely of four months' duration.

MR. BLOXAM has been appointed Assistant-Surgeon to Charing Cross Hospital.

DR. HABERSHON is proposed as President of the Medical Society of London for the ensuing year.

THE rank of Apothecary to the Forces will shortly cease to exist, the officer holding it being removed to the Army Hospital Corps.

HIS Royal Highness the Duke of Cambridge, the President of the German Hospital, will preside at the anniversary dinner on the 5th May.

AT a special meeting of the Governors of St. Mark's Hospital and Dispensary for Diseases of the Eye and Ear, Mr. R. Rainsford was unanimously appointed Assistant-Surgeon to the institution.

IT is stated that Dr. Hooker of Kew Gardens will be proposed by the Council, as President of the Royal Society, to succeed Sir George Airey, who resigns.

DR. VINTRAS, physician to the French Hospital, who was lately decorated with the Cross of the Legion of Honour for his services to the French resident in England and to the sufferers in the Franco-German war, has been nominated physician to the French Embassy in London.

HER Majesty the Queen has granted £50 in aid of the special fund of £2,500 which the Committee of the Royal National Hospital for Consumption and Diseases of the Chest are raising, in sums of £50 each, to furnish and maintain five houses to accommodate thirty additional patients.

THE SURGERY OF THE LARYNX.

DR. WEIDNER of Müringen, at the recommendation of Dr. Gerhardt, is engaged in translating Dr. Morell Mackenzie's essay on Growths in the Larynx, which is at present the subject of controversy between the author and Mr. Durham. Dr. Burow of Königsberg has likewise prepared an abridged translation of the same work for the forthcoming volume of Langenbeck's *Archiv für Klinische Chirurgie*.

THE NEW REGULATIONS FOR THE ARMY MEDICAL SERVICE.

MR. CARDWELL, in explaining the army estimates in the House of Commons on Monday, referred to the new scheme of promotion for medical officers in the army. The members of that service, like the artillery and engineers, complained, not of an actual, but of an immediately prospective stagnation of promotion. Large numbers were appointed at the time of the Crimean war and the Indian mutiny; and, whilst surgeon-majors were receiving promotion after twelve years' service, they were looking forward to a stagnation of promotion even for those who had fifteen years' service. Arrangements had accordingly been made by which it was proposed that there should be a reduced number attached to battalions and a larger number on the staff. This, by developing the system of station-hospitals, which was necessary in time of war, and strongly recommended by the highest medical authorities in time of peace, would improve their arrangements and lead to promotion. It was not proposed any more to have assistant-surgeons, but only surgeons and surgeon-majors; and the surgeon might look forward with confident expectation to becoming a surgeon-major after he had served fifteen years.

CHLOROFORM-DEATHS.

THE *Medical Press and Circular* continues, by extensive (though unacknowledged) extracts from our columns, to second our efforts to keep the attention of the profession fixed on the facts relating to the administration of anæsthetics. To an account of the deaths from chloroform which we recorded last week, and an abstract of Mr. Prichard's paper, it adds the following paragraph.

We have reason to know that a fatal case occurred in private practice during the last twelve months, where, though every precaution was taken, and a skilled chloroformist was entrusted with the administration, death ensued from the first few inhalations, and before a half-drachm of chloroform had been used.

DEATH FROM HYDRATE OF CHLORAL.

AN inquest was held last week by Mr. Carttar, on a druggist who died from the effects of an overdose of chloral, which he had been in the habit of taking to procure sleep. He was smoking his pipe late at night, when the pipe fell from his hand, he became insensible, and died.

MILIARY TUBERCLE IN CATS.

THE occurrence of miliary tubercle in the feline race has been described by Bollinger in Virchow's *Archiv* (vol. lv). He found, in two female cats, that both lungs had scattered throughout their substance a large number of miliary and submiliary granulations; there was also lobular hepatisation, but no cheesy transformation. In one of the animals the left kidney was the only other organ affected; in the other, both kidneys, the liver, and the pancreas contained miliary tubercles. Microscopic examination showed a complete identity between the tubercles found in the cat and those met with in man.

HOSPITAL OUT-PATIENT REFORM ASSOCIATION.

A MEETING of the members of this Association will be held on Thursday, March 6th, at 8 P.M., Dr. Alfred Meadows in the Chair, in the rooms of the Medical Society of London, to consider the following proposals of the Committee. 1. That each out-patient at every visit to a hospital shall be seen personally by one of the medical or surgical staff, and that no unqualified student be permitted to prescribe for out-patients. 2. That a lay officer attached to each hospital be instructed to see that the charity is not abused by persons being admitted as out-patients who are well able to pay the usual fees of practitioners, or to obtain medical attendance by provident dispensaries or otherwise. 3. That patients shall no longer be tempted to crowd to hospitals by the offer of medicine gratuitously; and therefore that no medicines should be supplied to out-patients at hospitals, but that advice and prescriptions be alone given.

PRIVATE MEDICAL BULLETINS.

THE illness of the Right Hon. H. Corry has illustrated rather forcibly the tendency to an abuse which deserves notice. Poor Mr. Corry's illness has been the sport of paragraphs in the daily papers, apparently medically inspired, and of very varying purport. One day it was announced that he was very ill, and, indeed, had but a poor chance of recovery; the next, that he was not so ill as had been represented, but had seen two gentlemen from London, whose views were set forth; and then, again, an evening paper on Wednesday announced that he was under the sole care of another gentleman, whose name and place of residence were also given, and who had his own version to give. After all this we are glad to know that Mr. Corry still survives, and that he is, in truth, now recovering from an attack such as he has successfully passed through several times previously. But a word of caution may not be misplaced on a question not altogether relevant to Mr. Corry, although *à propos* of these various and conflicting bulletins. It is a very well known trade maxim, that unpaid advertisements are the best that can be had, and that the very best of puffs is the puff indirect. But the members of our profession highly prize the observance of those rules of conduct which prescribe an abhorrence of any such modes of attracting attention; and we feel sure that some of

those to whose names attention is often and prominently drawn by the statement that they are in attendance on this or that person whose illness is attracting public sympathy and attention, must view the position of doubtful eminence in which they are thus placed with dislike and displeasure. The man of science shrinks from the publicity which may be easily courted by the charlatan, and which is liable at any time to place him side by side with equivocal notorieties who seek such prominence. The public anxiety is often aroused by the illness of persons holding positions of national importance in the affairs of the state, in art, and in letters. It may, and perhaps must, be legitimately satisfied; but the less this is done in connexion with the names of the medical attendants of the patients, the better. The traditions of our profession require that the physician and the surgeon shall be above even the suspicion of vulgar arts by which popularity is courted; but there is some danger that the abuse of private bulletins may give rise to that suspicion.

THE ACADEMY OF MEDICINE IN PARIS.

AT the meeting of the Academy of Medicine on February 18th, M. Bécclard was elected Perpetual Secretary, in the room of the late M. Dubois d'Amiens, by a majority of sixty-nine votes out of eighty-two. M. Henri Roger and M. Chauffard each had one vote, and eleven of the members present abstained from voting. M. Bécclard has for several years discharged the duties of the office to which he has been now elected.

THE HARTLEPOOL HOSPITAL.

THE Hartlepool Hospital is an institution with a very limited number of patients, the average of in-patients being seventeen or eighteen; and it has a medical staff of four visiting medical officers and a resident house-surgeon. Nevertheless, it pleased the managers to consider that it might be as well to add to the staff; and accordingly, without previously consulting their medical officers or giving prior notice, they suddenly passed a resolution adding two members. There seems to be no ground for pretending that the patients were not properly attended to, or for failing to consult the existing medical officers on the subject. The whole proceeding appears to have been grossly improper, and indefensible on any public ground.

HOSPITAL FOR WOMEN IN VIENNA.

THE Maria Theresia Hospital for Women in Vienna, the idea of establishing which was brought forward by Dr. Beigel in April last, was opened on December 15th. Dr. Beigel, as director, delivered an address on the occasion, in which he stated that during a residence of ten years in England—"the land of charitable institutions *par excellence*"—he had never seen an institution of the kind grow into working order so rapidly. As reasons for establishing the hospital, he referred to the fact that the treatment of diseases of women had become a speciality, and also to the comparatively lower mortality in small hospitals and private practice than in large hospitals—supporting his views by an allusion to the results of Mr. Spencer Wells's practice. While we congratulate Dr. Beigel on the success which has attended his endeavours, and wish prosperity to his hospital, we must also express our hope that he and his colleagues in the management of the hospital will take care to prevent it from becoming the scene of abuses of charity.

PROFESSIONAL HEROISM.

WE read in the *Ohio Clinic* the following instance where the instincts of the physician for the welfare of the injured were subordinate to the instincts for the preservation of his own life.

A night passenger-train (on the Louisville and Nashville railroad) was precipitated down an embankment twelve feet high, with subsequent destruction of the train by fire. Dr. B. M. Wible was asleep in the second berth from the rear of the sleeping coach, and Mr. Peter Fox was in the berth next in front. Dr. Wible's first knowledge of the fact that anything was wrong was on being waked up by the overturning of the coach, which rolled over on the side on which he lay.

His position convinced him that something was wrong; and, on trying to move, he found that he could not get out of his berth, being held in by the wreck piled around him. A minute or two elapsed, when he heard some one cry out, "I am bleeding to death!" Unable to get out to assist the sufferer, the instinct of the physician would not be confined, though his body was, and he called to the person who had made the cry, asking him where he was hurt. "My leg is crushed", was the reply. "Then press your fingers with all your force in the hollow of your knee, and hold them there till I come", was the instruction of the physician. In the meantime all was dark; and after some minutes had elapsed, the cry of fire was heard. This was a terrible sound to the imprisoned passengers. Lights flashed in through the windows of the car, and, thinking it was the flames breaking out near them, the physician called out loudly to "put out that fire!" A gentleman from Atlanta, who slept opposite to Dr. Wible, and had been thrown against his berth in the accident, was able to move about, and succeeded in partially releasing the physician, who instructed him to tear a sheet into strips, fold one of the strips into a hard lump, and press it into the hollow of the wounded man's knee, whom by this time Dr. Wible recognised as Mr. Fox. The Atlanta passenger having pulled away some of the *débris* piled upon the physician, the latter got sufficiently free to bandage Mr. Fox's leg so as to stop the flow of blood. They waited, it seemed, a long time, though in the confusion and anxiety it may have been only a few minutes, when two persons got hold of Mr. Fox and pulled him out of his position and out of the door of the car. He was immediately carried to the house of a Mr. Owens, who lived not far from the scene of the accident, and every possible attention was paid to him. The Atlanta man made his way through a window in the upper side of the car; and Dr. Wible, after some difficulty, got out of the door. He was dressed only in his night-clothes, and stood in his bare feet in the snow until some one threw him a pillow to stand on. He afterwards got a stocking, a blanket, Mr. Fox's coat, and his own cloak, with which he kept himself from suffering with the intense cold. He had not received even a scratch from the disaster. Efforts were made to find his clothing, but in vain; and he soon followed a guide up a steep and slippery hill, and, finding Mr. Fox, amputated his limb.

O'FLANAGAN v. SHAW.

THE following circular letter has been issued by Mr. J. O'Flanagan, *à propos* of the recent decision to which we have already referred.

To the Licentiates in Medicine (M.D.'s and Physicians) of Great Britain and Ireland, legally practising in this country as "General Practitioners," and who are not also Apothecaries.

Gentlemen,—To each of you individually I desire to address myself on a subject of the deepest professional importance to all. I take it for granted that, through the ordinary or through the special press of the country, you are already somewhat acquainted with the extraordinary law of "his honour, Deputy-Judge Mulcaster," as delivered by him in the Durham County Court, on 21st ult., in my case (O'Flanagan against Shaw); and I have been waiting ever since to see if any amongst you would move publicly in the matter; and this not altogether from modesty, but from the knowledge of my own incompetency; but as no one speaks, it devolves upon me to do so now.

Anterior to Deputy-Judge Mulcaster's decision, the delusion was dear to me, that by Section xxxi of the Medical Act of 1858 a duly registered physician could charge "for professional aid, advice, and visits, and the cost of any medicines or other medical appliances rendered or supplied by him to his patients," "in any part of Her Majesty's dominions;" and that, further, he was entitled "to demand and recover, in any court of law, reasonable charges" for same. To my utter astonishment, however, his honour informed me that this is not law. He went further, and told me that for "every bottle of medicine I supplied to my patients on my own prescription, I rendered myself liable to a penalty" under the Apothecaries' Act of 1815. Further still, that by supplying medicines I "forfeited my right to charge for visits and advice;" and he entered a judgment for the defendant, depriving me of my whole claim. And finally, he capped his decision by calling me "an irregular practitioner." Now this being law—at least county court law—each and every one of you are liable to be told the same thing, and to be prosecuted, at any time you chance to offend an honest man among your patients by being a little too pressing upon him for payment of his "little bill." I have great difficulty, however, in bringing myself to believe that it is law, albeit a judge is—or ought to be—a lawyer (although a barrister, according to Mr. Justice Blackburn, may not be); and, feeling doubtful on the point, it is my intention to bring a case to a superior court for final decision.

In thus fighting the battle of the profession as well as my own, I

expect at least advice and sympathy, if not aid, from all—except, perhaps, the apathetic few, and the selfish—still, I trust, more few. I look to you all the more, as the colleges and universities have too much to do, apparently, in watching each other, and in fighting for their own interests, to be very mindful of ours, or of ourselves—their graduates and licentiates.

A solution of the case one way or the other is now imperatively called for. If Deputy-Judge Mulcaster's law be not law, the sooner the thing is known and settled the better; and if it be law, the very same reasoning applies, for then not only the various examining bodies have been taking our money under something very like false pretences, but even the General Medical Council is open to a similar charge in taking from us our registration fees; so that, in the words of Deputy-Judge Mulcaster, we are all "irregular practitioners" together.

Trusting to your active and united co-operation in trying to become myself, and to make all, in future, who practise medicine in these realms "regular," at least by law. I am, Gentlemen, very sincerely yours,

Houghton-le-Spring, Durham, Feb. 22, 1873. J. O'FLANAGAN.

P.S.—The Medical Act of 1858, as commonly read, having conferred upon the apothecary the right to charge the same fees as us, thus virtually raising him to the rank and dignity of a physician, it seems strange that a physician cannot be allowed to be, if he chooses, his own apothecary. To work the question out properly, and just for the joke of the thing, I should like to hear of some of you who live in the neighbourhood with a lively and warm-tempered apothecary, sending him your prescriptions to dispense, and his answer to the messenger who brought the first one.—J. O'F.

THE HEALTH OF LONDON.

THE Registrar-General's return for last week again shows the unfavourable effect of the inclement weather upon the health of the metropolis. The total number of deaths registered was 1,664, which was 24 below the average, but the death-rate, which in the five preceding weeks had steadily increased from 18 to 25 per 1,000, further rose last week to 26. The deaths referred to diseases of the respiratory organs and phthisis averaged 411 during the ten weeks ending January 25th. Under the influence of the recent cold weather the deaths from these causes have in the past four weeks risen successively to 466, 615, 653, and 692; of the latter number, 350 were referred to bronchitis, 186 to phthisis, 99 to pneumonia, and 28 to asthma. There were 2 deaths last week from small-pox, 14 from measles, 8 from scarlet fever, 8 from diphtheria, 65 from whooping-cough, 37 from different forms of fever, and 18 from diarrhoea; thus to the seven principal diseases of the zymotic class 152 deaths were referred, against 111 and 130 in the two preceding weeks. These 152 deaths, although showing a considerable increase upon those returned in recent weeks, were 127 below the average. The 37 deaths referred to fever exceeded by 10 those returned in the previous week, although they were 18 below the average; 2 were certified as typhus, 19 as enteric or typhoid, 15 as simple continued fever, and 1 as relapsing fever. The mean temperature was only 33.4 deg., and 5.1 deg. below the average.

CHARGES OF ADULTERATING MILK.

AT Dale Street Police Court, Liverpool, on February 20th, before Mr. Raffles, Henry Dobson, cowkeeper, was summoned for selling, as unadulterated, a quantity of milk which was adulterated. Mr. Atkinson, deputy borough solicitor, supported the information, and Mr. Baxter appeared for the prisoner. Inspector Robinson said that on the 7th instant he purchased from the defendant's wife a pennyworth of milk, which he conveyed to Dr. Brown, the public analyst. A certificate, signed by that gentleman, was produced, stating that he found the milk in question to be adulterated by the addition of 10 per cent. of water. The inspector stated that when he told the defendant's wife what he wanted the milk for, she asked him to give it her back, so that she might change it, because there was water in it. He refused to allow her to change it, and she then said that if he would let her get him a sample from the cow instead of it she would give him a shilling. Mr. Baxter pressed the point respecting the non-liability of the defendant for the acts or words of his wife; and Mr. Raffles adjourned the case for seven days, in order to consult legal authority on the subject.—Shepherd Scoles, also a cowkeeper, was summoned for a similar offence.

Dr. Brown said that in this case the milk contained at least 15 per cent. of water. The defendant's wife appeared, and she stated that the milk had been watered by her son while she was ill in bed, and without any authority from either herself or her husband. The boy himself was called, and said that on the morning of the day in question, he, after milking the cows, rinsed out the tins with a drop of clean water, and poured it into the milk. In explanation of his conduct, he said he thought "it was a shame to waste the froth" that remained in the tins. In answer to Mr. Raffles, he stated that he put about a quart of water to about three quarts of milk. Neither his father nor his mother knew anything about it, and they were never in the habit of watering their milk; indeed, a woman whom they had to work for them had said that it was a shame to sell such milk—it was a deal too good, and required watering. Mr. Raffles said that after such an explanation he could not convict, and the summons would be dismissed.

THE MEDICAL PROFESSION IN PRUSSIA.

THE Prussian Medical Calendar contains some interesting statistical information regarding the profession in the kingdom. At the end of 1871, the number of qualified practitioners, including surgeons of the first class, was 7,154 in a population of 24,643,416, being one medical man in each 3,444 inhabitants. At the end of 1870, the number of practitioners was 7,367; of 1869, 7,451; of 1868, 7,446; of 1867, 7,420; of 1866, 7,281. Thus the number of medical men has not only not kept pace with the increase of the population, but has actually diminished, being 127 less at the end of 1871 than at the end of 1866. At the end of 1867, there was one medical man to each 3,231 of the population; while at the end of 1871 the proportion was reduced to one in 3,444. At the latter date, the population was about 668,000 more than at the former; while the number of doctors was diminished by 266. Previously to the enlargement of the Prussian kingdom, the proportions of medical men to the population at different dates were as follows: in 1858, 5,188 in 17,739,913, or one in 3,419; in 1861, 5,425 in 18,494,171, or one in 3,408; in 1864, 5,619 in 19,255,140, or one in 3,427. In Berlin, the diminution in the number of medical practitioners in proportion to the population has been even greater. In 1858, there were 528 in a population of 470,130, or one in 890; in 1861, 573 in 547,570, or one in 955; in 1864, 622 in 646,187, or one in 1,039; in 1867, 712 in 717,436, or one in 1,008; in 1871, 710 in 826,340, or one in 1,164. Within the last few years, there has been a diminution not only of the number of students of medicine, but also of those of other professions.

SCOTLAND.

DR. MCKENDRICK delivered an interesting lecture on the 21st ult. to the members of the Pharmaceutical Society, on Muscles and Nerves. The lecture was practically illustrated by experiments.

THE Aberdeen Microscopical Society has elected the following office-bearers for the year. *President*: Dr. Ogilvie. *Vice-Presidents*: Dr. Dickie, Dr. Rodger. *Committee*: Mr. A. D. Milne, Mr. John Roy, Mr. Robert Fergusson, Mr. John Frazer. *Treasurer*: Mr. George Walker. *Secretary*: Rev. Alex. Beverly. *Curators*: Mr. Alex. Clark, Mr. Robert Leys.

SMALL-POX IN FORFAR.

ALTHOUGH there has been a slight outbreak of small-pox in Forfar recently, the cases have been much fewer than alleged by some of the daily papers. There have been only fourteen instead of forty cases as stated. Five of these have died—three of the patients had not been revaccinated, and their primary vaccination was doubtful; one was an unvaccinated infant; and the fifth was a woman, attacked immediately after her confinement. Most of the cases were traceable to a midwife who dressed the body of the first patient who died, and immediately returned to her calling. It is certainly remarkable that five out of fourteen cases terminated fatally. There is in this fact alone evidence of defective administration of the Vaccination Act.

IRELAND.

THE Lord-Lieutenant of Ireland has appointed Dr. Philip C. Smyly, Surgeon to the Meath Hospital, to be Surgeon to His Excellency in Ireland. Dr. Hatchell has been appointed Physician to the Lord-Lieutenant.

THE GENERAL MEDICAL COUNCIL.

WE referred last week to the anomalous position which Mr. Hargrave occupies as the representative in the Medical Council of the Royal College of Surgeons in Ireland, after that body has requested him to resign. His position will now be still more difficult, as we believe that the Council of the College have resolved, in consequence of Mr. Hargrave's resolution to hold to his office, to communicate their opinions directly to the President of the Council, without recognising the presence in the Council of the gentleman who takes his seat as their representative.

QUEEN'S COLLEGE, GALWAY.

THE Report of the President of this College has just been issued. During the session 1871-72, there were seventy-eight students of medicine attending the College, of whom seventeen were members of the Irish Church, nine Presbyterians, forty-seven Roman Catholics, and fifteen of other denominations. This shows that the Queen's Colleges are not unacceptable to the general mass of the laity, when continued and tremendous efforts are used without success to prevent them from frequenting these Colleges; and shows that the public mind is not opposed to them. It will, indeed, be a matter of deep regret to all who take an interest in unsectarian education, to see one of those noble institutions—the Queen's Colleges—which have done much for Ireland, demolished, as Mr. Gladstone, in his new education scheme now before Parliament, proposes.

LECTURES ON SANITARY SCIENCE.

DR. STOKES delivered on February 22nd the first of a series of weekly lectures on Sanitary Science, which are to be given under the management of the Committee of the Royal Dublin Society and the Sanitary Association of Dublin. The discourse was an able review of the sanitary condition of Ireland, the causes of epidemic disease, and the theories as to their prevention. It was listened to with great interest by a large audience, and fitly inaugurated a course which, from the subjects to be discussed and the abilities of the lecturers, cannot but prove to be of service to the citizens of Dublin.

POST MORTEM EXAMINATIONS IN WORKHOUSE HOSPITALS.

WE are glad to find that the Local Government Board will not insist on Dr. Laffan resigning his appointment as medical officer to the Cashel Union Workhouse. A pauper left his body by will to Dr. Laffan for the purpose of *post mortem* examination, knowing that otherwise it would be at the disposition of the master of the workhouse. When Dr. Laffan claimed the body, a communication was made to the Local Government Board, who at first required his resignation. On reflection, however, they have decided that such a course is unnecessary, without entering into the propriety of obtaining the body of a patient by will, though perhaps it would be impossible to have an opportunity of making a necropsy otherwise, when the patient had no friends, and the master of the workhouse was inimical to the doctor. It would be a great misfortune to science if *post mortem* examinations were not allowed to be made in workhouse hospitals. The late Robert Mayne of Dublin owed a good deal of his reputation to the knowledge which he acquired in his pathological investigations in the deadhouse of the South Dublin Union. Almost all we know of the pathology of the Irish famine fever was obtained from investigations in union hospitals; and there is no such field in Ireland afforded for the study of pathology as in workhouse hospitals. Ten thousand deaths occur annually in Irish workhouses, and it would be a great misfortune if that source of pathological knowledge were closed up by a few testy masters of workhouses or crotchety boards of guardians.

THE ANNUAL MUSEUM AT BIRMINGHAM.

I.

THE circumstances of the London meeting of the Association differ from those of the recent meetings in some respects, which will call for special consideration of the question of collecting this year a Museum, as has been successfully done of late at our annual meetings. Besides the fact that London is provided with collections and museums on a complete and very extended scale at the Royal College of Surgeons and at the different hospitals and schools, there will be this year held a special exhibition of surgical instruments of all countries at South Kensington; and it is probable that special facilities for their inspection will be offered by the Commissioners. It may, however, be well just now to recall some of the leading features of the Birmingham Annual Museum last year, which, owing to an accidental omission, were not recorded at the time in our pages, but may serve now as an useful guide. It was the most complete Annual Museum yet brought together. The objects were arranged under twelve headings. I. Instruments, arranged by Mr. Bennett May, including very fine displays by Louis Blaise and Co. (late Savigny), and Arnold and Sons of London, full of improvements and suggestive novelties, and with excellent models of the best known instruments; a very efficient display by Salt of Birmingham, including a capital cabinet for surgeons to collieries; a new arm bed rest; some interesting and well made novelties by Archibald Young of Edinburgh, including Lister's spray-producers and carbolised catgut; Sayre's flexible catheter and periosteum-scraper. Meyer and Meltzer, and Krohne and Sesemann, showed their specialities; and Messrs. John and William Ward (Manchester) had a stand which was interesting for its exhibition of specialities belonging to Manchester practitioners—Fairbank, Lund, Roberts, Southam, and Whitehead. A very instructive series of orthopædic and microscopic instruments were exhibited by Dr. Warden; and a number of private practitioners showed new inventions of their own, of which we shall shortly give a more detailed account. In Class II were exhibited sundry apparatus, which we also reserve for separate description. Class III included electrical apparatus, not very complete, but still interesting and suggestive. The collection of calculi in Class IV was unique. The whole collections were exhibited of Sir William Fergusson, Mr. Crompton, Mr. Gutteridge, Mr. Baker, Mr. Oliver Pemberton, Mr. Bartleet, and others. In Class V were shown General Pathological Specimens of very great interest from the private collections and hospital museums of the locality. This was a most excellent feature of the meeting, and we regret not having available material for a discussion of these specimens. The ophthalmic specimens and instruments shown in No. VI were not very well worth studying, either in respect to the specimens or to the instruments. Class VII was a very good class, and capable of being well developed in future, especially this year in London; it included new drugs and preparations, and new articles of diet for invalids. This is a department in which many of us are glad to have facilities for seeing and testing in some way novelties which only slowly find their way from the centres of distribution, and which are then sometimes disappointing. Dr. Lindsay of Perth showed some specimens of Swedish lichen brandy and reindeer moss; Dr. Thompson (Leamington), specimens of varum and paper for use in hæmorrhoids; Mr. Bartleet, specimens of picked oakum; Dr. Dusart of Paris, wine and syrup of lacto-phosphate of lime; Dr. Wm. Hinds, a collection of British poisonous and medical plants; Messrs. Young and Postans, some very good and new effervescing preparations; Southall, Son, and Dymond, and Ferris and Co. (Bristol), very useful displays of new and improved drugs and preparations. Mr. Chapman showed, and afforded opportunities for testing, koumiss and blanda, which are both making way, and which are undoubtedly agreeable and valuable dietetic agents. Only one wine was shown this year—Feltoe's "Specialité Sherry"—a wine which is deservedly making its way, chiefly through the recommendations of the medical profession, founded on its honestly excellent qualities, its freedom from acidity and heat, and its uniform soundness. In No. VIII were shown an extensive series of drawings and photographs. Perhaps the most interesting, because the most connected and instructive department, for physicians, was No. IX, in which were arranged an extensive series of preparations, drawings, and instruments, illustrative of the diseases of the organs of circulation, and the instruments employed in their detection and treatment. The obstetrical department, No. X, was extremely complete. We shall refer in detail to some of the classes.

THE ADMINISTRATION OF ETHER AS AN ANÆSTHETIC.

OUR Liverpool correspondent writes:—At the Medical Institution, on the 13th February, Dr. Rawdon read a paper on the inhalation of ether as an anæsthetic. He detailed his experience of its use in several operations of a prolonged and serious nature—such as ovariectomy and vesicovaginal fistula—and described his mode of administration; namely, with a napkin folded and stitched (not pinned), in the form of a cone, with a sponge in the base, and the whole covered with oiled silk to prevent evaporation. The average quantity of ether necessary to produce complete anæsthesia was from three to five ounces, and the time occupied three or four minutes. The author expressed the opinion that, while the anæsthetic effect of ether was as complete as that produced by chloroform, it possessed the advantage of causing less subsequent depression, and was much less liable to give rise to troublesome vomiting; he therefore considered it preferable in operations which involved great shock, or where danger from after-sickness was to be feared, as in ovariectomy. It might also be advantageously substituted for chloroform when patients entertained excessive dread of the latter; and in surgical procedures in which the recumbent position was inconvenient, as in dental and other operations in the mouth or throat. He did not anticipate that ether would displace chloroform, which was useful in cases where the benefit of ether was at least doubtful—namely, the convulsive diseases of children and puerperal eclampsia.

The objection which had been urged against ether, that the odour was disagreeable to the patient, might be obviated by the previous administration of a small quantity of chloroform, sufficient to produce insensibility to smell; but he thought we should consider "not so much what our patients liked best, but as what was best for them." The inconvenience of the persistence of the odour of ether in the breath, and even in the clothes, of the medical attendant, was too trivial to weigh against the manifest advantages of the drug; and the question of cost which had been raised he held to be unworthy of a moment's consideration, if, as he believed, it were in certain cases safer than chloroform.

In the discussion which followed, considerable difference of opinion was expressed as to the relative merits of the two anæsthetics: it was, however, sufficiently apparent that, whilst several speakers based their views upon extensive experience in the use of chloroform, few had seen ether used, and none, probably, had seen it given on a sufficiently large scale to draw a safe conclusion as to its merits or demerits.

Much stress was laid upon the ascertained immunity with which chloroform had been so extensively used. The enormous experience of the late Mr. Syme was quoted, who, it was said, during the many years and in the innumerable cases in which he had used chloroform, had not met with a single accident, or even with one instance in which alarm was excited. One speaker, whose large experience and skill and caution in the use of chloroform are well known, attributed many of the accidents which had occurred to the "combination of recklessness and timidity" frequently observed in its administration. He characterised the statements and reports which have appeared in the *BRITISH MEDICAL JOURNAL* as "a crusade against chloroform, which, to say the least, was unjustifiable." He thought that the necessity for complicated apparatus and other irksome details connected with the use of ether would hinder its general adoption, and predicted that chloroform would still hold its own as the favourite anæsthetic. He nevertheless admitted that, the greater his experience in the use of chloroform, the more deeply he felt the responsibility and anxiety in every case in which he was called upon to administer it.

The only speaker who had used ether in obstetric practice described its effects to be satisfactory, and scarcely to be distinguished from those of chloroform. Allusion was made to the objection of the late Sir James Simpson to the use of ether in labour; namely, that its odour in the child's breath showed that it passed into the placental circulation, and thus proved injurious to the foetus; but no facts were adduced in support of this theory.

The conclusion to be drawn from this discussion is, that the profession in Liverpool, as in this country generally, have not yet had sufficient experience in the use of ether to determine from personal observation its exact value as an anæsthetic, or to enable them to confirm or refute the decided preference given to it by our transatlantic brethren. One desideratum appears to be, either some uncomplicated inhaler, or such improvements in the mode of administration as to prevent the great waste and annoyance from the rapid evaporation of the ether.

SPECIAL CORRESPONDENCE.

PARIS.

Propylamine in the Treatment of Rheumatism.—M. Moutard-Martin.
The Lady-Students.—*The Triumphs of Pneumatic Aspiration.*

OUR own correspondent writes, under date February 14th:—I see that you have already noticed the growing popularity of the new remedy of the new year here. It has been introduced at a favourable season here, and I should think it would not be unseasonable with you. Your physicians must make haste to employ it—as Trousseau said of new remedies generally—while it is time. It is notorious that new remedies cease to be so efficacious when they are no longer new. Hurry quickly, then, to find cases of rheumatism, and to treat them by propylamine. You can give it in capsules, in dragees, and in draughts—that is, if your chemists are half as enterprising as ours. You have already given an account of its chemical and therapeutical properties; but perhaps I can add to your information with the help of M. Auhoin, who has devoted some further columns of the *Gazette Hebdomadaire* to the elucidation of its chemical history. In the first place, propylamine has many synonyms; viz., azotate of trityle, tritylamine, metacetamine, amylamine, propylac, etc.; so that you must be prepared to meet it under all its aliases. M. Guibourt (*Traité des Médicaments Nouveaux*, p. 300, 2nd edition, 1865) describes the result of physiological experiments on himself with it. It reddens the skin slightly, acts as a caustic on the mucous membranes, and depresses (*hyposthenises*) the arterial system. M. Fargier Lagrange published a thesis on it at Strasbourg in 1870, entitled *A Therapeutical Essay on Trimethylamine*, written under the inspiration of M. Coze. It seems that by Awenarius, Hetet, Guibert, and Kaleniczenko (I am not responsible for the orthography), it has been employed for a great variety of maladies besides rheumatism—pericarditis, hemiplegia, paraplegia, scrofulous diseases, piles, diseases of the liver and of the spleen, rickets, amenorrhœa, dysmenorrhœa, leucorrhœa, spinal meningitis, etc.—and always with the most astonishing success. You see that it is very new.

The favourite propylamine in Russia is that prepared from cod-liver oil, and Awenarius and Kaleniczenko use nothing else. Kaleniczenko, indeed, considers that cod-liver oil might fairly be described as a solution of propylamine, to which it owes its chief virtues. We have always been using propylamine prepared from herring-brine, and our results are equally good. We are a little disturbed to find that Awenarius has a very poor opinion of propylamine derived from this source, but we are not discouraged. M. Lagrange gives a good physiological account of the action of the substance. His conclusions are, that “propylamine diminishes the intra-organic combustion, and lessens the elimination of urea; it diminishes the activity of the circulation, and lowers the temperature; it exercises a sedative action on the nervous system, and manifestly diminishes the neuralgic and articular pains.”

These actions accord with those described by Awenarius, by Dujardin-Beaumez, and other of our physicians. I observe a suspicious tendency to combine it with morphia, and to employ other drugs concurrently with it; but meantime it is being severely tested by competent and sceptical observers, and we shall soon have a harvest of careful observations to lay before you. But, if you do not desire to be behind the time, and to take your conclusions ready made from us, you must begin to try it for yourselves. It is particularly suited to the acute inflammatory forms, when there are continuous fever and absolute incapability of moving the limbs.

The Schools of Medicine and Pharmacy of Montpellier have been closed, in consequence of tumultuous political manifestations by the students; but the affair is probably merely temporary, and is of no real importance, except as showing the incurable turbulence of our students.

M. Moutard-Martin has been elected a Member of the Academy of Medicine, in the therapeutical section. The younger school would have preferred to see M. Oulmont elected. He belongs to the younger disciples of exact scientific investigators. He had a very respectable number of votes. M. Martin belongs to the school of clinical observers. Baron Larrey, well known to many eminent foreigners as the most

courteous head of our Military Medical Council, has retired, and is replaced by M. Cazalas. Our courses at the Faculty are strengthened by the recent nominations of Charcot, Vulpian, etc. M. Axenfeld is very ill; and Marchal de Calvi, a famous free lance in medicine, is unhappily stricken with apoplexy.

The lady-students here are strengthened by the addition of a French lady to their number—the first native, I believe, who has attended the courses. One of the English students, Mrs. Ella Lawson, was last week admitted Bachelier ès Sciences et ès Lettres. Observing that an English lady lately, who had been examined and qualified for the Tripos at Cambridge, was not admitted to the degree, we draw the conclusion that you are more conservative than courteous, and more jesuitical than just.

The last meeting of our Surgical Society was occupied with the triumphs of pneumatic aspiration in the treatment of hydatid cysts and of strangulated hernia. It is now of almost daily application in the hospitals and in private practice, and renders great services in the treatment of effusions into the pleura and pericardium and into the joints, and in the diagnosis and treatment of all kinds of collections of fluid. From what I saw recently in London when I went the round of the hospitals, and from conversations with your leading surgeons and physicians, I was led to the conclusion that, notwithstanding your practical character, you are by no means yet sufficiently penetrated with the uses of this most practical instrument, which has in some sense revolutionised the treatment of retentions of urine with stricture, of strangulated herniæ, of hydrothorax, cysts of the liver, etc., which are now robbed of half their terrors, and can be managed more easily than a ganglion of the wrist was formerly, before the labours of Dr. Dieulafoy and the advent of the *aspirateur à vide préalable et successif*. At first, we all said that it was useless; now, that it is immensely useful, but not at all new. You are still in the first stage; but the channel is soon crossed, and we shall invade you with the aspirator, of which you can have a choice of fifteen varieties.

ASSOCIATION INTELLIGENCE.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting is appointed to be held at the Infirmary at Gravesend, on Tuesday, March 11th, at 3.45 P.M.; John Christopher ARMSTRONG, Esq., in the Chair.

Dinner will be provided at the Old Falcon Inn at 5.45 P.M.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, February 24th, 1873.

METROPOLITAN COUNTIES BRANCH.

THE ordinary meeting of this Branch, announced to be held on Wednesday, March 12th, is postponed. Due notice of the day of meeting will be given.

A. P. STEWART, M.D.

ALEXANDER HENRY, M.D.

} *Honorary Secretaries*.

London, February 19th, 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting will be held at the Pavilion Hotel, Folkestone, on Thursday, March 13th, 1873, at 3 o'clock; Dr. WILDASH, of Hythe, in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, February 18th, 1873.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held at the Wynnstay Arms Hotel, Ruabon, on Thursday, March 20th, at 1 P.M.; R. CHAMBRES ROBERTS, Esq., President, in the Chair.

Gentlemen having papers or cases to communicate, will please to forward the titles of the same a few days before the meeting.

The dinner, to which members may invite friends, will be at 3 P.M. Tickets 6s. 6d. each, exclusive of wine.

D. KENT JONES, *Honorary Secretary*.

Beaumaris, February 12th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE fourth meeting of this session was held on Friday, January 31st; present, JAMES RUSSELL, M.D., in the Chair, and twenty-seven members.

New Members.—Seven members of the Branch were admitted members of the Section.

1. *Successful Trephining.*—I. Mr. NEWNHAM exhibited a man admitted into the Wolverhampton Hospital on February 21st, 1872, with a compound depressed fracture of the right parietal bone. The symptoms at first were those of slight concussion; afterwards they became those of compression. The scalp-wound was enlarged and the man trephined, twelve splintered and depressed fragments being removed. The dura mater was found to be slightly lacerated. Subsequently, matter formed beneath it; this was discharged through the opening of the dura mater after it had been enlarged. From this period all adverse symptoms ceased; he was discharged quite well on April 23rd. —II. Mr. Newnham also exhibited Richard B., aged 23, who was admitted into the Wolverhampton Hospital on November 4th, 1872. Just previously to admission, he received a kick from a horse over the right parietal bone, causing a depressed fracture of that bone and an extensive wound of the scalp. There was much collapse. His pulse was 60; sensibility was imperfect. He was trephined an hour after admission, and several pieces of bone were removed. The dura mater was punctured by a fragment. His progress to recovery was rapid, and he was discharged on December 10th.

2. *Congenital Malformation of the Organs of Vision.*—Mr. LLOYD OWEN exhibited two infants aged about seven months each, both suffering from hereditary syphilis. In one case, the right eye was megalophthalmic, with coloboma of the iris and choroid, the fissure extending up to the optic disc. The left eye was microphthalmous; there was no distinct iris, merely a ragged fringe. The ophthalmoscope showed a yellowish white reflection from the fundus, the choroidal pigment being deficient. In the second case, the right eye was megalophthalmic. There was posterior synechia, and the pupillary opening was occluded by a film of organised lymph.

3. *Old Standing Dislocation of the Elbow-joint.*—Dr. JOLLY showed a stout, healthy young woman, with dislocation of both bones of the left forearm backwards, occasioned by falling down stairs with great violence upon the elbow. At this time—about twenty-two years from the accident—the forearm is shortened an inch and a half, but is quite as well developed as the other. The symmetry of the joint is not restored, and its antero-posterior diameter is increased to the extent of an inch. The head of the radius forms a protuberance behind and to the outer side of the external condyle; the ulna lies towards the inner condyle, and is somewhat separated from the radius. The forearm can be completely flexed and extended; pronation and supination are perfect.

4. *Hydatid Tumour of the Meninges of the Brain.*—Dr. SAWYER exhibited a drawing showing the *post mortem* appearances in a case of hydatid tumour of the meninges of the brain, which had been lately under his care at the Queen's Hospital.

5. *Successful Case of Colotomy.*—Mr. GOODALL read notes of a case of colotomy. The patient, a lady, aged 43, had suffered from symptoms of stricture of the rectum about twelve months previously. The operation was performed on January 25th, 1872, on account of complete obstruction of eight or nine days' duration. The cause of the obstruction was a pelvic tumour. The patient recovered, and is now in the enjoyment of fair health, and suffering very little inconvenience. She is able to take part in the duties and pleasures of domestic life in a large family.

6. *Glioma of Eyeball.*—Mr. PRIESTLEY SMITH exhibited an eyeball from a patient at the Eye Hospital under Mr. Chesshire's care, completely filled with glioma. The growth had destroyed every structure within the sclerotic, except the pigment of the choroid. Anteriorly, it was softening from fatty degeneration; posteriorly, it had passed along the optic nerve to the brain. It began at six months of age as "amaurotic cat's eye," and had been allowed to progress without treatment for two years. The boy died two months after removal of the globe, from extension to the brain. The growth consisted of a fine intercellular substance containing round, equal-sized, nucleated cells.

7. *Choroidal Sarcoma.*—Mr. PRIESTLEY SMITH showed a specimen also from one of Mr. Chesshire's patients. The retina was completely detached, except around the optic nerve and ora serrata. A firm nodular tumour involving the choroid, attached to the sclerotic, and occupying a quarter of the circumference of the globe, reached from the ciliary processes to the optic nerve entrance. Vision had been failing eight months when the case came under notice. The tumour was diagnosed

with the ophthalmoscope, and the globe excised nine months ago. The patient, a woman, aged 55, is now in perfect health. The structure was that of a spindle-shaped sarcoma.

8. *Stricture of the Pylorus.*—Dr. RUSSELL presented a case of carcinomatous stricture of the pylorus, fatal simply by its mechanical effects. The strictured portion was unadherent; the stomach was dilated so as to contain 120 ounces, and by its increased weight had sunk into a vertical position in the abdomen, occupying a great part of the front of that cavity. The hardened pylorus was felt during life lying by the side of the umbilicus. There was no ulceration, nor any secondary growths. The patient, a female, was thirty-six years of age. The symptoms were of about six months' duration.

9. *Curvature of the Spine.*—Dr. RICKARDS showed a specimen from a case lately under Dr. Fletcher at the General Hospital. It illustrated: 1. Anterior curvature of the spine from caries of the vertebræ; 2. Caries of the dorsal vertebræ; 3. Psoas abscess in its entirety, its origin, course, and termination.

10. *Removal of Fibrous Tumour of the Uterus.*—Mr. LAWSON TAIT showed a large fibrous tumour of the uterus that he had successfully removed by abdominal section about a fortnight before. The clamp had embraced the uterus, probably about the middle, and both ovaries were removed with the tumour, they being situated about its middle. The patient recovered without a bad symptom.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE fifth ordinary meeting of the session was held at the Midland Institute, Birmingham, on Thursday, February 13th; present, T. W. WILLIAMS, Esq., in the Chair, and forty-four members.

Notice of Motion.—Mr. LAWSON TAIT gave notice of bringing before the next meeting a recent case in which censure was passed on a member of the Branch by the coroner for Central Warwickshire.

Communications. 1. *Papillomatous Growths.*—Mr. LAWSON TAIT showed a mass of papillomatous growths which he had removed from a patient who had been sent to him for his opinion on the propriety of inducing premature labour, or perhaps subsequently performing the Cæsarean section. The disease was supposed to be cancerous; but, recognising it as due to tertiary syphilis, Mr. Tait removed the warts. The patient was two months afterwards delivered at the full time, made a rapid recovery, and the wounds had now quite healed.

2. *Dermoid Cysts.*—Mr. LAWSON TAIT showed two dermoid cysts. One, only six and a half ounces in weight, had been removed two days previously. It had been packed down in the pelvis, giving rise to great distress; was diagnosed and removed with a fortunate issue.

3. *Cystic Degeneration of Ovum.*—Mr. LAWSON TAIT showed an ovum with cystic degeneration of the villi of the chorion. The second he had seen within a few days.

4. *Horny Growth.*—Mr. JOLLY exhibited a drawing of a papillary horny growth, an inch and a half in length and two inches in diameter at its base, originating from the cicatrix of an old wound over the upper border of the right patella. It was rough, and presented a number of longitudinal fibrous lines, with a tendency to curve and taper at the point. On removal, it proved to be true horn, consisting of scaly epithelium greatly condensed and desiccated, and containing a fibrous core of hypertrophied papillæ supplied freely with blood-vessels, which permeated for some distance up its centre.

5. *Connection between Tonsillitis and Rheumatism.*—Dr. TOTHERICK spoke on the connection which he believed to exist between tonsillitis and rheumatism or gout. He had practised for ten years in a district where rheumatism in every form prevailed to a very large extent; and there quinsy was also remarkably prevalent. In fact, the great majority of the inhabitants had enlarged tonsils. He had been often struck with the fact that some members of a family would have acute rheumatism, whilst others had quinsy; and the two diseases—if, indeed, they were not both different manifestations of one and the same disease—often afflicted the same person alternately. As an additional evidence of the rheumatic nature of quinsy, he had found that guaiacum—which had long ago an established reputation in the treatment of rheumatism—was by far the best remedy in quinsy, almost infallibly aborting the disease if administered before suppuration had occurred. He had no doubt that a few cases of quinsy had a gouty pathology, and in such cases guaiacum had not the same value as in those of a purely rheumatic character.

6. Dr. SAWYER read a paper on the Treatment of Chronic Inflammatory Diseases of the Larynx.

7. Mr. VINCENT JACKSON read the record of a case of Impassable Stricture of the Oesophagus, for which gastrotomy was performed.

Microscopical Section.—A report was presented by the officers of the Microscopical Section, with rules for the conduct of the Section.

A Council Meeting was held after the Branch meeting, when five gentlemen were elected members of the Association.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 11TH, 1873.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

REMOVAL OF A NEEDLE FROM THE HEART: RECOVERY OF THE PATIENT. BY G. W. CALLENDER, F.R.S.

THIS was the history of a man who for nine days followed his ordinary occupation in pain and with discomfort, having a needle fixed in the tissues at the apex of the heart. On the ninth day, in consequence of his statement and in view of the pain which he was suffering, an incision was made over the fifth intercostal space, and the broken eye of the needle was found on a level with the intercostal muscle. This extremity was seized, and the foreign body was withdrawn. The patient recovered without an unfavourable symptom. With this history, the exact position of the needle in the wall of the chest was given, as also was that of its probable position in the heart; the movements of the foreign body, caused by those of the heart, were figured, and their measurements were added. Some remarks were made upon recovery and duration of life after somewhat similar injuries, and an appendix of cases was given in the form of a table.

The PRESIDENT asked the nature of the pain felt at the end of a month.—Mr. BROOKE said there was no reference to diagnosis by means of a magnetic needle, which no doubt would have suited here.—Mr. THOMAS SMITH asked how far the needle entered. Such a case was encouraging to those who wished to puncture the pericardium in cases of accumulation of fluid.—Dr. C. J. B. WILLIAMS said the needle must have been buried to some depth in the substance of the heart. In animals on which experiments had been tried with pins, to ascertain the causes of the sounds of the heart, the introduction of needles caused at first violent action; afterwards the action was quieter. The needles always moved and produced a friction-sound. Most likely there was adhesion here. It might be possible to introduce a needle, and so give an electric shock directly to the heart in suspended animation.—Mr. CROFT did not think the needle had penetrated the heart-substance. There were various reasons why he thought its end must have been free in the pericardium. A boy was brought to St. Thomas's with a needle supposed to be broken in the substance of the heart. He died of pericarditis. The point was found projecting into the pericardium. It had caused laceration of the heart's substance, and pericarditis.—Mr. HULKE said there was no difficulty about Mr. Callender's theory. There was much greater difficulty in accepting Mr. Croft's notion. The needle was really free at its outer end; and, attached at its inner end to the substance of the heart, it swung with its motions.—Mr. FAIRLIE CLARKE said in Mr. Croft's theory inconvenience was more likely to arise than in Mr. Callender's. Much more severe injuries had been recovered from.—Mr. CALLENDER said if he had not been quite sure as to the nature of the case, it would not have been worth while to bring it before the Society. The movements were exactly such as would be produced by the motion of the heart. It was marvellous how the man could go about his work for nine days in this state. The pain complained of a month after was doubtless due to nervousness. In the case of a child who ran a needle into a joint, he did not find the magnetic needle of much practical use.

CASE OF EXCISION OF THE KNEE-JOINT FOR DISEASE IN A WOMAN FIFTY-THREE YEARS OF AGE, WITH SUCCESSFUL RESULT.

BY FREDERICK J. GANT, F.R.C.S.

Mr. GANT described a case which he thought might be regarded as a notable exception to the typical conditions of disease appropriate for excision of the knee-joint or of other joints. The chief peculiarities were these. The disease, chronic rheumatic arthritis of twenty-three years' duration, resulting in imperfect ankylosis, with partial dislocation of the leg backwards, corresponding malposition of the limb, and increasing tendency to displacement; the age of the patient, fifty-three years; excision as performed in relation to the state of the joint; firm union in seven weeks; complication of after-treatment by accidental attack of erysipelas affecting the whole limb without destroying the union; permanent result, and measurement of the limb five and a half months after operation. In commenting on these particulars, the author suggested the applicability of excision to a condition of disease

which had not hitherto, he believed, been submitted to the operation, and at a more advanced period of life, thus comprising a larger class of cases, although of exceptional character. In the present instance, the age of the patient was the most advanced in which excision of the knee had hitherto been practised, or at least recorded. Since completing the history of this case, the author had found one other case in which excision of the knee-joint was performed by Mr. Curling for chronic rheumatic arthritis, with a successful result; the patient's age, however, being twenty-three years.

The PRESIDENT said there were two points of interest in Mr. Gant's paper—the kind of disease, and the age of the patient. He did not think that the operation would be often performed for rheumatic arthritis, which seldom affected the knee-joint to a damaging extent. Mr. Gant was to be congratulated, but he did not think the operation should be often extended to persons of such an age.—Mr. T. SMITH said that, looking at the excellent results obtained, he trusted Mr. Gant would never try the operation in another such case.—Mr. CROFT said in some cases they had performed the operation at St. Thomas's Hospital on patients over 40. Mr. Sydney Jones had performed it for rheumatic arthritis on a patient somewhat advanced in life. He was not inclined to oppose the operation even late in life.—Mr. T. HOLMES said he knew of a case of excision of the hip-joint for rheumatic arthritis in a patient aged 56, with recovery. But the matter could not be settled by individual cases; for, though some survived, these did not commend the operation. What were called statistics were not yet sufficient to prove anything one way or the other. It was his own experience that excision was always more dangerous than amputation, whether in acute or chronic disease. Amputation was safer for the patient's recovery; the object of excision was to save the limb, and the importance of that decreased rapidly with advancing years. The ultimate result was the thing to be considered. Was the operation worth the risk in such cases? In this case the patient was not completely cured, nor would she be till she could use the limb freely. Mr. Gant's paper, on the whole, confirmed his views.—Mr. GANT said his case was brought before the Society, not to establish a rule of practice, but as illustrating the kind of cases in which the operation might be performed. They might employ the operation either in acute disease, or for the results of disease in a useless limb. This patient belonged rather to the latter group; however, she was constantly having recurring attacks of the disease. He thought the result was successful, especially considering the erysipelas.

SUCCESSFUL CASE OF GASTROTOMY IN EXTRAUTERINE GESTATION. BY LAWSON TAIT, F.R.C.S.

In the case of J. N., aged 27, retrouterine pregnancy was diagnosed on September 23rd, the child having arrived at the term and died about the end of the July previous. The operation was performed on Nov. 2nd, the section being much as in ovariectomy. After opening the sac the feet presented, and no difficulty was experienced in removing the child, except in extracting the head from the pelvis, in which it was deeply packed, and where it had contracted adhesions to the floor of its cavity. The edge of the wound in the sac was stitched to the edge of the peritoneal wound by a continuous suture, the peritoneal cavity being thus completely closed. The upper half of the parietal wound (its entire length being about seven inches) was closed by deep sutures. A syphon drainage-tube was inserted deeply into the pelvic cavity, and the whole was syringed every eight hours with a solution of sulphite of soda. A fetid discharge issued from the cavity till about the eighth day after the operation, when it became purulent and was mixed occasionally with placental debris. Pieces of detached placenta were removed occasionally, together with foetal hair which had become adherent to the internal surface of the cyst, and been detached from the scalp in removing the child, until November 29th, when the great mass of the placenta was removed. After this the cavity rapidly closed, the part in the pelvis being quite obliterated early in December, and the whole shut up by the end of the month, leaving only a small sinus. The patient had a severe struggle with hectic. The chief peculiarities of the case were—the absence of any "false labour" previously to the death of the child; the leaving the placenta undisturbed; and the peculiar method of closing the peritoneal cavity, and leaving the parietal wound partly open. To leave a communication between the cyst and the peritoneum was to run the gauntlet of pyæmia and peritonitis. Closing the parietal wound entirely must lead to similar results.

Mr. SPENCER WELLS thought the paper was of importance, as showing that the placenta might be left and allowed to be discharged through the abdominal opening. This removed one of the great difficulties and dangers of the operation. From the account given, he thought that in this case the incision might have been made through the posterior wall of the vagina; it would have allowed more perfect

drainage, and have imitated the natural process when the foetus was spontaneously discharged, which was usually through the vagina or rectum.—Dr. HEYWOOD SMITH said that there had recently been three such cases at the Hospital for Women, but all had proved fatal. In one case gastrotomy was performed and the placenta removed; the patient died from hæmorrhage and shock. In another, the placenta was left to be discharged through the abdominal opening; the patient died of peritonitis, which came on before the operation. He thought it was best to operate early during the life of the child.

MEDICAL SOCIETY OF LONDON.

MONDAY, JANUARY 27TH, 1873.

THOMAS BRYANT, Esq., President, in the Chair.

Extrathoracic Suppuration with Discharge into the Lung.—Dr. SAN-SOM exhibited a patient—a woman aged 37—who had been under his care at the Royal Hospital for Diseases of the Chest since November 1872. Six weeks before admission, she noticed a swelling above the right clavicle, recurring after a violent cough. Auscultation and percussion failed to elicit any evidence of general pulmonary lesion; but above the right clavicle there were obscure cavity-sounds, and close to their situation was a limited oval swelling; and below the clavicle a diffuse fulness was noted. On December 6th, half a pint of pus was suddenly expectorated, and the swelling to a great extent subsided. Auscultation revealed gurgling with crackling sound on coughing, and pressure of the finger produced a feeling of large crepitation. On the 21st, all swelling had subsided, as well as all the signs and sounds; and tenderness had almost gone. On January 10th, 1873, fluctuation and tenderness were again manifested as previously; and on the 17th a second copious expectoration of pus occurred. The patient still suffered from severe cough, with occasional expectoration of rather foetid purulent phlegm. The supraclavicular prominence had largely subsided, but the finger still readily detected the crackling sensation produced by a cough, and gurgling was still heard. Over all the rest of the thorax the sounds were quite normal.

Aortic Disease.—Dr. HABERSHON read three instances of aortic disease which had recently come under his care, and showed the pathological specimens. The first case was that of a man, aged 39, who had suffered from repeated attacks of rheumatism. When admitted into Guy's Hospital in August 1872, he was suffering from urgent dyspnoea and cardiac sickness, with œdema of the lower extremities; a loud double *bruit* was audible over the aortic valves, which after a few days became continuous. He died on September 10th. One aortic valve was contracted and everted; the valve nearest the pulmonary artery was thickened, ulcerated, and covered with fibrinous vegetation; an ulcerated opening immediately above the valve extended into the pulmonary artery; the edges were irregular, and the opening was partially blocked up by fibrine. The second case was that of a man, aged 56, who was brought to the hospital in a dying state in December 1872. He had been suffering from dysphagia and dyspnoea. The aorta in its ascending and transverse portion was enormously dilated, so as to admit a man's fist. On the right side immediately above the valves a pouch extended to the right, and the lung in contact with it was sloughing. Other lobules of the lung were also in a similar state. The pouch pressed upon the left bronchus and upon the œsophagus; an oval communication an inch long existed between the two canals, and the ends of the bronchial cartilages projected into the œsophagus. The third instance was one of multilocular aneurism of the ascending aorta. A sac extended behind the sternum, and occupied the normal position of the heart; it perforated the ribs, and another false sac formed a pulsating tumour, extending from the left side of the sternum below the left nipple in the direction of the axilla. Death resulted from the perforation of the poststernal sac into the left pleura. The patient was fifty-five years of age. The aorta was dilated and atheromatous, and two inches above the valves was an opening three inches in circumference which passed into an aneurismal sac, and then into the subcutaneous sac, the latter opening being between the third and fourth ribs. Forty ounces of clot and as much serum were found in the left pleura.—Dr. BROADBENT asked whether, in the first case, the opening into the pulmonary artery was congenital. He thought that it was so, and that the left ventricle had supplied both the general system and the lungs for a great part of the patient's life.—After some remarks from Dr. ROUTH and Dr. SEMPLE, Dr. C. T. WILLIAMS asked what was the cause of death in the third case? The aneurism did not seem to have given way anywhere.—Dr. HABERSHON thought Dr. Broadbent's explanation was very interesting; but the case was supposed not to be congenital, because a systolic and diastolic *bruit* was heard which afterwards

changed to a continuous blowing murmur. He thought ulcerative endocarditis was not very uncommon.

Tapping for Empyema.—Dr. C. T. WILLIAMS showed a patient—a man aged 29—who was admitted into the hospital at Brompton on July 4th, 1871, with a history of pleurisy of four-and-a-half months' standing, and with signs of extensive effusion into the right pleura. On the 10th, he was tapped by Sir William Fergusson, and four pints of purulent fluid were taken away with temporary relief. Fresh accumulation took place, and an abscess formed in the mammary region, which was opened by Mr. Bartlett, and found to communicate with the pleura through a channel passing between the two layers of intercostal muscles, which acted as a valve preventing the entry of air. In spite of this mode of exit, the matter rapidly accumulated, the valve was rendered insufficient, air was admitted, and the discharge became offensive. The patient became much worse, and began to show symptoms of pyæmia. On August 21st, Mr. Henry Smith made a second opening in the posterior wall of the chest, and passed a seton through; this greatly increased the discharge and also its offensive odour. On the 24th, at the request of Dr. Williams, Mr. Henry Smith introduced a drainage-tube, and injected a solution of carbolic acid into the pleura. The effect of this was that the discharge became serous, small in amount, and free from smell; the pyrexia immediately disappeared, and the man made a rapid recovery. Dr. Williams strongly recommended the use of the drainage-tube in cases of pyæmia, especially if rapid formation of pus took place.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

FEBRUARY 19TH, 1873.

BENJAMIN BELL, Esq., F.R.C.S.Ed., in the Chair.

Oxalate of Lime Calculi.—Mr. JOSEPH BELL showed two calculi of oxalate of lime, together about the size of a walnut, which he had recently removed by lateral lithotomy from a man aged 62. The stones had escaped repeated soundings, and maintained a constant position in the bladder, and to each other, causing a sensation as if only one stone were present. The patient made a good recovery.

Swelling of the Eyelids.—Dr. ARGYLL ROBERTSON showed a case of persistent and very extensive swelling of the eyelids of both eyes. The patient had no dropsy, either cardiac or renal. The skin seemed hypertrophied, as in elephantiasis. Tapping had produced no effect. The sensibility of the lids seemed to be partially diminished. The field of vision was much narrowed, and the patient could not see to do his work. Dr. Robertson intended to remove a considerable slice of the hypertrophied textures.

Lithotomy.—Mr. DAVIDSON (of Madagascar) read a paper entitled a Brief Retrospect of the Recent History of Lithotomy, with an account of a new method of performing the operation. Lateral lithotomy, which used to be the favourite and classical mode, was now on its trial again. This was in part the result of the fact that all the best cases of stone in adults were treated by lithotrity, only the worst ones being left for lithotomy. After alluding to the flexibility of statistics from the days of Raw downwards, the author enumerated two principles which ought to guide all operations for stone. 1. The external wound should be such as give free access to the part of the urethra to be opened. 2. The internal prostatic wound should not be larger than absolutely necessary to allow extraction without laceration. Regarding the second of these rules, there was immense variety of opinion. After detailing the specialities in the views of Syme, Fergusson, Crampton, Buchanan, and Warren, he alluded more particularly to the operation of Allarton, and the risks in it of undue dilatation, laceration, and bruising in cases where the stone was large. He then spoke of the other median operation of Lloyd (recto-urethral) and Fergusson, with a semilunar incision, which, while median externally, was lateral so far as the deep wound is concerned; also of the plans of Erichsen and Thompson, with mesial wound and double incision of the prostate. Hence it was obvious that the lateral operation was not now the universally adopted operation that it used to be. Mr. Davidson then described his own operation. He uses a staff not unlike Buchanan's rectangular one, but with a small curve at the angle. It is grooved on the convexity. He makes a horse-shoe-shaped incision course lower on the left than on the right side, and then exposes the membranous portion of the urethra. Having opened this, he introduces a guide consisting of two parallel steel bars capable of being separated from each by a screw action in the handle, and the upper or outer of which is deeply grooved for the reception of a beaked knife. The guide being inserted into the bladder, the prostatic incision is made by the beaked knife, which is straight and narrow, to any extent required by the surgeon, who has previously formed his opinion as

to the size of the stone. The blades of the guide can then be expanded so as to dilate the wound, and the knife reapplied if necessary. The forceps are to be introduced in the guide. The advantages claimed for this method were—1, more accuracy in determining the extent of the prostatic incision; 2, better discrimination of the size of the incision in proportion to the size of the stone; 3, less risk of hæmorrhage. Mr. Davidson had cut eleven patients by this method, all under puberty. One had died within a month, but after he had left hospital. Seventeen cases had been operated on by his colleagues, with one death.—Mr. B. BELL remarked on the value and interest of the paper, especially when it was remembered that, as a medical missionary, Mr. Davidson was overwhelmed with work of all kinds.—Dr. JOHN CHIENE made remarks on the operation of lithotomy from an anatomical standpoint. He thought Buchanan's operation was a lateral one in everything but the method of making the skin-cut. He thought that in lateral lithotomy the surgeon can make the cut through the prostate quite definite in size. He enlarged on the importance of cutting the firm fibrous ring surrounding the mucous membrane of the prostatic portion of the urethra.—Mr. JOSEPH BELL alluded to Aston Key's method of performing lithotomy on the straight staff, and to the brilliant results attained at Guy's Hospital by this and similar plans of operating as recorded by Mr. Bryant. He remarked on the comparatively slight importance of the method used in operating, and the vital importance of recognising and treating morbid conditions of the urine, kidney, and bladder. With reference to Mr. Davidson's operation, he thought the idea of the guide was in the right direction; and that the manner in which the whole subject had been introduced to the Society was most admirable.—Mr. DAVIDSON replied.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, JANUARY 18TH, 1873.

GEORGE H. KIDD, M.D., President, in the Chair.

Intracapsular Fracture of Neck of the Thigh-bone.—Dr. BIGGER presented a specimen. A gentleman fifteen months ago fell in the street, his hip coming against the kerb-stone. There was much bruising and œdema, and fracture was not suspected. The patient recovered, and died a few days ago from another cause. The capsule of the joint was intact. The head of the bone was detached from the lower portion of the neck, on which it freely played, a false joint having formed.

Scirrhus of the Mesentery.—Dr. HAYDEN said that on November 26th last a small-sized man, aged 43, was admitted to hospital, complaining of irregularity of the bowels and remittent pain in the abdomen. These symptoms had been present for six months. A hard and rugged tumour was felt in the ileo-cæcal region. The feces were mortar-like. The heart was very weak. The patient soon died of peritonitis from intestinal perforation. The tumour was found on examination to be distinctly cancerous. Dr. Hayden drew attention to the following points of interest:—1, the disappearance of the tumour coincidently with the occurrence of perforation; 2, the atrophy of the heart, due to cancerous cachexia; 3, the contraction of the heart, evidenced by the rugose state of the pericardium in places, and due to an old pericardial inflammation; and 4, the deposition of ossific matter in the false membrane between the heart and pericardium.

Gangrene of Lung.—Dr. LAW showed the lungs and trachea of a coal-porter, aged 50, who died after an illness of six weeks. While suffering from a cold, the patient had attended a "wake," and got drunk. When admitted to hospital his dyspnoea was extreme, the left lung was dull anteriorly and the right lung posteriorly. Mucocrepitating râles were generally audible. He died in three days. The left lung was broken down, and in a state of putrilage. The tracheal mucous membrane was much congested, and the right lung was in a condition of universal *engouement*. Dr. Law said the case was one rather of putrefaction, than of gangrene properly so-called. The malady usually arose under the like circumstances to those detailed in the present case.

Pulmonary Apoplexy.—Dr. GERALD F. YEO showed the viscera of a woman, aged 52, who had died in the Whitworth Hospital, after suffering from great dyspnoea, weak heart, and albuminuria, and latterly pleural effusion on the right side. All the cardiac cavities were dilated, and contained clots. In the apices of the ventricles and in the auricular appendices the clots had evidently been formed *ante mortem*, being brittle, non-elastic, dry, laminated, hard, and of a yellowish brown colour. The valves were all healthy and sufficient. The pulmonary artery was healthy. There were evidences of pleuritis round the upper lobe of the right lung; and at the lowest portion of each lung a large pulmonary apoplexy existed. The arteries leading to the altered lung-tissue were in both cases plugged with dry adherent coagula, and the

mechanism of the resulting apoplexy was probably that described by Paget and Willis. The kidneys were extensively diseased, and the cortical substance of the left kidney was full of small fibrinous infarction.

Intracapsular Fracture of Neck of the Thigh-bone.—Dr. BENNETT showed a specimen, the clinical history of which was wanting. The shortening of the limb was fully one inch and a half. The great trochanter was approximated to the crest of the ilium, and the joint was fixed by the interlocking of the upper fragment with the rim of the acetabulum, which had undergone absorption. There was a bony deposit in front of the trochanter, and a spiculum of bone in the psoas tendon. The neck had altogether disappeared from the upper fragment, and nearly from the lower. The fragments were united by strong fibrous tissue.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, JANUARY 11TH, 1873.

LOMBE ATTHILL, M.D., Vice-President, in the Chair.

Abstract of Cases in Midwifery Practice.—In the absence of the author, a paper by Dr. HEMPHILL, of Clonmel, was read by the Honorary Secretary, Dr. J. R. Kirkpatrick. Details of 280 cases of labour in private practice were given. Of these, 224 were natural labours, 6 were tedious. Operations were necessary in 11 cases, including one forceps case and the removal of the placenta on nine occasions. In eight breech-presentations three children were lost; there were one footling presentation (child saved), two arm presentations, three hand and head (children all saved), and one case of twins. An acephalous fœtus was once met with. There were three cases of puerperal hysteritis, and three of puerperal mania, three of accidental hæmorrhage (two children being lost), three of lacerated perineum, and five of adherent placenta. In *post partum* hæmorrhage the author had used thirty grain doses of fresh powdered ergot with much success. Altogether two mothers and eight children were lost out of the 280 deliveries.

Fourth Annual Report of the Rotunda Lying-in Hospital.—Dr. JOHNSTON, master of the institution, read his fourth clinical report. Within the year ending November 5th, 1872, 1193 deliveries had taken place in the hospital; 130 extern deliveries had been attended in the city; 3,677 attendances at the dispensary had been noted, and 289 patients had been under treatment in the chronic wards; in all 5,289 cases had received relief. Among the intern deliveries, 426 were of primiparæ. The labour was natural in 931 instances, including 316 primiparæ; of these, four died—one from pyæmia, one from bronchitis, and two from peritonitis. Of the presentations, 6 were of the upper extremity (in five of these version was practised under chloroform), 37 were of the breech or lower extremity, and 30 were footlings. There were 49 cases of abortion. The forceps was used on 131 occasions (with 9 deaths, or 1 in 14.5), 95 of the patients being primiparæ; 77 children being male and 54 female, of whom 62 males and 42 females were born alive. Dr. Johnston advocated the use of the forceps in the hands of skilled practitioners, even, in certain circumstances, before the os was fully dilated. He detailed the particulars of 35 such cases, in 32 of which the mothers recovered, the child being born alive in 27 instances. The cause of this early operative interference was early rupture of the membranes on thirty occasions, accidental hæmorrhage on two, and convulsions on three occasions. Two mothers died from gastritis, and one from convulsions in the seventh month. Among complications were 19 cases of twins, 10 of accidental hæmorrhage (none fatal to the mother, but six fatal to the child), 4 of unavoidable hæmorrhage, 6 of *post partum* hæmorrhage, 2 of retained placenta, 7 of prolapse of the funis, and 5 of convulsions (the last all in primiparæ). Chloroform was given on 131 occasions, but always after a preliminary full dose of ergot. The anæsthetic was always pushed until stertor was produced. There were 14 cases of peritonitis (12 of the patients being primiparæ, and 7 mineptæ), 2 cases of pyæmia, 1 case of phlebitis, 3 cases of acute gastritis, 3 of scarlatina, and 10 of variola (9 in patients, and 1 in an inmate of the institution. No instance of the spread of infection had occurred, the small-pox cases having been distributed over many months, and in nine instances having been admitted from the city. Twenty-four cases of acute pulmonary affections came under notice, 6 of mania (5 being unmarried), and 5 of syphilis. The number of deaths during the year was 20, or 1 in 59; 6 of these were due to zymotic causes, but in no instance could the death be attributed to the confinement having taken place in the hospital.—The CHAIRMAN considered that Dr. Johnston had proved that a well-managed lying-in hospital was not a hotbed of disease, and that contagious diseases did not spread in it. The use of the forceps instrument before the complete

dilatation of the os was novel and suggestive.—Dr. MORGAN said that in considering reduction as a predisponent cause of death in child-birth, it was necessary to draw a distinction between cases of primary and recent reduction, and those of old standing. Thus at the Westmorland Lock Hospital the childbed mortality was very small.—Dr. DENHAM must caution young practitioners against the possible dangers attending the early use of the forceps by the inexperienced or the unskilled.—Dr. KIDD bore testimony to the admirable arrangements of the Rotunda Hospital. He thought that the forceps used early by a judicious hand had saved many lives.—Dr. J. W. MOORE said that among the many valuable statistics brought forward by Dr. Johnston, none were more valuable than those which related to the mortality of the Rotunda Hospital. The contrast between the city and hospital was especially striking as regarded the mortality from zymotic causes, to which only six deaths were attributable in the hospital, or less than one half the mortality from this class of diseases in the city.—Dr. JOHNSTON was led to use the forceps in the first stage of labour from having found the cervix uteri detached from the body of the viscus in a fatal case. He always used Barnes' double-curved forceps.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, JANUARY 3RD, 1873.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

Variculous Oedema of the Larynx.—Dr. CHARLES F. MOORE showed the larynx, trachea, thyroid body, and portions of the skin of a man who, having recently passed through two pyrexial attacks, was admitted to hospital with erysipelatous symptoms in connection with the head. In a short time purpuric spots appeared in various situations, and papules with depressed centres became developed. Extreme dyspnoea rapidly supervened, and the patient died asphyxiated. The thyroid body was very large, the mucous membrane of the trachea bore traces of recent inflammation, and the true vocal cords were highly oedematous.

Lithotomy under Ether.—Dr. MACNAMARA exhibited a large calculus which he had removed by the lateral operation from a boy aged 14. Ether was given, and succeeded admirably, the operation being completed in less than twenty minutes without nausea or other unpleasant symptom.

Vermicular Action of the Urethra inwards.—Dr. MACNAMARA said that many years he held (as, indeed, he had been taught) that foreign bodies lodged in the urethra had a tendency to be thrust forward. But, on inquiring more closely into the matter, he was led to believe in the existence of a vermicular action in the urethra, acting from without inwards on a body presenting a sufficiently large superficies. A calculus was thrust forward by the *vis à tergo* of the urinary stream, which overbalanced the vermicular action, as the latter had only a small surface whereon to act. But a catheter, when left in the urethra, had a tendency to pass towards the bladder, and to prevent it from doing so, it was often necessary to apply a jugum. The object of this vermicular action was clearly to prevent leakage from the bladder. In the volume of the *Dublin Hospital Gazette* for 1858, Mr. Fleming had spoken of a sucking power, or vermicular action of the urethra, in certain cases, but no mention was elsewhere made of this physiological property of the part.—The PRESIDENT remarked that the number of cases where portions of catheter found their way into the bladder strongly confirmed Dr. Macnamara's interesting and novel remarks.—Mr. STAPLETON could not recognise the existence of an urethral vermicular action, and he believed that an entire catheter never yet had passed into the bladder.—Dr. H. KENNEDY referred to an example of this accident recorded by Mr. Stokes in the first number of the *Irish Hospital Gazette* (Jan. 1st, 1873).—Mr. FLEMING considered that the condition of a catgut bougie which had been left for two hours in a stricture, was such as to invalidate the importance of an apparent motion of the bougie towards the bladder in that case. He thought that where a whole catheter remained in the urinary passages, a part of it was always to be found in the prostatic portion of the urethra and a part in the bladder itself. And this was a point of great practical significance; for the surgeon who bore it in mind was frequently able to remove the catheter without cutting into the bladder at all.—Dr. MORGAN suggested that the phenomena described by Dr. Macnamara might depend on a reversal (under certain conditions) of the ordinary action of the *accelerator urinae* muscle. He could not adopt the hypothesis of a vermicular action of the urethra.—Mr. WHARTON was unable to understand the terms "suction" or "vermicular action" as applied to the urethra. Dr. Morgan's explanation seemed quite satisfactory.—Mr. RICHARDSON referred to the use of the winged catheter, as opposed to the notion that a catheter tended to pass towards the bladder.—Dr. B. F. McDOWELL contended that the parts

were so altered by the morbid processes attending stricture that in these cases, even if such a thing as vermicular action had previously existed, it must cease to act.—In reply, Dr. MACNAMARA reminded Dr. McDOWELL that in stricture only an eighth or so of the urethra was engaged as a rule.

Oesophageal Forceps.—Mr. STAPLETON exhibited a very ingenious instrument for the extraction of foreign bodies from the oesophagus. The principle was that of a lady's garden-scissors.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, JANUARY 8TH, 1873.

SAMUEL GORDON, M.B., in the Chair.

Digitalis in Acute Diseases.—Dr. JAMES LITTLE read a paper on the use of digitalis in the failing heart and delirium of acute diseases. Having referred to the researches of Stokes and Corrigan as to the condition of the heart in fever, and to the use of stimulants in that disease, he spoke of the employment of digitalis in cases where stimulants were either not well borne or were actually contraindicated. They might disagree with the brain, and give rise to a train of cerebral symptoms; or from previous over-indulgence, the patient might not be able to bear them; or in the presence of renal mischief their use would generally be altogether contraindicated. Under circumstances such as these the author had employed digitalis in more than twenty cases, including six of typhus, one of rheumatic fever, and the remainder of enteric fever. The preparation used was the tincture, given in half-drachm doses every three or four hours, and rarely every hour. The administration of the remedy was discontinued after the pulse had fallen to 80, and except in one case the action of the drug was supplemented by wine or brandy, given in cordial or stomachic doses. In one case of rheumatic fever, digitalis was used alone. The patient, a merchant, aged 35, had symptoms of a rheumatic attack towards the close of last October. Six months previously he had suffered from severe dyspepsia, with much cerebral disturbance. On October 26th he remained in bed, the heart was very weak, and the temperature was 102 deg. Tincture of the perchloride of iron was given in twenty-minim doses every fourth hour. Four days later, signs of commencing cardiac complication appeared. The evening temperature on November 6th was 103.6 deg., the highest during his illness. On November 11th he was delirious at night, and on November 18th he had been one hundred hours without sleep, his pulse was feeble (100 per minute), and the first sound of the heart was absent. As stimulants could not be borne, half-drachm doses of tincture of digitalis were given every hour. After eight doses, the patient fell asleep. Nausea having afterwards set in, the tincture was withheld, and one-eighth of a grain of atropia, one-fortieth of a grain of digitaline, and a fourth of a grain of morphia were injected hypodermically. The patient did well.—The CHAIRMAN expressed his deep sense of the value of Dr. Little's communication, and alluded to the novelty of the application of digitalis in functional affections of the heart.—Dr. HAYDEN could not but look upon digitalis as a cardiac tonic, the "opium of the heart," as it had been termed. He recalled the practice of Mr. Jones, of Jersey, who used the drug freely in delirium tremens. Dr. Hayden generally gave ten minims of the tincture, in combination with perchloride of iron and spirit of chloroform. He believed that digitalis was useful only when it acted on the kidneys. It was of great advantage in fatty heart with dilatation of the cardiac chambers.—Dr. GRIMSHAW had used digitalis six years ago in a case of acute rheumatism with nervous symptoms, similar to the one described by Dr. Little. The patient was delirious except when under the influence of full doses of digitalis (given twice or thrice a day). The heart was very weak. In a subsequent attack digitalis failed, while brandy succeeded; the disease, however, assumed the character of pyæmic rheumatism, and the patient died. He believed the infusion to be the most reliable preparation of the drug. Large doses were especially dangerous in delirium tremens, and in all instances caution was necessary. He had used strychnia with much success as a cardiac tonic in fever.—Dr. H. KENNEDY relied most on powdered digitalis. The drug had long since been employed in maniacal cases. He considered that, in order to test its efficacy in a satisfactory way, the remedy should be given alone. Vomiting was a dangerous symptom.—Dr. W. G. SMITH dwelt on the importance of the class of cardiac remedies, and remarked on the inutility of experiments on the lower animals apart from clinical observation and experiments. Digitalis was proved to be a direct cardiac stimulant. The question of tolerance of the drug turned on the value of the preparation employed. The active principle, digitaline, had recently been isolated in France as a crystalline substance, very unlike the amorphous powder at present in use, and which was of most uncertain

strength.—Dr. FITZPATRICK must regard digitalis as a sedative, a depressant, and a diuretic.—Mr. MACSWINEY mentioned a case in which large doses of digitalis seemed to be followed by weakening of the heart, syncope, and death.—Dr. AQUILLA SMITH referred to the importance of clinical investigations bearing on the subject under discussion. The special action of digitalis on the heart had been proved by experiment and clinical observation. It was not directly a diuretic, but, through its stimulant action on a weak heart, it tended to remove congestion or stasis of the vascular system, and so diuresis set in. Indeed, its diuretic action might be looked on as analogous to the purgative action of opium in colica pictonum.—Dr. PURSER considered that, in many cases of enfeebled circulation in acute diseases, this feebleness depended on dilatation of the peripheral arteries, which allowed the blood to flow too freely into the veins, and so tended to neutralise the heart's essential action of maintaining the difference in tension or equilibrium between the arterial and venous systems. On these arteries many medicines, and digitalis among the number, probably acted by stimulating the sympathetic nerve. The small vessels contracted in consequence, and the heart became subsequently influenced, not by the remedy directly, but from the cardiac contractions being rendered more effective by the restoration of the normal condition of the peripheral circulation.—In his reply, Dr. LITTLE said he had purposely omitted to speak of the use of digitalis in chronic diseases. In too large doses, the drug invariably produced tetanic spasm of the heart.

CORRESPONDENCE.

THE UNIVERSITIES: THE CONJOINT EXAMINATION.

SIR,—I should be glad to be allowed to say a few words upon two points alluded to by Dr. Lyon Playfair in his address to the graduates of the University of St. Andrew's, of which an extract is given in the JOURNAL of February 15th.

First, with regard to the English universities. There can be no doubt that till within a recent period they were almost exclusively engrossed with classics and mathematics, and failed to exercise the influence they might and should have had upon the medical profession; and it must be admitted that they are still, to some extent, deficient in that respect: nevertheless, it ought to be added that within the last few years a considerable and important change has taken place. The sciences correlative with medicine—chemistry, physics, botany, and comparative anatomy—are now actively and practically cultivated in these universities, and form subjects of a Tripos examination, through which the road to honour and reward is as freely open as it is through the older Tripos examinations in classics and mathematics. Scholarships and Fellowships are awarded for proficiency in these sciences. Additional professorships and demonstratorships have been, and are being, founded in them; laboratories and dissecting-rooms have been built and are in process of construction; museums have been built and enlarged; students in increasing numbers are working in them; and altogether there is far greater life and promise of future activity in this direction than at any previous period of university history. Nor do we stop here. We believe, in Cambridge at least, that the study of the more directly medical sciences—human anatomy and physiology, in a complete manner, and pathology, medicine, and surgery, in an initiatory manner—may be, and ought to be, taught here, as philosophically and practically, in short, as well as or better than elsewhere; and that it is the duty of the University thus to connect its higher culture and teaching with the practical requirements of life. Accordingly, the dissecting-room for human anatomy has been recently enlarged, and is now so well supplied with subjects and students that it needs further enlargement. Four demonstrators and assistants are engaged under me, in anatomy and physiology, in addition to those under Dr. Michael Foster in the physiological laboratory and to those in the dissecting-room for comparative anatomy. The principles of medicine are taught by the Regius Professor of Physic; pathology by the Linacre Lecturer in Medicine; pharmacology by the Downing Professor of Medicine; and clinical study, at Addenbrooke's Hospital, is carefully directed by the physicians and surgeons to the hospital, with the assistance of a house-physician and a house-surgeon. Much beyond this I do not think it would be wise to attempt. The endeavour to make Cambridge a complete school of medicine would be a mistake. It is far better that, after the student has acquired the initiatory knowledge which I have mentioned, he should be compelled to pass to the wider spheres of practice afforded by the metropolitan hospitals. Having, that is to say, prepared himself up to the requirements of the second M.B. examination, which is in subjects nearly similar to those of the first professional examination at the Colleges of

Physicians and Surgeons, and having become familiarised with hospital practice, the student should no longer remain in Cambridge, but should continue his clinical work in London or elsewhere. He thus has the great advantage of pursuing his practical studies in two hospitals, instead of confining them to one. I feel, therefore, that we cannot be accused, as members of an English university, of altogether neglecting our duty to the profession of medicine. If we are not doing our utmost, we are doing a good deal to increase the university element in that profession; and Dr. Lyon Playfair's statements, that "the English universities have lost their hold on the medical profession", needs some qualification, and ought not to be allowed to pass unnoticed and unchallenged. His suggestion that the universities "may at least adjust a preparatory curriculum to suit the medical profession, and thus secure to medical students a liberal culture bearing on their future life before they begin their professional learning", comes a little too late, and could not have been made by one who had acquainted himself with what is now going on in the universities. Such an one would have found that we have already done more than Dr. Lyon Playfair suggests that we should do, and that we are more willing "to extend modern obligations to society" than he seems to be aware.

An inevitable difficulty in the way of a large extension of the universities in the direction of the medical profession is presented by the fact, that higher culture and the ordeal of more extended and more searching examinations necessitate a longer period of study; and this involves additional expense. The difference is not, however, so great as is commonly supposed; the necessary expenses are reduced to a minimum, or nearly so; the fees are not high; and many students in Cambridge live very economically, even though enjoying the advantages (to use the words of Sir James Paget at the recent dinner of the Philosophical Society in the University, when congratulating the University on the revival of medical study within its walls) "of associating with the best born, the best bred, and the best mannered men of their time". The intelligent and industrious student will in after-life find a good return for the additional capital thus invested; but, as we know, the additional capital is not always forthcoming, and I do not yet see how this difficulty is to be overcome.

Secondly, with regard to the proposed plan for a conjoint examination. It has been long admitted that the number of portals through which a candidate may in this country pass and obtain admission to the Register, and so a qualification to practise, is neither satisfactory to the public nor beneficial to the profession, especially as the licence from any one of the several bodies, whether medical or surgical, gives the legal qualification to practise in all branches of the profession. It has been further felt that, forasmuch as the examinations at each of these licensing bodies are taking place at several times in the year, they are, in the aggregate, so numerous that it is scarcely possible to carry out any inspection by the Medical Council in an effective and satisfactory manner. It became, therefore, evident that, unless some arrangement was made by the several licensing authorities, and some plan devised for reducing the number of qualifying examinations, Government would take the matter into its own hands, and that something analogous to the German *Staats-Examen*, of which Dr. Lyon Playfair so vividly portrays the evils, would be introduced. It is partly in the hope of preventing these evils, and in the hope of maintaining the independence and self-government of the profession, as well as of maintaining the corporations, which Dr. Lyon Playfair and others value "as productive of professional strength and *esprit de corps*", that the English bodies are endeavouring to combine so as to institute one good licensing examination in the place of several. I can vouch from personal knowledge, that the eminent men who are concerned in this are actuated by the honest desire to promote the welfare of the profession; that they have voluntarily given a great amount of their valuable time and thought in the desire to arrange a scheme which shall prove satisfactory to the public and to the profession; and that they have a good hope of success. It is not, however, to be supposed that they aspire to accomplish the superhuman result of devising a scheme which shall be without some real and more imaginary objections. I must be pardoned if I am disposed to range Dr. Lyon Playfair's objections among those of a somewhat imaginary nature. I confess I am at a loss to understand how "a downward competition would be the inevitable result of a single examining board". I do not perceive that his arguments constitute a sufficient ground for the assertion that "such a conjoint system possesses neither the condition of permanence nor that of strength"; nor do I see that the proposed plan will have the effect of substituting a minimum for a maximum standard of qualification any more than does the present system—rather the contrary. Every pass examination must have a minimum standard. At present, each licensing body is to some extent limited as to its standard by the fact, that a legal qualification to practise is given or withheld as a result of its

examination. Under the conjoint system it is not likely that either the minimum or the average standard for qualification will be lower than it is at present; for the examination, be it remembered, will be conducted by examiners nominated by (not in any case *from*) a committee composed of the representatives of all the combining authorities, and will be supervised by that committee as well as by the Medical Council. Surely this must give a better security for a fair minimum standard, than when the examinations are conducted by those who are the teachers of the candidates to be examined. At the same time, each of the several universities and corporations will be more free than at present to extend the range and adjust the standard of its own special examinations, being no longer restricted by the considerations of a legally qualifying condition. Their several special degrees and diplomas requiring the higher standards of attainment will, I anticipate, be more commonly sought than is now the case; and thus the dangers from uniformity in teaching, apprehended by some as a consequence of the one conjoint examination, will be more than counterbalanced by the varying requirements of the several universities and corporations. I hope that great good will ensue from this; that a large number of students will aspire to that closer connection with the Colleges of Physicians and Surgeons which is attainable through the membership and fellowship of those colleges, and will be thereby stimulated to the higher education which that connection implies.

The climacteric argument and key, as it were, to Dr. Lyon Playfair's position is the apprehension that, under the influence of a conjoint examination, the Scotch universities would fail to attract the medical students in such large numbers as they now do, and that a good influence upon the profession would be thus diminished or lost. We can understand how "impossible it is for him", with such a feeling, "as representing two Scotch universities, to yield to a popular cry for a one-portal system". I trust that this also is a groundless apprehension. I cannot persuade myself that the good reputation and good teaching of the Scotch universities are not a sufficient guarantee against such a result, and would fail to enable them still to hold their own against the extra-academical schools; and I regret that his better knowledge of these universities leads Dr. Lyon Playfair to a different opinion.

I am, etc., G. M. HUMPHRY.

Anatomical Museum, Cambridge, February 1873.

ANCIENT ENGLISH APOTHECARIES.

SIR,—Will you allow me to state, in reference to Dr. Smart's interesting lecture on the mediæval medical staff as regards the *apothecary*, that Lord Chief Justice Coke, in his Eighth Report (the City of London's Case), mentions a grant from the Tower of London, 32 Edward III (*i.e.*, in 1359), whereby it was granted to *John Falcourt de Lucca*, apothecary, citizen of London, to enjoy the rights of the citizens of London, and to be free of the duties payable by aliens. After explaining that he did not thereby become a freeman of London, he adds, "And it was said that he was the first apothecary that ever was in this kingdom." It would seem, from Dr. Smart's account, that Lord Coke was mistaken, unless the *apotecarius reginæ* mentioned as accompanying the army of King Edward I, fifty years earlier, differed from the apothecary of the time of Edward III.

Regent's Park.

I am, etc., W. G. LUMLEY.

CHLOROFORM ACCIDENTS.

SIR,—I have read with much pleasure a communication in the last number of the JOURNAL from Mr. Prichard of Bristol on chloroform accidents; and the instances which he gives of deaths caused by chloroform, and of cases in which it very nearly proved fatal, described in a most graphic and vivid manner, have confirmed me in the opinion which I have long held, that a very large number of the deaths which occurred under chloroform have been caused by the mode of administration. Chloroform administered upon a piece of sponge, a fold of lint, or a towel, is always dangerous, and places the life of the patient in great jeopardy; for it is impossible for the administrator to know either how much chloroform the patient has inhaled, or whether it is, or is not, mixed with a proper quantity of atmospheric air. It cannot be disputed that a properly constructed inhaler is the only accurate method of administering ether, chloroform, or any other anæsthetic.

There are so many good and portable inhalers made by the instrument-makers, with contrivances for regulating the admixture of air with the vapour of chloroform, that I will not attempt to describe them, and will only mention the one invented some years since by Dr. Sarsom as one of the best, if not the best, excepting Clover's, that has been introduced. I need hardly say that the only objection to Clover's apparatus is its large size. Skinner's mask is, I think, open

to many objections; it gives too large a surface, and uses a large quantity of chloroform. The last number of the BRITISH MEDICAL JOURNAL contains the particulars of two deaths from chloroform; and I notice that the patient who died under its influence at the West London Hospital had the chloroform given her upon a piece of lint. I would say, in parenthesis, that I believe we shall ere long return to ether as an anæsthetic, and that chloroform will fall into disuse. When chloroform or any other anæsthetic is administered to a female, it is of considerable practical importance not only that the dress should be unfastened at the neck, but that the stays should be unhooked, as it will invariably be found that they are fastened so tightly as to impede the movements of the ribs and the action of the diaphragm. But my object in writing this letter was not to make suggestions as to the administration of chloroform generally, but to express a hope that the administration of chloroform upon a sponge, a towel, or a piece of lint (or in any way, excepting by means of a properly constructed inhaler) will soon fall into disuse, be regarded as a most dangerous proceeding, and receive the universal condemnation of the medical profession.

I am, etc., JOHN MARSHALL, L.R.C.P. Lond., etc.
Dover, February 26th, 1873.

THE DEATH FROM ANÆSTHETICS AT THE WEST LONDON HOSPITAL.

SIR,—Under the heading "Deaths under Chloroform", at page 205 of your last number, is published a letter from Mr. Wyman describing a case which occurred at the West London Hospital, but which, as it appears to me on reading the report, was a death from ether rather than one from chloroform. The chloroform had produced no further effect on the heart than making the pulse irregular; it was then removed, and the administration of ether commenced. "After a few respirations the pulse became regular and fuller for a few seconds; and then stopped suddenly."

I have so many times felt the pulse beat irregularly whilst giving chloroform, and on removing it found the pulse regain sufficient regularity to enable me to give it again, that I believe the mere removal of chloroform would in this case have been sufficient to restore the patient. The stoppage of the pulse followed the administration of ether, and, I believe, was caused by it.

When strong ether-vapour is given to a dog through a tracheal tube, the heart is stopped by it in less than half a minute. Now, in the present case, the previous action of the chloroform had so much reduced the sensibility of the glottis, that the ether-vapour passed into the air-passages without opposition, although it was little diluted with air.

I am informed the ether had just been poured on a sponge, warmed with hot water, placed at the bottom of a hollow cone. Under these circumstances, the ether would evaporate very freely indeed at first; and although ether is very often administered in this way, the safety attending the practice is probably due to the partial or complete closure of the glottis, until by evaporating the ether has cooled, and no longer gives off so high a percentage of vapour. When ether is added to an inhaler already containing some cold ether and water vapour (condensed from the breath, of course), the ether does not evaporate nearly so freely as it does in the first instance.

I think the case shows that, under certain circumstances, it is not so safe as some of its advocates have supposed, to give ether without regard to its dilution with air.

I am, etc.,
3, Cavendish Place, February 25th, 1873.

J. T. CLOVER.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

SIR,—As you expressed a wish to know what appointments have taken place under the Sanitary Act, I beg to inform you that the Board of Guardians of the Barrow-upon-Soar Union, Leicestershire, have appointed the five medical officers of the Union as Medical Officers of Health in their respective districts, till March next, at the rate of £5 for every thousand of the population. They have done so on the grounds that they consider the District Medical Officers are aware, from time to time, of any nuisances that may exist in their districts from defective drainage, overcrowding, and want of sufficient accommodation, and know the localities in which epidemic and

endemic diseases are likely to appear; and also as they are competent to treat disease amongst the poor under disadvantages, they are equally competent to give an opinion on defective drainage, overcrowding, foul air and water, damp and unhealthy dwellings without having a Medical Officer of Health placed over them, who perhaps would be obliged to ask him for information concerning the sanitary state of their districts.

At a partial meeting of Poor-Law Guardians, held at Leicester, in the last month, a resolution was passed that one Medical Officer of Health be appointed for the county, and that other Unions should be solicited to give their consent. Imagine the heroic son of Æsculapius borrowing wings from Mercury and strength from Hercules to visit the Augean localities in the three hundred and ninety-six towns and villages in this county, and report on their sanitary condition. How could he do it, even if he received his information from others? It is a rule "that prevention of disease is better than cure;" therefore it is not only the duty of the medical profession to cure, but also to prevent the spread of diseases. If army-surgeons look after the health of the troops, and the sanitary state of the localities in which they may encamp, and report on the same, are not the Union medical officers in the civil service equally competent to report on the sanitary condition of the labouring classes and the dwellings in which they live, by whom our manual work is done and our armies recruited?

The objection is raised by some, that Union medical officers in rural districts may offend owners of property, who perhaps, if nuisances are let alone, may become their patients. It is a fallacy, with but little reason in it, for they might as well object to that coming "betwixt the wind and their nobility," after being amongst small pox, scarlatina, measles, and fever, which is the object of the sanitary act to prevent. If inspectors of vaccination are sent from London to see the reports of vaccinators and examine the vaccinated, would it not equally answer to have a medical staff of officers of health to visit the different unions, and see that the rural medical officers did their duty without having it so subdivided through the kingdom.

I am, etc.

Sibley, Loughborough, Feb. 13, 1873.

P. DOWNEY.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting of this Association was held on Wednesday, at the Medical Club. Dr. Joseph Rogers, who presided, in his opening remarks alluded to the anticipated amendment of the Public Health Act (1872), which, however, had been dropped for this session. This he regretted, as well as Mr. Stansfeld's abandonment of the Hospitals Dispensary Clause in that Act last session. He thought that drugs ought to be found free of cost to all Poor-law medical officers throughout the country; and he urged the extension of the system now in operation in London to the provinces. He concluded by announcing his resignation of the office of President, which he had held for nearly seven years.—Dr. J. Lush, M.P., was then elected President, and Dr. Rogers, Dr. Brett, and Mr. C. Seeley, Vice-Presidents. The meeting then proceeded to discuss the sanitary and dispensary questions. Dr. Joyce moved, and Dr. G. R. Barnes seconded, "That this Association viewed with satisfaction the tendency of rural sanitary authorities to pursue the policy of combination recommended by the President of the Local Government Board."—Dr. Brett moved as an amendment, "That the opinion of the meeting was averse to the amalgamation of large sanitary districts, and they considered that the Public Health Act could be best carried out by appointing medical officers health-officers of their own districts where possible."—After a discussion, the amendment was carried. The following resolution was also adopted—"That this Association entertains a strong opinion that the establishment of public dispensaries in accordance with the recommendation of the Sanitary Commission and the Poor-law inspector's special report is necessary and desirable; and earnestly hopes that the Government, notwithstanding their avowed intention of introducing no measure in the present session affecting the sanitary requirements of the country, may be induced, in view of the great distress among all classes of the poor, in a time of exceptional severity, to pass some measure having for its object the prompt and efficacious relief of sickness."—A vote of thanks to the chairman concluded the proceedings.

THE PUBLIC HEALTH ACT.

DORSET.—At the Town-hall, Dorchester, last week, under the presidency of Lord Digby, a conference of the rural and urban sanitary authorities of Dorset, was held concerning the expediency of carrying out the provisions of the Public Health Act. Mr. Hawley and Mr. Wodehouse, Poor-Law Inspectors attended, and a large number of guardians of the poor were present. Mr. Hawley referred to the

appointment of medical officers of unions as medical officers of health under the Act, stating that the Local Government Board had distinctly refused to sanction such appointments. He read a letter showing that in eleven districts of the Crediton Union, in Devonshire, as many union medical officers had been appointed officers of health, but that this course had been disapproved; and he strongly contended that the union officers had not time for the discharge of the extra duties in question; also that, as they had been trained for the curing of diseases, they were not qualified to act for its prevention in the capacity of officers of health. He submitted two schemes—first, that an independent man should be appointed as medical officer of health for the whole county of Dorset, at a salary of £1000 *per annum*; and, secondly, that as an alternative, the county be divided into two parts, a medical officer being appointed for each, at an annual salary of £500 each. Mr. John Floyer, M.P., followed, and as Chairman of the Dorchester Board of Guardians, contended that the union medical officers were highly competent and suitable for the post of officers of health under the Act. He said that if the Local Government Board employed an officer of health they ought to pay him. By concurrent authorities there ought to be mutual concessions. He proposed "That this meeting desires to represent to the Local Government Board, that in their opinion the appointment of efficient inspectors of nuisances is most important for carrying out effectually the objects of the Act, and that the appointment of the medical officers of the several unions in this county would generally be most satisfactory and sufficient for the discharge of the duties imposed upon them; and they trust that the Local Government Board will reconsider the conclusions at which it is supposed they have arrived, adverse to such appointments." Mr. H. C. Goodden, of Upwey, seconded the motion, which was carried by a majority of 23 to 2. It was stated that Government would pay a moiety of the salaries of such officers whose appointment they approved. The election of relieving officers as inspectors of nuisances was generally condemned, and it was affirmed that the constabulary were ineligible for the office.

BURNLEY.—A deputation of the Burnley Guardians, on February 26th, waited on Mr. Stansfeld at the Local Government Board with the view of having conferred upon them the powers of an urban authority, as defined in the Act of last year. Mr. Shaw, M.P., said the deputation represented a rural authority, and they found themselves unable to carry out the sanitary measures required by the Act without constituting themselves an urban authority. Speculating builders could run up houses without drains or water apparatus attached to them, and they were powerless to stop them. What they wanted was to have the power of a Local Board, without abandoning their duties as guardians, and especially to have the highways under their control. Mr. Stansfeld, in reply, said the policy and intention of Parliament was that they should not arbitrarily turn a rural authority into an urban authority, but take the requirements of the rural authority into consideration, and make special orders suitable to the particular case. He should be going beyond the Act if he were to convert a rural authority into an urban authority; but he could confer powers suitable to the requirements of the individual case. He therefore proposed to take their case and deal with it on its merits; and he had no doubt he should be able to meet many of their requirements. As to giving them control over the highways, he could not say anything at present, as the whole subject of local government was now before Mr. Gladstone, and his policy would be made known in the course of a few weeks.

TOTTENHAM.—Dr. W. Tyndale Watson has been appointed Medical Officer of Health for Tottenham.

OBITUARY.

HUGH MASSY, M.R.C.S.ENG.

MR. MASSY died at his residence in Bath on January 24th, aged 66. He passed the Apothecaries' Hall in May 1828, and the Royal College of Surgeons in 1829; after which he commenced practice in Bath. For twenty-five years he was the surgeon of the Lying-in Charity, and for nearly thirty years was one of the medical officers of the Bath Union. He was also the medical referee of the Railway Passengers' Assurance Company for the Bath district. He had great experience in the obstetric branch of the profession, and was greatly esteemed by all classes. The primary cause of his death was an accident he sustained. He was proceeding to visit a patient in Wiltshire. Near the Bath terminus of the Great Western Railway, his foot slipped and he fell, dislocating his shoulder and injuring his spine. After lingering for nearly ten weeks, he died on January 24th. Mr. Massy leaves a widow and a family of one son and three daughters.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—February 25th.

DIGEST OF SANITARY STATUTES.—Sir C. Adderley asked the President of the Local Government Board whether the digest of sanitary statutes which he had prepared in two codes, urban and rural, was so complete as to render any legislation during the present session, in the way of collecting and consolidating the existing statutes, unnecessary and inexpedient, whatever might be advisable in the way of amending them.—Mr. Stansfeld replied that he did not know that it was expedient or necessary to consolidate what were called the Sanitary Acts this session of Parliament; he did not think it expedient, because it was a task which might be attempted, but which could not be practically accomplished. The various Sanitary Acts had been all taken to pieces and re-arranged under practical headings, so that any man without a knowledge of the law could discover what the law was. The various sections of the Act were then placed under these headings, and redundant phraseology was withdrawn. They had to deal in a digest with the law as it stood, and he thought the time had not come for consolidating it. The digest was in the hands of the Queen's printers.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, February 20th, 1873.

English, Thomas Johnston, Fulham Road, S.W.
Rogers, Edward Coulton, Modbury, Devon

INDIAN MEDICAL SERVICE.—List of candidates for Her Majesty's Indian Medical Service, who were successful at the competitive examinations held at London in August 1872, and at Netley in February 1873, after having passed through a course at the Army Medical School, Netley. [Maximum number of marks, 6,900.]

Order of merit and names.	Studied at	No. of marks.
1. *Brereton, S.	Dublin, London, and Paris	5459
2. Moriarty, M. D.	Dublin	5120
3. Price, G.	Belfast and Dublin	5118
4. Bovill, E.	London	4965
5. O'Brien, B.	Cork	4645
6. Dundas, G. A.	London	4315
7. Hill, H. W.	Edinburgh	4290
8. Ahmed, Z. A.	Cal., Glasg., Edin., & Lond.	4280
9. Levinge, E.	Dublin	4265
10. Rogers-Harrison, A. N.	London	4133
11. Gilligan, W. A. G.	Dublin and Edinburgh	4045
12. Beech, L.	London	3915
13. Griffiths, W. E.	London	3881
14. Cullimore, D. H.	Dublin	3861
15. Esmonde-White, H. P.	Dublin	3770

* Has obtained the Herbert Prize.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK UNION, Northumberland—Medical Officer for the Embleton District: £30 per annum.
ATCHAM, Bridgnorth, Church Stretton, Cleobury Mortimer, Clun, Forden, Ludlow, Madeley, Newport, Shiffnal, and Tenbury combined Rural Sanitary Districts—Medical Officer of Health: £800 per annum.
AUCHTERGAVERN, Perthshire—Parochial Medical Officer for the Bankfoot District.
BARNET, Hemel Hempstead, Hendon, Watford, and Welwyn Rural Sanitary Districts, and Barnet Urban Sanitary District, combined—Medical Officer of Health: £700 per annum. Applications to Richard Pugh, Esq., Watford.
BINGHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications to Z. Stafford, Esq.
BIRMINGHAM BOROUGH GAOL—Surgeon.
BISHOPS STORTFORD UNION, Herts—Medical Officer for the Workhouse (£70 per annum), and the Hailingbury District (£62 per annum).
BOURNEMOUTH URBAN SANITARY DISTRICT, and Christchurch and Ringwood Rural Sanitary Districts, combined—Medical Officer of Health: £225 per annum. Applications to Henry Pain, Esq., Christchurch, Hants.
BRADFORD FEVER HOSPITAL—Physician.
BRADFORD INFIRMARY AND DISPENSARY—Physician.
BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CAHERCIVEN UNION, co. Kerry—Medical Officer for the Derrynane Dispensary District: £80 per annum.
CHELMSFORD UNION, Essex—Medical Officer for District No. 4: £74 per annum.
CLERKENWELL, Parish of, and Boards of Works for St. Giles and Holborn Districts, combined—Public Analyst: £300 per annum. Applications to S. W. Hopwood, Clerk to Board of Works, 20, High Holborn.

DALMELLINGTON, Ayrshire—Parochial Medical Officer: £50 per annum.
HERTS AND MIDDLESEX—Medical Officer of Health: £700 per annum.
HIGHER BEBINGTON URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum. Application to Thomas Woodburn, Rock Ferry, Birkenhead.
HORNCASTLE UNION, Lincolnshire—Medical Officer for the Wragley District: £35 per annum.
HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester—Resident Medical Officer: £100 per annum, residence, and board.
HUNSLET UNION, Yorkshire—Medical Officer for District No. 2: £60 per annum.
JOINT COUNTIES LUNATIC ASYLUM, Carmarthen—Assistant Medical Officer: £100 per annum, furnished apartments, board, washing, and attendance.
LANCHESTER UNION, Durham—Medical Officer for the Tanfield District: £30 per annum.
LEEDS GENERAL INFIRMARY—House-Physician and House-Surgeon: £100 per annum each, with board, residence, and washing.
LETTERKENNY UNION, co. Donegal—Medical Officer for the Letterkenney Dispensary District: £100 per annum and fees.
LIVERPOOL ROYAL INFIRMARY—House-Surgeon: £100 per annum, board, lodging, and washing.
LOUDOUN, Ayrshire—Parochial Medical Officer: £50 per annum.
LOUTH UNION, Lincolnshire—Medical Officer for the Hainton District: £8 per annum.
LOWER BEBINGTON URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum. Application to Thomas Woodburn, Rock Ferry, Birkenhead.
MEATH COUNTY INFIRMARY, Navan—Apothecary and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.
METROPOLITAN FREE HOSPITAL, Devonshire Square—House-Surgeon: £80 per annum, apartments, board, coal, and gas.
MUCH WOOLTON URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.
NEWPORT UNION, Monmouthshire—Medical Officer and Public Vaccinator for the Marshfield District: £40 per annum and vaccination fees.
PORTSMOUTH URBAN SANITARY DISTRICT—Medical Officer of Health: £450 per annum, and about £50 per annum as Public Analyst for the Borough.
RATHDOWN UNION, co. Dublin—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Glencullen Branch of the Dundrum and Glencullen Dispensary District: £110 per annum, and fees.
RICHMOND RURAL SANITARY DISTRICT—Medical Officer of Health: £130 per annum.
ROYAL ACADEMY OF ARTS, Burlington House—Professor of Anatomy. Applications to John Prescott Knight, R.A., Secretary.
ROYAL FREE HOSPITAL, Gray's Inn Road—Junior House-Surgeon.
WARMINSTER URBAN SANITARY DISTRICT—Medical Officer of Health: £25 per annum.
WARWICK COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, furnished apartments, board, and washing.
WESTRAY AND PAPA WESTRAY, Orkney—Parochial Medical Officer: £50 per annum, and residence.
YORK DISPENSARY—Two Resident Medical Officers: £130 per annum, furnished apartments, coals, and gas.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

BIDDLE, Cornelius, Esq., appointed Medical Officer to the Merthyr Tydfil Union Workhouse and Infirmary.
***DAVIES**, E. G., Esq., appointed Surgeon to the Carmarthen Tin Works, *vice* D. R. Watkins, Esq., deceased.
OWEN, Edmund, M.B., Assistant-Surgeon to St. Mary's Hospital, appointed Surgeon to the North West London Dispensary for Sick Children.
ROGERS, Claude, Esq., appointed House-Surgeon to the Dental Hospital of London, *vice* Robert Hepburn, jun., Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

MONTGOMERY.—On February 20th, at Ranelagh House, Maidenhead, the wife of *Edwin Cuthbert Montgomery, Esq., Surgeon, of a daughter.

MARRIAGE.

***UNDERHILL**, Arthur S., B.A., M.B., of Great Bridge, Tipton, and eldest son of *Thomas Underhill, M.D., West Bromwich, to Mary Hannah Livinia, youngest surviving daughter of Major-General SYMONS, R.A., of Seven Miles Road, Clifton, on February 20th, at St. John's, Clifton, by the Rev. T. G. Luckock, Vicar of Emmanuel, assisted by the Rev. H. G. Walsh, Vicar.

DEATHS.

BYAM, William J., Esq., Surgeon, formerly of Welbeck Street, at Woodcroft, near Chesham, aged 64, on February 16th.
***HARE**, Henry, M.D., at Great Baddow, Essex, aged 55, on February 18th.
MACAULIFFE, T. B., M.D., at Abbeyfeale, co. Limerick, on February 5th.
SHIRREFF, James Hales, M.D., formerly of Deptford and Blackheath, at Exmouth, aged 91, on February 16th.

A CENTENARIAN.—Mrs. Elizabeth Dawe, a widow, of Carharrack, Cornwall, died on February 20th, at the reputed age of 102.

MR. WM. WALKER, of Kilbirnie, has been presented with a gold watch and chain and a purse well filled with sovereigns, as well as a gold watch and chain for Mrs. Walker, as tokens of esteem after upwards of forty years' practice. The presentations were made at a public supper, at which about a hundred of the principal residents were present.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London. A General Meeting for the election of Officers and Council at 7 P.M.: the Ballot closes at 8 P.M. After which, an Ordinary Meeting, when a paper will be read by Dr. Sabben "On the Forcible Feeding of the Insane." Clinical Cases and a new Instrument by Dr. Robert J. Lee.

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited:—Sir William Jenner: Hæmatozoa from Human Blood. Dr. Charles Carter: Fibro-cystic Tumour of Ovary. Dr. Wiltshire: Fibrous Tumour of Ovary. Dr. Goodhart: Surgical Kidneys. Dr. Henry Green: Syphilitic Phthisis. Dr. Bagshawe: Epithelioma of Epiglottis and Base of Tongue. Dr. Douglas Powell: Aneurism immediately above Right Sinus of Uterus. Dr. Wickham Legg: Changes in the Liver produced by High Temperature. Dr. Curnow: Kidneys with Large Calculi at the Origin of the Ureters. Mr. Wagstaffe: Myxoma of the Genitals. Mr. Christopher Heath: Fracture of the Olecranon.

WEDNESDAY.—Royal Microscopical Society, 8 P.M. Mr. E. J. Gayer (Surgeon H.M. Indian Army), "Notes on the Micro-spectroscope and Microscope."—Obstetrical Society of London, 8 P.M. Adjourned discussion on the "Injection of a Solution of Perchloride of Iron into the Uterus"; Dr. Bantock, "On the Pathology of Certain so-called Unilocular Ovarian Cysts"; and other papers.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. HEARNDEN (Sutton).—The *Handy Book of Medical Information and Advice* is published by T. Nelson and Sons, London, Edinburgh, and New York.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, [and will be published in the BRITISH MEDICAL JOURNAL.

SHILLING INSURANCE FEES.

DR. GILLESPIE, of Norwich, writes again, as other medical correspondents have done before, to complain of the very small fee offered by the Norwich Life Assurance Company for medical examinations. The fee charged is from 1s. to £2 2s.; when the sum assured is under £50, the smaller sum; and when above £1000, the larger fee. Dr. Gillespie ridicules the idea of a professional man thinking of accepting a fee of 1s. for medical examination. A shilling is a coin unknown to the profession, except as the means of converting a sovereign into a guinea.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

TAYLER'S AND HENLEY'S PROCESSES FOR PRESERVING MEAT.

SIR,—May I beg a place in your JOURNAL for the two descriptions of the process for preserving meat by pressure; one as made known by me to the Admiralty, British, Colonial, Foreign Governments, and the public in 1869, as the two accompanying documents, out of many, will prove; the other, as copied from Mr. Henley's specification for a patent taken out by him in 1871.

I think all your readers will agree that the two processes are identical, the essential feature in each being the removal of the fluid from the solid portion of meat by pressure.

Mr. Henley has granted the River Plate and the Texas Pressure Meat-Preserving Companies the use of his patent for £100,000, *i.e.*, for the same invention as I gave to the public in 1869. Of this perhaps the shareholders are not aware, or also of the fact that any Meat-Preserving Company can use my invention without paying any royalty whatever.

In the present scarcity and dearth of meat this is an important feature, as a company starting without the incubus of £50,000 for the use of a patent, could afford to sell pressed meat at a cheaper rate. True and prior inventors seldom make money of their inventions, and their only reward is often the justice and credit which they are enabled to obtain through the medium of the press.

I am, etc.,

W. H. TAYLER, M.D.

Tudor House, Anerley, S.E., February 24th, 1873.

Dr. Taylor's Process of Preserving Meat by Pressure, 1869.—The animal on being slaughtered should be well-drained of its blood, having removed the meat from the bones and separated all the fat; the former should be put into a press, and by means of hydraulic or other great power, the fluid portion of the meat should be pressed out till the residue forms a dry cake. The pressed out liquor, containing the soluble salts of the meat, should be evaporated down to a certain consistence and preserved in suitable vessels. The fat should be clarified and run into bladders and gut, or salted and packed. The bones and hoofs boiled down for gelatine, the residue making phosphorus and manure. By these means every part of the animal would be profitably made use of.

Mr. Henley's Process of Preserving Meat by Pressure, 1871.—This invention has for its object the rapid removal of the fluid portions of meat and fish by means of powerful mechanical pressure, through the agency of which the said fluid portion may be abstracted, and a more or less complete desiccation obtained with the consequent preservative result on such substances. The pressure may be obtained by means of the hydraulic, screw, lever, or other press. The fluid portions of the meat operated upon will flow off, and may at once be run into a boiler for being evaporated, to form concentrated extract of meat. I claim the employment of mechanical pressure, for extracting the fluid from the solid portions of meat or fish in a raw state.

[COPY.]

8, Victoria Chambers, Westminster, July 24th, 1869.

SIR,—I have the honour to acknowledge the receipt of your letter containing a method for preserving meat, and to inform you that I have duly transmitted a copy to the Hon. the Chief Secretary, for the information of the Government of Victoria.

I have the honour to be, etc.,

W. H. TAYLER, Esq., M.D.,

GEO. VERDON, Agent-General for Victoria.

Tudor House, Anerley.

Reply to letter asking for copy of Correspondence sent to the office in 1869.

Government of New South Wales,

3, Westminster Chambers, S.W., January 5th, 1872.

SIR,—Messrs. Merry and Co. have referred to me your letter of the 8th ult., addressed to Captain Mayne, requesting a copy of a letter addressed to you by that gentleman, respecting your method of preserving meat by pressure.

I beg to inform you that Captain Mayne left England some months since, but search has been made and with success, and I therefore send the original documents herewith.

To Dr. W. H. Taylor, etc., Anerley.

Your obedient servant,

CHARLES COWPER.

WINDFALLS FOR DOCTORS.

THE curiosities of medical life and practice are endless. If we hear very often of medical men doing arduous work for very scanty remuneration, sometimes there is an agreeable obverse of receiving very splendid remuneration for very scanty services. We know of a medical man whose duty it is to take lunch every day at a great castle belonging to a noble lord. The household is immense; and there is just the chance that there may be some case of indisposition demanding attention. He gets some of the best company and best lunches in England, and duly charges a guinea for each attendance. There is a very wealthy man near a great city, who cannot bear to be left for the night. There is a physician of great ability who drives out of town nightly to sleep at his residence. He is consequently debarred evening society; and if he goes out to dinner, he has to leave his friends before wine. He has to charge his patient a thousand a year; and, I think, he works hard for his money. Sometimes the services are such that money cannot repay them. A friend of mine, a young medicus, had a standing engagement for four hundred a year to look after the health of an old lady. She required to be inspected three times a day, and make an exhibition of tongue and pulse. What made matters so aggravating was, that she was as strong as a horse, while the doctor was a delicate man. She was so selfish and perverse, that he was obliged to tell her that he would have nothing to do with her case. Similarly, I know the son of a rich man who proposed to pay a clergyman several hundred pounds a year for leave to spend his evenings with him. The parson, however, was obliged to tell his rich friend that he talked such intolerable twaddle, that he could not accept his company on any terms that could be named. But the oddest of these arrangements is the following: A medical man has been attending a patient several years, and yet he has never seen his patient. The gentleman firmly believes that he has an œsophagus of peculiar construction, and that he is accordingly liable at any moment to be choked. That help may be at hand whenever any sudden emergency may occur, he has a physician in the house night and day. The physician, being human, must needs take his walks abroad, and it becomes necessary to provide a substitute for him two hours a day. Accordingly, a doctor attends daily from twelve to two, fills up his time by disposing of an admirable lunch, and finds the gold and silver coin, in their usual happy combination, neatly put by the side of his plate, in tissue-paper. Up to the present date, he has never had the pleasure of exchanging words with his interesting patient.*

* From "The Romance of Medicine", in London Society.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

TUNBRIDGE WELLS INFIRMARY.

SIR,—The case of suicide to which you refer in your last number had been sent from a distance of eight miles. He had already been attended to, and his wounds dressed, by the surgeon who first saw him. I examined the wounds; and, as there appeared no immediate danger, and I had not the appliances or attendants that would be required for such a case, and as our rules expressly forbid the admission of lunatics, I recommended his being taken to the Union Infirmary, the journey being only half an hour by train. My impression as to his fitness to travel was fully borne out by the result of the case; for the man lived a fortnight after his admission, and the report of the medical evidence given before the coroner states that "he went on favourably up to within three days of his death".

I am, etc., B. RIX,

House-Surgeon to the Tunbridge Wells Dispensary and Infirmary.
February 26th, 1873.

NEW INHALERS.

SIR,—Allow me to say a word on your adverse criticism of my Ether and Chloroform Inhaler. You find with it three faults: 1. The sponge does not fit. 2. Expiration wastes the vapour. 3. It would be dangerous with chloroform. As to the latter, alleged without stating any reason, chloroform has been given with this inhaler many times, both by me and in my presence, and has always been found to act satisfactorily and well. The quantity required is scarcely more than half what is consumed with a towel, piece of folded lint, or hollow sponge. A few drops may be first given; then the main dose, after which a very little suffices to maintain anaesthesia, withdrawing or applying the inhaler according to indications of the effect produced. The chloroform should be scattered on the sponge, the width of which ensures ample mixture with air. From my experience in giving chloroform in a large number of cases, I planned this inhaler, as being simple, effectual, economical, and equally safe with any other contrivance intended to be used by an intelligent person who understands his work. If your critic can explain in what respect it is dangerous, I will attend to him willingly; but he has no right to say so without giving reasons.

As to excessive waste of vapour, this assertion is at once disposed of, by reference to the quantity of ether or of chloroform required to produce a given effect. For, with both drugs, the amount consumed with this inhaler, is less by nearly one half, than would be needed with a handkerchief, piece of lint, or hollow sponge.

That the sponge does not fit, can surely never be gravely adduced as a defect in the invention. The sponge is intended to fill the opening completely, though not tightly; but if very dry, it is of course hard, contracted, and too small. Evidently a paper of directions ought to have been sent to you. The sponge should be washed when requisite, partially dried, and replaced. It then fits the aperture, maintaining its usual open, springy, porous texture, allowing specks of light to be seen through it. If one does not fit another must be procured.

In planning this inhaler, my object has been to contribute to improvement in giving anaesthetics. The invention will find its own level; those will use it who can work with it, and that it will prove exceedingly useful I have not the least doubt. But I desire to see advancement in the whole matter; not alone in the secondary point of finding a good inhaler, nor yet in fixing on this or that drug as the only anaesthetic to employ; but in the prime necessity of a careful and skilful giving of anaesthetics pushed to the utmost degree of improvement, the administrator choosing for each patient the kind of anaesthetic best suited to the case, and using increased watchfulness, and a yet closer reading of the effects of whatever is employed, as none of these agents are absolutely safe.

I am, etc.,

W. E. C. NOURSE, F.R.C.S.

11, Marlborough Place, Brighton, February 22nd, 1873.

Our objections to this apparatus are the following. 1. The sponge "does not effectually close the apparatus," which Mr. Nourse admits in saying that "specks of light can be seen through it." 2. Inspiration and expiration going on through the sponge, the exhaled air carries away with it a large, wasteful, and unpleasant amount of ether. 3. To administer chloroform by an apparatus fitting so closely to the face, and with so large an evaporating surface, is to incur the danger of administering it in the proportion of more than five per cent. of the inhaled air, which is always dangerous.

CLUB PATIENTS AND DEATH CERTIFICATES.

SIR,—I was to-day called upon to give the ordinary death-certificate for a patient whom I had attended. After my giving the certificate, the friends who came for it said they were going to forward it to the burial club society to which payments had been made on his account for the last ten years. I, of course, told them that the certificate I had written was for the registrar. They then said they must have an extra certificate for the burial club, which I told them I could not give unless paid for it. After making application to the burial club, and finding that a separate certificate was necessary, they came back to me offering to pay for one. I then wrote out a manuscript certificate, as no printed form was produced to be filled up as is usual in such cases. This manuscript form was rejected by the burial club people as useless—why, I cannot conjecture. Meantime the ordinary certificate was taken to the registrar (himself a medical man), who informed the friends, so they assert, that I had not only robbed them by pretending to give a certificate (which was of no use), but that I had intended to rob him of his fee. Now as I am frequently called upon to give extra certificates in such cases, and as I am bound to charge for them by rules drawn up and signed over a year ago by the bulk of the general practitioners in this city (including the registrar in question and myself), I should be glad if you would enlighten me as to what the registrar could mean by his behaviour. Is there anything to prevent a medical man, who has attended a patient, from giving an extra certificate of his death, when called upon to do so, or from charging for the same?

January 20th, 1873.

I am, etc.,

ASSOCIATE.

It is a common thing for persons to apply to the registrar for an official copy of the certificate of death, for which a fee is charged. But there is nothing to prevent the medical man who attended the deceased from giving a similar certificate and charging for it; and if the friends prefer having one in this way, it is scarcely fair to charge him with attempting to supplant the registrar. We do not profess to explain the conduct of the gentleman to whom our correspondent alludes, but prefer to think that there must be some misunderstanding as to the expressions which he used.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

SUBSCRIBER (Rotherham).—An L.R.C.P. Edinburgh is not entitled by law or custom to style himself Dr. The second part of the question might be submitted to the Medical Council, through the Registrar, 32, Soho Square, London.

L.K.Q.C.P.—The question whether the Fellows and Licentiates of the College of Physicians in Ireland have the right to call themselves Dr., is one on which authorities differ. The College itself claims the right for them.

LITHATES IN THE URINE.

SIR,—A correspondent asks "what is the pathology of the presence of lithates?" Indeed it would be very difficult to give a definition of their pathology, especially in view of the very lax, and, as it seems to me, very unscientific signification attached to the term. As the word now-a-days is commonly employed, it may mean a deposit of urates, or of phosphates, or of oxalates—any salts, in fact, capable of forming a stone or calculus in the urine. And, as the character of these sediments differs widely among themselves, it becomes difficult, if not impossible, to sketch uniformly their pathology. Should your correspondent state specifically what are the predominating substances embraced under the generic term "lithates," as they exist in the case alluded to, I shall endeavour to furnish him with a clue to their pathology.

I am, etc.,

URATES.

INDIA.—A correspondent writes: I am about to go to the North of India—province of Bandalcand, probably. Can any ex-Indian medical brother give me information on the medical, surgical, and allied scientific requirements of Hindostan. I am anxious to know about the materia medica of this district. What works should I read? and where are they obtainable? I should have both European and native patients.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Feb. 22nd; The Manchester Guardian, Feb. 26th; The Aberdeen Daily Free Press, Feb. 22nd; The Bath Express, Feb. 22nd; The Birmingham Daily Post, Feb. 24th; The Hampstead and Highgate Express, Feb. 22nd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. G. M. Humphry, Cambridge; Dr. R. Southey, London; Dr. C. Handfield Jones, London; Dr. John Murray, London; Mr. Lawson Tait, Birmingham; A Member; Mr. H. Arnott, London; Dr. Kelburne King, Hull; The Secretary of the Royal Microscopical Society; Mr. D. J. Hamilton, Liverpool; Mr. James Dixon, London; Dr. Smart, Penge; Dr. Lyon Playfair, M.P., London; The Director-General of the Medical Department of the Navy; Mr. Charley, M.P., London; Mr. Nourse, Brighton; Dr. Parsons, Dover; Dr. Shirreff, Lympston; Dr. A. Johnston, Stoneyford; Dr. Dobell, London; Dr. J. W. Ogle, London; An Associate; Dr. Philpots, Poole; Mr. Holmes, London; Dr. L. W. Sedgwick, London; Dr. Hilton Fagge, London; Dr. Kelly, Rotherhithe; Our Edinburgh Correspondent; Dr. Kerr, Letterkenny; Dr. F. J. Brown, Rochester; Mr. W. Byam, Woodcroft, Chepstow; Dr. Tilbury Fox, London; Dr. Dyce Duckworth, London; Dr. J. Matthews Duncan, Edinburgh; Dr. Tayler, Anerley; The Secretary of the Obstetrical Society; Dr. C. Dukes, Rugby; Our Liverpool Correspondent; Dr. J. J. Phillips, London; Dr. H. K. King, Welwyn; The Secretary of the Pathological Society; Dr. MacLagan-Wedderburn, Forfar; Our Paris Correspondent; Dr. F. Page, Newcastle-upon-Tyne; The Secretary of the Clinical Society; Dr. Sawyer, Birmingham; Mr. Bartleet, Birmingham; Our Dublin Correspondent; Mr. Vincent Jackson, Wolverhampton; M.R.C.S. Eng.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. J. Ford Anderson, London; Mr. J. W. Langmore, London; Dr. Pye-Smith, London; Mr. H. E. Haynes, Evesham; Dr. Hearnden, Sutton; Mr. W. H. Jones, Ovoca; Dr. Grainger Stewart, Edinburgh; Dr. A. Fergus, Glasgow; etc.

BOOKS, ETC., RECEIVED.

Ozone and Antozone: their History and Nature. Illustrated. By Cornelius B. Fox, M.D. London: 1873.
The Vaccination Officer's and Public Vaccinator's Handbook. By Walter Bullar Ross. London: 1873.
Autumnal Catarrh (Hay-Fever). By Morrill Wyman, M.D. New York: Hurd and Houghton. London: Trübner and Co. 1872.
A System of Oral Surgery. By J. E. Garritson, M.D. Philadelphia: Lippincott and Co. London: Trübner and Co. 1872.
Proceedings of the Dublin Obstetrical Society for Session 1871-72. Dublin: 1872.
Notes on Asthma. By John C. Thorowgood, M.D. Second Edition. London: 1873.
Report on the Sanitary Administration of the Panjab for the year 1871. Lahore: 1872.
Neuralgia and Kindred Diseases of the Nervous System. By J. Chapman, M.D. London: 1873.
Lessons in Elementary Anatomy. By St. George Mivart, F.R.S. London: 1873.
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CLINICAL LECTURE

ON A

CASE OF DEATH IN COMA AFTER THE USE OF
ETHER: WITH REMARKS ON THE
CHOICE OF ANÆSTHETICS.

By JONATHAN HUTCHINSON, F.R.C.S.,

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YOU are aware, Gentlemen, that, during the last four months, we have been giving ether instead of chloroform. Last week, I explained to you our reasons for the change. I now have to state those which have induced me in the case just operated upon to revert to our old favourite. The patient, who has just left the theatre, is an *old* man; and I have recently had in private practice a case which leads me to suspect that, after all, chloroform for the aged may, perhaps, be the safer anæsthetic. The facts as to the case alluded to are these. I had to operate upon an old gentleman from Leighton Buzzard, in whom a gland under the jaw had become cancerous after the successful removal of the primary disease from his cheek. He was 84 years of age, and in feeble health. We employed ether as the anæsthetic, and it seemed at the time to act very satisfactorily. He was kept thoroughly under its influence, but with repeated stages of partial waking, for about twenty minutes. We had to tie the facial artery, but the operation did not involve any unusual loss of blood, and his pulse never flagged in the least. I ought to say that during part of the operation we had compressed the carotid (the left side); indeed, we began with this, for it was essential to save bleeding as much as possible. I do not think that this compression of the carotid had anything to do with the fatal result, but, as it is just possible that it had, it is right to mention it. When the operation was over and the wound closed, I was in every respect well satisfied with the state of things. Our patient had a good pulse at about 80; his face looked well, though perhaps a little dusky. I was obliged to leave him, on account of another engagement, directly after the operation, and before he had recovered enough to speak or to take any notice of what I said to him, but there was nothing in his condition then which caused me the slightest anxiety. Mr. Nettleship, who stayed with him half-an-hour longer, did not observe anything unusual in his condition, but he had not spoken. The operation was at two o'clock, and I saw him again at five. His daughters then told me that he had got out of bed several times since the operation to pass urine, but had seemed confused and stupid and had not spoken to them. He seemed inclined to sleep, and I could not get him to speak to me. At ten o'clock I saw him again, and now became alarmed to find that his unconsciousness was deepening. His cheeks puffed in breathing, and we could not induce any evidence of consciousness. He would occasionally move his left arm, but his right seemed powerless. He had occasional twitching of the right cheek. We had mustard plasters applied to the calves of his legs, and gave him an enema of turpentine. On the following morning his symptoms remained much the same, but he had had several convulsive seizures in which the spasms affected chiefly the muscles of the right side of the face. It should be observed that his left cheek was distorted and puckered by the scar of a former operation. We noticed that he kept his eyes constantly directed to the left side. He had passed urine in the bed. As he could not be got to swallow any food, we now began feeding him regularly by means of a stomach-tube. Although I much feared that hæmorrhagic apoplexy had taken place, I was not without hope that the symptoms were merely due to prolonged action of the anæsthetic, and that he might yet rally. In the evening he seemed rather better, but was still absolutely unconscious, and was still liable to occasional attacks of spasmodic twitching of the right cheek, affecting also, though to a less extent, his right arm. These attacks would last from five to ten minutes, and when they ceased he would appear much exhausted. During the following night several more severe attacks occurred, and he died at six o'clock the next morning. Thus he had lived about forty hours after the operation, and during the whole of this time he had never spoken intelligibly with the exception of having said "no" once or twice during the first few hours. We must bear in mind that he had been at first able to stand, to get out of bed and to pass his urine; that he had subsequently had indications of incomplete hemiplegia of the right side, with spasmodic twitching of the same and turning of the eyes to the left. I confidently expected that

we should find at the autopsy a cerebral hæmorrhage on the left side near the fissure of Sylvius.

Dr. Hughlings Jackson was kindly present with us at the *post mortem* examination, and dissected the brain and its arteries most carefully, but with the result that nothing whatever was found bearing upon the cause of death. On the *right* side of the brain there was a cyst which had evidently resulted from an old hæmorrhagic clot, and which was probably connected with the history of a sort of seizure nine or ten years ago, from which he had perfectly recovered. With the exception of this and of the results of general senile atrophy, his brain appeared quite healthy. We dissected his left carotid artery, and found that it was quite pervious and not in the least injured by the compression. It is possible that his kidneys had some share in producing the cerebral symptoms; the right one was small, contracted, and very decidedly granular, whilst in its pelvis was a calculus which had a moulded conical projection on one side, looking as if it had fitted into the commencement of the ureter; the other kidney was also somewhat granular, but not so far advanced. The chest was not examined, but he had shown no symptoms pointing either to heart or lungs. The wonder to us all was that no local cerebral lesion could be found.

Now, in looking back upon this case, I cannot help suspecting that the anæsthetic was largely to blame for the patient's death. The two other elements which we must keep in view are the general senile degeneration of tissues, and the disordered blood consequent on renal disease. Perhaps you will ask why I ventured to do an operation or to give an anæsthetic to so old a man; and in reply to this I must allege that it was done in order to save him from one of the most horrible forms of death, viz., from cancerous ulceration under the jaw. The gland mass, although quite movable, had already softened in the middle, and would soon have given way. Both he and his relatives were made thoroughly aware of the danger which attended the operation, and they elected, and I think wisely, to encounter it. It was out of the question to do it without an anæsthetic. Then we had the fact that only four months before he had borne a much more prolonged operation with impunity, and had recovered from it perfectly well; on that occasion I gave chloroform, and kept him under its influence at least half an hour, for we removed a large part of his cheek by means of the wire heated by galvanism. The wire broke twice, and our operation was protracted. On this occasion our patient was for several days after the operation sullen and taciturn in manner, but he had no tendency to coma. I am not certain that I have ever given chloroform or performed an operation upon an older patient, but I have operated many times for cataract and other maladies on patients nearly as old. I believe that it is a general remark that the aged bear chloroform very well, and I have never felt the least compunction about giving it to them when necessary. There can, I think, be no doubt that ether, as a rule, causes more cerebral excitement than does chloroform; patients are more apt to struggle violently during its use, and they are sometimes very unmanageable, as if drunk, when its effects are passing off. During its exhibition also it is necessary to interfere much more with the access of air, and thus to cause more venous congestion. Now, in all these features we may suspect some degree of risk to a senile and degenerate brain. The anæsthesia of ether more nearly approaches the state of alcoholic intoxication than does that of chloroform. Profound intoxication would be, I should suppose, attended with more risk in an old than in a young person, and the risk would, of course, be increased if the kidneys were unsound. I may, perhaps, be somewhat hasty in forming a conclusion from a single case, but I may own that in future I shall not feel inclined to give ether to aged people, and I come to this conclusion the more easily because in them chloroform appears to be attended by little or no risk.

In reference to the general question as to the choice of anæsthetics, I may say that I am strongly of opinion that we ought, with the exception of a few cases, to allow ether to supersede chloroform. I have now employed ether in so many cases, both at this hospital, at Moorfields, and in private practice, that I am justified in forming an opinion as to its general applicability. It appears to me that you can do anything with it that you can do with chloroform. It is not quite so rapid in its action, and, on the whole, not quite so convenient to use. Patients complain also more of its disagreeable consequences in the way of headache, etc., but these are matters really of comparatively little importance in the majority of operation cases. Now and then it happens that a patient after ether struggles and becomes violent in the stage preceding the full return of consciousness, and in fear of this result I have never yet given it for extraction of cataract; nor do I ever intend to do so, for, as our patients in these operations are always elderly, they are those who bear chloroform well and ether ill. I do not think that at Moorfields we have ever lost by chloroform a patient in whom it was given for the extraction of cataract. Those who have died, and

there have been several (none under my own care), have almost always been young patients, and generally, I think, for strabismus operations. Then, again, for young infants, in whom chloroform seems to be exceptionally safe, I think I shall still continue to prefer it. For such operations as hare-lip, for instance, chloroform is more convenient.

At Moorfields we have for long been in the habit of using methylene. It is certainly more rapid in its action than chloroform, but I have never been sufficiently impressed, either with its superior convenience or its additional safety, to be induced to employ it either in private practice or here. I have seen several cases in which alarming symptoms occurred during its use, but never an actual death.

Our one reason for abandoning chloroform is its danger. If we could get rid of this, it would certainly stand without rival. My own experience of chloroform has been very considerable, and for a great variety of cases. I have had but a single death in my own practice, but I have been the witness of several in the practice of others. I have also had amongst my own patients several very alarming occurrences, in which it was with the greatest difficulty that death was prevented. In the case of a girl at Reigate, in whom apparent death occurred during excision of the knee, we had to perform artificial respiration for at least ten minutes before any signs of reanimation occurred. In another case at the London Hospital, in an amputation of the thigh, the period during which I thought the patient dead was almost as long. In both these instances, death-like pallor of face and absence of pulse (cardiac syncope) were the alarming symptoms; and in both artificial respiration, irritation of the surface, and the use of brandy enemata, were the means resorted to. In addition to them, I have had many cases in which the pulse failed temporarily, and in which we had to begin artificial respiration in order to ward off the more dangerous condition. During the last four or five years, I think I have had fewer alarming cases of this kind than formerly; and I attribute this in part to the skill and care of those who have given chloroform for me, and in part to the fact that I have been very particular as to the administration of stimulants (brandy) before using the anæsthetic. I have never of late used chloroform without knowing that my patient had fasted for some hours, and had taken a dose of brandy within the last half-hour. These seem to me the two principal points; but, if you insist upon the one (the fasting), it is additionally important that you attend to the other. In a fasting and exhausted state of the system, we have the condition in which cardiac syncope is the most likely to occur.

The case which I have alluded to as the only one in which I have had death actually occur, was that of a man much exhausted by a month's suppuration from a compound fracture with his elbow-joint. I saw that he was very nervous when he was put on the operating-table, and I ought to have given him brandy before proceeding. His heart failed within five minutes of the commencement of the inhalation, and before I had begun the operation.* If your patient is unusually feeble, I do not think it well to do an operation early in the morning—i.e., before the first meal. Indeed, in all cases in which an early appointment is made, it is best to tell the patient to take some fluid food, coffee, beef-tea, or milk, about two hours before the time fixed. Under most other circumstances I should insist upon a four hours' fast, with the double object of preventing the danger which attends vomiting during the anæsthesia, and the inconvenience and suffering which it sometimes produces afterwards. As regards the quantity of brandy to be given, that should be in proportion to the patient's age and habits, bearing in mind that it is better to give too much than too little. It is given in order to act as what is called "a diffusible stimulant;" which, I suppose, means that it is to keep the blood-vessels well open, and thus facilitate and sustain the circulation. Ether is an agent of a similar class, and hence its freedom from risk as compared with chloroform. Opium also acts in the same way, and I have no doubt that the administration of a good dose of opium, or the inhalation of ether for a few minutes before using chloroform would, either of them, make the latter much more safe.

There is just one other little matter to which I wish to advert. You may have observed that in cases in which the anæsthetic is used in order that the actual cautery may be applied to some part of the face, as we not unfrequently do for lupus and rodent carcinoma, I always give chloroform. Sometimes we give ether for a few minutes first, but we always take care that the vapour has had time to pass away before the cautery is brought near to the face. The reason for this is obvious; the vapour of ether is very inflammable, and a little thoughtlessness might easily lead to a terrible accident. It may be well also, for the same reason, to avoid employing ether by candle-light.

* This case occurred about ten years ago, and was published at the time.

CLINICAL LECTURE ON CASES OF PARALYSIS AGITANS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
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[Concluded from page 223 of last number.]

THE first point for our consideration is, to what recognised place in a nosology the foregoing cases are to be referred. The prominent symptom in all was tremor, persistent and continuous. Paralysis could hardly be said to be present in any, except perhaps the last. The question then arises, Does such tremor as existed in these cases sufficiently characterise them as instances of paralysis agitans? Eulenberg, one of the best recent authorities, would, I suppose, say no; for in some passages he questions the reality of recorded instances where there was no evident paralysis, not even excepting Dr. Reynolds's case of paralytic tremor. In others, however, he speaks of tremor as the initial and essential symptom of the disease, and of paralysis as a secondary one, which ensues after a longer or shorter time. Thus he appears to consider that the diagnosis of paralysis agitans cannot be made in the absence of some amount of paralysis; and that, therefore, in the early period of the disease, we are for the most part unable to recognise it. He regards, if I understand him aright, simple though continuous tremor as a distinct disease. This, I think, is over-refining. Dr. Sanders, in his excellent article in Reynolds's *System of Medicine*, vol. ii, p. 198, takes a sounder position. He distinguishes *simple* or *passive* tremor, occurring only during a voluntary action, from *spasmodic* or *active* tremor, taking place even during rest and when the parts are supported. All tremors he admits to be signs of weakness in the nerve-centres; but the *passive* tremor he regards as evidently due to want of power only, while the *active* implies some irritation in the motor nerve-centres. The latter is characteristic of paralysis agitans, and furnishes the ground of diagnosis. This seems to me, under the circumstance, the best rule to follow. If, indeed, we knew anything positive respecting the pathological change which accompanies the malady, if the results of necropsies had not been so frequently negative, it would be better to be guided by the *post mortem* than by the *ante mortem* phenomena; but, as we are quite in the dark respecting the pathology, we must rely on the symptoms for the present; and, though it may be true that in typical cases there exists evident impairment of motor power, yet the absence of this does not constitute sufficient ground for denying the genuineness of cases and excluding them from this group, which possess its most characteristic features. We might as well refuse to admit a case, otherwise well characterised, to be pneumonia, because of the absence of rusty sputa. The essence of the disorder is clearly not paralysis, but clonic spasm, as we must conclude from this symptom being persistent from the commencement to the close, and giving its special features to the disease. Muscular debility in the later stages undoubtedly becomes, or may become, very great; but even then it is rather the debility of exhaustion and decay, than true paralysis. It is in elderly persons that we find the best marked examples of paralysis agitans; and in them, as Dr. Sanders says, the effects of senile decay (among which muscular weakness figures conspicuously) are necessarily mixed up with the other symptoms. Besides, in bad cases, the continued unrest must tell heavily on the nervous system in the way of exhaustion. It is further to be considered that, when we observe no evident sign of paralysis in a patient, we are scarcely entitled to conclude certainly that nothing of the kind exists. A man may be able to grasp pretty forcibly and walk fairly well; but, unless we had tested by some method the amount and endurance of his muscular power previously to his illness, we cannot positively affirm that they are undiminished. My third case has some bearing on this point. The spasmodic movements in this patient were extremely forcible—more than I could control; yet his force for a continued effort was notably less than mine. His right upper limb was more severely affected than his left. When recovering, he could hold out a weight with the latter steadily for several seconds; but, when he attempted to do the same with the right, tremor came on immediately, and the arm dropped. It was quite clear that tremor coincided with failure of contractile power—that the right arm was not only less steady, but less strong, than the left. As improvement went on, ability for sustained muscular effort was regained. I think we do not sufficiently estimate the value of endurance—of staying power—as a test of the efficiency of a nervo-muscular apparatus. It is this quality, especially when well developed in the heart, which enables a man to

endure fatigue and withstand and outlast morbid influences; and it is this quality which fails most evidently in a multitude of neurotic disorders.

But, again, there seems to be evidence that the muscular power, at least as regards brief efforts, may be remarkably preserved in paralysis agitans. M. Charcot tells us (*Gazette des Hôpitaux*, April, May, 1869) that, among the inmates of the Salpêtrière suffering from paralysis agitans, though there are difficulty and retardation in the execution of voluntary movements, yet the dynamometer shows that the muscular strength is by no means deficient, being often greater in the limb which trembles most and seems weakest. Trousseau (vol. ii, p. 217) corroborates this statement as regards the early period of the disease. For all these reasons, I accept Dr. Sanders's rule above quoted; and I regard the four histories above given, as well as those contained in my work, as genuine instances of paralysis agitans (*pace* Herr Eulenberg).

Morbid Anatomy.—Not many careful observations have yet been made, but still sufficient to enable us to come to some conclusions. Stoffella, Skoda, and Oppolzer have found well marked sclerosis of the pons Varolii, medulla oblongata, and cord. M. Joffroy (*Gaz. des Hôp.*, No. 157, 1871) has published the results of his examination of three aged female patients. He found the central canal of the cord filled up by a cell-growth, probably derived from the lining epithelium. In two of his cases there were nuclear formation in the vicinity of the ependyma, pigmentation of the nerve-cells, especially in Clarke's *columna vesiculosa*, and an abundant accumulation of amyloid corpuscles. In the third case there was some sclerosis in the medulla oblongata near the pons Varolii. In the present case, there was no lesion in the medulla or the pons. Dr. Murchison (*Path. Trans.*, vol. xxii, p. 25) records the case of a male aged 71, who had had paralysis agitans twelve years, and died of typhus. Dr. Cayley found (1) thickening of the cortical layer of connective tissue of the cord, and increase of its nuclei; (2) irregular nucleated tracts and patches of connective tissue in the dorsal and cervical regions of the cord, mostly situated near the posterior roots of the nerves (the reticulum of the cord, especially in the neighbourhood of these patches, was much thickened); (3) the spinal canal was transformed into an oval tract of leucocytes, which occupied also the site of the surrounding "substantia cinerea gelatinosa". There were also some other changes of a recent kind, probably due to the typhus. Eulenberg cites three necropsies made by Ordenstein. In one of these, where the malady had lasted thirty years, there was found only atrophy (rarefaction) of the nerve-tubes; in a second, softening of both cerebral peduncles, and some loss of substance in the pons; in a third, nothing. He states also that Th. Simon examined four cases at Hamburg with a negative result. It is to be wished that we had some examinations of the bodies of younger patients; and it would also be well if we had some of aged persons who had *not* suffered from any symptoms of the malady. It might be the case, that more or less sclerosis occurred without producing any symptoms. Accepting the above statements, the negative as well as the positive, we can but conclude that the symptoms of paralysis agitans may occur with and without discoverable lesion, which, therefore, is not essential. Joffroy's observation, that sclerosis of the pons and medulla is not necessarily present in the most typical paralysis agitans, accords with the experience of Larcher and others that this change induces a set of symptoms differing materially from those of paralysis agitans, especially in the early occurrence of paralysis, and the non-spasmodic character of the tremor.

The *relations* of paralysis agitans, defined as above, are very interesting. Thus it has clearly an intimate affinity with mercurial tremor—so close that we may correctly regard the latter as a *toxic* form of the malady. Most neuroses are capable of being generated in this way, as well as by simple failure or defect of a nervous centre, and by remote irritation; so that we should expect to find the same hold good in the case of this disorder, regarding it as a neurosis. Another near relative of the malady which we are considering is chorea, which might almost be called the paralysis agitans of the young, and is often attended with very great muscular weakness or even actual paralysis. Dr. Sanders describes (*Edin. Med. Journal*, 1869, p. 743) a case of paralysis agitans, with characteristic and well marked symptoms, in a boy aged 16; and remarks that the disorder, being really spasmodic in its chief phenomena, is more nearly allied to chorea than to paralysis. Dr. Mac-lachlan mentions a case of four or five years' standing in a male aged 60, where paralysis agitans was associated with chorea so intimately that it was hard to say which set of symptoms preponderated. With tetanus it agrees in being a disorder of the spinal motor centres, and perhaps of their superior expansions, in being often independent of definite lesion, in being idiopathic, toxic, or reflex, as regards causation, in being non-febrile, and in the exemption of the intellectual centres; but differs in the spasm being clonic and not tonic, in

being rarely excited by a lesion (reflex irritation), and in being non-transitory. Neuralgia resembles paralysis agitans in the absence of definite lesion, in its frequent association with debility, in its being intensified by causes of exhaustion, and especially in its inveteracy in advanced life. Between paralysis agitans and the disorders which depend on sclerosis of the cord, its posterior columns or upper expansion in the medulla oblongata or pons, there seems to be symptomatically no great resemblance; but organically some affinity may be traced, inasmuch as in some instances the same kind of change is found in paralysis agitans. Admitting, as I am inclined to do, that sclerosis may be occasionally the chief cause of paralysis agitans, the variety of symptoms produced by this degeneration in conditions clinically different may depend on differences in its localisation.

Etiology.—What is true of chorea and of many other diseases—viz., that their effective cause varies greatly in different instances—holds true, I believe, in paralysis agitans. The actual condition of the nerve-cells which causes the clonic spasm is no doubt the same in different cases, but it may be generated by different agents; and to bear this in mind may be of material consequence. Debility of nerve-centres, however induced—by mercury, by falls, by violent muscular or excessive mental exertion, by violent emotions, by venereal excesses, by ague—seems to have a potent influence in producing paralysis agitans, just as it has in causing other neuroses. Old age, therefore, when the vital powers are all gradually failing, may well be, as we find it, the period of life especially favourable to its invasion. No special cause may be requisite, more than that certain motor centres should deteriorate in their nutrition after a special fashion. The peculiar molecular condition of the altered nerve-cells may be indiscernible; but its effect on function is, that the centre, instead of becoming simply weak, becomes unduly excitable. Change of this kind is by no means infrequent in the sensory centres from impaired nutrition, and gives rise to the various forms of hyperæsthesia and paræsthesia. This view of course does not account for the peculiarities of paralysis agitans—does not explain to us why it differs from senile tremor or chorea; but it is correct, I believe, as far as it goes. It indicates the kind of treatment requisite, and may be supplemented by the very reasonable hypothesis that change, which is in the main deteriorative, may vary in its *manières d'être*, to borrow Trousseau's phrase; and that such variations may, though slight, materially modify the symptoms. There are, in fact, cases which the best observers regard as forms of paralysis agitans, but which present, nevertheless, notable diversity in the symptoms, such as are related by Trousseau (vol. ii, p. 215).

Now, proceeding on this view—that the motor nerve-cells in paralysis agitans are in an enfeebled condition, probably due to defective nutrition, which, however, is itself the result of failing power—we next observe that the loss of functional capacity shows itself in a special way. In the construction of a motor nerve-centre, it is requisite to create an apparatus which shall be always ready to evolve force, but which shall not do so spontaneously—not without the application of a stimulus of some kind or other, physical or mental. Now, the peculiarity of nerve-cells is, that they possess these two qualities: they prepare material which, by undergoing oxidation or in some other way, generates force; and yet they can prevent this material from so acting, although blood is circulating all round it charged with oxygen. The cells of other organs, as of the kidney, the testes, and the liver, seem to be acting constantly: the only condition requisite for their action is, that they should receive a due supply of blood. But the motor nerve-cells may lie for hours ready to act energetically, and yet scarce act at all. Now, in states of spasm this property of the nerve-cell is lost or much impaired. It still generates force; it does so continuously, but not in obedience to appropriate stimuli. As long as blood is supplied, it works on blindly, draining away the nerve-force from other centres, till at last the heart is exhausted and circulation ceases. If it should be thought that the action of the nerve-cells of the corpora striata and anterior spinal horns is regulated by those of the convolutions, which keep the former quiescent when this is desirable, yet the question recurs, How is the quiescence or regulation of these superior nerve-cells obtained? How is it that, while fully supplied with healthy blood, they can refrain or not from functioning? If we must refer this to a constant operation of the mind, how is it that the muscles are at rest during sleep and insensibility from narcosis or injury? Most of us, however, I suppose, hold that quiescence of the intellectual and volitional centres coincides with the same state of the motor centres, and *vice versa*; so that more need not be said on this point. In states of cerebral excitement, mania, and delirium, this faculty of quiescence is lost in the cells of the convolutions, and in great measure in those of the motor centres too; and here also the pathological change is commonly induced by causes which depress and exhaust nervous energy.

As regards *treatment*, Cases II and III show that, when the disorder

is recent, there is good hope of a successful result; while Case IV corroborates the general experience of the inefficacy of remedies in the aged when the disease has become inveterate. The same influence of age is remarkably apparent in the neuralgia of herpes zoster, which is so slight in the young, and so terrible and persistent in the old. The improvement obtained by succus conii in Case III was very striking, and was also well marked in Case II. Galvanism in Cases I and II appeared useful, but not highly so. Electricity is probably more beneficial in some cases than in others. Dr. Butlin (*Practitioner*, November 1869) records the case of a servant more than eighty years old, who was cured completely by electro-magnetising the affected arm every second day a few times. The disorder had existed a long time before treatment was commenced, and was severe enough to disable her from carrying trays, etc. One case which I have recorded in my work was speedily cured by the same means. The general tenor of experience in this and in kindred disorders is to the effect, (1) that the main indication is to conserve and support the failing power of the nervous centres affected; (2) that this is best accomplished by remedies drawn from the class of sedatives, or by the milder tonics. Henbane, conium, chloral, subcutaneous opiates, bromide of potassium, belladonna, hypophosphites or phosphorus, cod-liver oil, carbonate of iron, and sulphuret of potassium baths, with electricity in one or other of its three forms, appear to me the most hopeful remedies. But steady persistence in appropriate treatment is doubtless essential, and the want of this may account for many failures. Trousseau's adage should be borne in mind, "*À longue maladie, longue traitement.*"

M. Eulenberg uses some very complimentary expressions in accusing me of confounding cases of simple tremor and chorea infantilis with paralysis agitans. I believe I have justified myself sufficiently with regard to the first; and, as to the second, I cannot see any ground for it. There are none of the cases contained in my chapter on Paralysis Agitans which can be regarded as chorea. I think he has quite failed to disprove my point, that there are different affections comprehended under the name of paralysis agitans.

THERAPEUTIC MEMORANDA.

PARACENTESIS ABDOMINIS.

IN the JOURNAL of February 15th (page 185), it is stated that Dr. Lyons described seven cases of paracentesis abdominis, in which he performed the operation with the effect of prolonging life. One woman suffering from cirrhosis had been tapped no fewer than thirty-six times, from fourteen to sixteen quarts being drawn off at each time, and ultimately the ascites remained stationary. Another patient was apparently moribund, when sixteen quarts of fluid were evacuated with immediate relief. All the members who spoke at the meeting when the above remarks were made, were in favour of early tapping.

I have only had very limited experience; but from the result of my cases I am also in favour of early tapping. In my first case, the dropsy had been early detected, and was operated upon before the strength of the patient had been exhausted. I tapped this patient three times during the year 1864, with the effect of greatly relieving the suffering, and apparently prolonging life. My second case was in all respects very similar; it was one of ascites from cirrhosis; early operation gave great relief, and I believe it prolonged life. The only other case on which I have operated was in February last. A lady had been under the care of a practical physician for some months suffering from cirrhosis. I was requested to attend her quite at the end of her illness, and I found her a good deal exhausted from pain caused by a much distended abdomen. The physician being related to the patient I did not insist upon the necessity (indeed, the time to do much good had passed) for operative interference; but, being requested, I tapped on the 13th of the month, and the patient died on the 26th purely from exhaustion. Early tapping, so far as I know, is a course not generally adopted, nor advocated in text-books, if one may judge from the following quotations.

"In this form of dropsy, however, the peritoneum becomes more impaired in its power to absorb the fluid than in most of the others; the fluid is, therefore, seldom reduced, and the patient generally requires the last imperfect resource of art—namely, tapping, or paracentesis."—Dr. Aitken.

"But if there be urgent dyspnoea or other general distress from the dropsy, the fluid ought to be removed by tapping; a proceeding, however, which does not afford satisfactory results."—Dr. Tanner.

MARSHALL MONCKTON, Hurstpierpoint.

ABSTRACT OF A CLINICAL LECTURE

ON

RENAL DISEASE IN CALCULOUS PATIENTS, AND ITS INFLUENCE ON THE CHOICE OF OPERATION.

Delivered at University College Hospital, February 28th, 1873.

BY SIR HENRY THOMPSON, M.B.,

Surgeon-Extraordinary to His Majesty the King of the Belgians; Surgeon to University College Hospital; etc.

THE patient, a naval pensioner, aged 60, thin and careworn, had suffered from symptoms of stone for more than three years. In the course of 1872, he had been admitted into a metropolitan hospital, when the stone was crushed several times. After this, the patient continued pretty comfortable for about three months; he then rapidly relapsed, and, when he came under Sir Henry Thompson's care, the old man was in a most miserable condition. He could not hold his urine more than half an hour, even at night, and, as he could only pass it when in the erect position, he was obliged to leave his bed every time, and was greatly reduced by pain and want of sleep. This urine was alkaline, of low sp. gr., contained a large amount of albumen, and an unmistakable granular cast was found under the microscope at the first examination. On sounding him, fragments of phosphatic stone were detected. It was evident that the patient had advanced disease of the kidneys, and that his ultimate fate was settled; still, his principal sufferings were due to the presence of the calculus matter in the bladder, and these could be removed or greatly relieved by lithotrity.

He was accordingly admitted into the hospital on January 21st; the 24th, Sir Henry removed some *débris*, and repeated the process on the 28th without any unfavourable symptoms: on the contrary, the patient during this time improved in strength, could move about better, and was able to hold his urine for an hour or more at a time. All but a few fragments had in fact been removed when, on February 1st—a cold day—the patient slipped out of the ward and stood for some time in the yard of the hospital smoking. Next day, he had a severe rigor, followed by headache, drowsiness, partial suppression of urine, etc., and, although at first he rallied somewhat under treatment, he never recovered the effects of his unfortunate indiscretion, and died on February 19th of uræmia.

Post Mortem Examination.—The external surface of the kidneys was granular; the capsules were opaque and adherent: on section, the cortical layer was thin, mottled with patches of yellow degeneration, and studded here and there with small abscesses; the pyramids were congested. The pelves of the kidneys and the ureters were dilated, and contained puriform matter. The muscular coat of the bladder was hypertrophied; the mucous membrane was much congested, dark, thickened, opaque, and ulcerated in places; the so-called "middle lobe" of the prostate was much enlarged, forming a regular bar across the neck of the bladder; in the deep hollow behind this were a few small and soft fragments of stone, weighing in all twelve grains.

In commenting on this case, Sir Henry Thompson said:—The question we have to consider to-day, gentlemen, is this—If stone in the bladder be complicated by the presence of chronic renal disease, what should be done? When are we justified in operating? and which operation should we choose? "Chronic renal disease" is a wide term; and, in order to answer the question better, I will consider the chief forms of kidney-disease separately.

We may at once dispose of malignant disease: if this be so advanced that a satisfactory diagnosis is possible, any operation is clearly useless. Chronic Bright's disease, again, is a loose term, and includes several varieties; the two that chiefly concern us now are the large white smooth kidney, and the granular contracted kidney: the so-called amyloid disease is rare. There is no difficulty in the diagnosis of Bright's disease, even when complicated by the presence of stone; the low specific gravity of the urine, the presence of casts and of an amount of albumen out of proportion to the amount of pus present decide the nature of the case at once. Next, there is what may be called the calculous kidney. You will often meet with men who are frequently, or almost continuously, passing crystals of uric acid or small calculi. This never goes on for any length of time without damage to the kidney; on microscopic examination, you will always find blood in the urine. They are often stout red-faced, healthy-looking rustics; but if such a man come to you with a stone

in his bladder, and tells you that he has been accustomed to pass gravel for years, beware of him; in spite of his apparent good health, he will be unusually liable to severe rigors and urinary fever.

Next, saccharine diabetes is occasionally associated with stone. I have met with two such cases, and never had any more troublesome: there was in both very great irritability of the bladder and of the system generally; and if you should meet with the same complication, the case will probably require all the care and patience you can muster.

Lastly, there is that dilated condition of the kidney and the ureters which is due to long standing obstruction in the passages. This has been sometimes called "surgical kidney," a most inappropriate and unphilosophical term, and one which I never use. So far from being really a "surgical" kidney, it is one which denotes the want of surgical treatment; one which never would have existed had surgical aid been afforded at the outset of the malady. This condition is most frequently met with in cases of old stricture, also in cases of enlarged prostate, large calculus, long continued atony of the bladder, etc. Owing, then, to the presence of some obstruction to the escape of urine from the bladder, that organ becomes dilated and hypertrophied, the pressure tells backwards on the ureters, these and the pelves of the kidneys become dilated, the secreting substance itself is compressed against the capsule, and, finally, the whole organ may be distended into a sort of cyst. I have seen the ureters as large as the small intestine, and contain, with the pelves of the kidneys, thirty fluid ounces of water. A calculus by itself never produces this effect unless it be large, and not necessarily even then; it depends on the amount of obstruction. And now comes an important fact, viz., that all this may occur without any distinct symptoms; you may suspect that this state of things is present, but you cannot make absolutely sure. The patient probably has some cystitis, and consequently pus in his urine, but there is no more albumen present than the pus would account for; there are no casts; the urine may be of fair specific gravity, and there will even be no deficiency of urea; if there be, the patient will at once show symptoms. The fact is, that we are liberally provided with secreting and excreting organs. A man may live very comfortably, even though a considerable proportion of both lungs be blocked up with tubercle; two half lungs are sufficient under ordinary circumstances; but if he get a little bronchitis—an amount which a healthy man would scarcely feel—it carries him off; he has just enough breathing space to sustain life, but no margin to spare. Just so a man may live with two half kidneys; he gets along quite well under ordinary circumstances; there is just enough of the organs left to meet the wants of the system, but any small derangement upsets the balance, and serious symptoms appear at once.

A high authority abroad has stated that this state of the kidneys can be diagnosed by means of palpation, but I cannot confirm his assertion. It would be exceedingly difficult to detect with certainty a soft, movable, and collapsible tube like the ureter even in a thin person; but generally these patients are past middle life, and stout also from confinement; the parts are not sensitive, unless suppuration or a renal calculus be present. You may often be able to make a shrewd guess; but even a strong suspicion is not a sufficient ground for refusing to relieve a suffering patient.

In the next place, to what extent does the presence of renal disease affect the prognosis of lithotripsy? Omitting slight cases, I have operated on three patients who were suffering from *advanced* chronic Bright's disease. The first was some years ago. A very pale, weak, and puffy-looking man, with a large phosphatic stone, came to me to be operated on, but I refused; he, however, begged so hard that I would do something for him, and was in so much pain and distress, that at last I took him in. Even then I kept him three weeks under observation before I did anything, which is not my usual custom. I then crushed the stone very carefully in eight sittings, allowing a good interval between them. The man was in the hospital three months—three times as long as most of my patients—but he went out freed from his trouble, and died of the kidney-disease nine months afterwards without any recurrence of the calculus.

Some time afterwards, I operated on a second and similar case. He had some rigors, but went out at the end of ten weeks cured of his stone; he came to show himself three months afterwards, when he had still a large amount of albumen in his urine, but no recurrence of the stone. Emboldened, perhaps, by success, I attempted a third and worse case shortly afterwards. This patient went on well for a time, but after the fifth sitting uræmic symptoms supervened, and he died.

I cannot tell how many cases of mechanical dilatation of the kidney I may have operated on with success; for, as I said, I know no means of ascertaining with certainty during life the existence of the disease; but I have little doubt that there has been more or less distension of the ureters, etc., in a considerable number of the more severe cases. I may instance particularly three cases of stone complicated by very tight and

old standing stricture. My plan under such circumstances is to tie in catheters for a week, or until I can introduce a small lithotrite; after each crushing I replace the catheters, and continue them until the stone is removed. I have not the smallest doubt, judging from the history and state of these patients, that all had some, perhaps a considerable, amount of disease; yet in each case the result was successful.

Surgeons have said that, if a patient with stone in the bladder have also chronic disease of the kidneys, the best plan is to cut him; to have one operation and have done with it, and not to go on teasing the man with instruments for several weeks. I can only say that lithotomy would certainly have killed any one of the three pale, feeble, bloodless patients I first mentioned; indeed no one of the six could have been cut—no surgeon would have thought of it. It is just fifty years since lithotripsy was first introduced, and up to thirty years ago, or less, this dictum was true, but it is not so now. The statistics of lithotomy were never better than they were fifty years ago; indeed they are now scarcely as good, for since then many of the most favourable cases have been treated by crushing. The statistics of the lithotripsy, on the other hand, have improved, and are improving every year. Lithotomy, then, has stood still; lithotripsy has been greatly improved, and the axiom is consequently now reversed. There is no doubt with our present experience that, if only the stone is sufficiently friable, lithotripsy, *if skilfully performed*, is the best operation in such cases: the shock, loss of blood, etc., of lithotomy make considerable demands on the strength of the patient. The lithotripsy must, I repeat, be very carefully done; of the two operations, that of crushing is certainly the one in which previous practice on the part of the operator makes the greater difference in the chance of curing the patient. Therefore, I say to you, inasmuch as you may be well able to do a good bold operation of lithotomy at the outset of your career if you have surgical talent at all, do so with any doubtful case, or if the stone be at all large, until you have had a little experience with two or three cases of small stones by lithotripsy. Whatever you do by that means, let your early attempts be always made on small calculi only.

In conclusion, I may repeat the advice which I am constantly giving you. Always find the stone, if possible, when small; the symptoms produced by a stone, say of the size of a nut, are clear enough. There is no question, then, about the advisability of cutting or crushing, or about the presence or absence of kidney-disease; crush the stone at once, and the cure of the patient is almost certain.

THE ORIFICES OF THE UNIMPREGNATED UTERUS, AND THEIR SURGICAL TREATMENT.

By J. MATTHEWS DUNCAN, M.D.,

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IN the JOURNAL for November 9th, and for November 16th, 1872, I published a paper on the Mechanical Dilatation of the Cervix Uteri. This paper had on every side important practical bearings; but it was intended to be in the main a scientific, as ordinarily distinguished from a practical, paper. This distinction of scientific from practical is unfortunately still too true and too evident, to require any justification or explanation. It is the grand object of gynecologists to unite practice and science; and every sure step in this direction is essential and everlasting progress not only for science, but also for humanity.

To the criticisms on this paper, I made a brief response in the number of the JOURNAL for January 25th, 1873. Since that date, farther criticisms have appeared in the same journal from Dr. Heywood Smith and Dr. J. H. Bennet. Whilst I wish to express my indebtedness to these gentlemen for their valued and courteous remarks, I feel called upon to make some entirely new statements on the subject under consideration. The remarks of Dr. Henry Bennet are, with few but important scientific exceptions, so just, and do so appropriately condemn much of the prevalent gynecological practice of the day, that I am glad to have an opportunity of expressing my approval of them; and also to explain, however imperfectly, my own views as a practitioner in diseases in which the size of the canal of the cervix uteri is directly or indirectly implicated. This paper is not, like my former one, scientific—it is more of a practical character; and much of what I have to say conveys not facts, but views or impressions, which I meantime firmly believe. A daily and generally a laboriously gained experience in gynecology of above a quarter of a century finds me very doubtful of the true character of many of my own and others' supposed facts; and I can, in most practical matters, be sure only of honest zeal in the pursuit of truth.

The State of the Orifices of the Uterus.—The orifices of the uterus I have never found closed, except in an occasional rare case of complete atresia of the internal os of the cervix. Using the word stricture in the ordinary surgical sense, I can say that I have never seen or heard of an acquired stricture of the orifices of the uterus or of the canal of the cervix. I have often heard of stricture of the womb; but the term has then been applied in a loose and improper way to instruct or to amuse patients.

Some cases of congenital stricture or partial closure of the external os uteri have occurred to me; but such cases are very rare. This condition and other contractions of the cervical canal do not deserve the name of stricture, because they do not obstruct the passage of uterine mucus or of healthy menstrual discharge (see the *Journal of Anatomy and Physiology*, November 1870, p. 150). Plugs of coagulated blood or of dense mucus may more or less firmly close the orifices of the uterus. The external os uteri may be, in a certain sense, closed by being adpressed by the neighbouring vaginal wall. The canal of the cervix and its internal os may be, in a certain sense, closed by swelling of the walls, or by an acute flexion, or by a growth, whether sessile or polypus-like. The external os uteri is larger and more easily dilatable than the internal os uteri. Both are, when in a state of health, at all times easily permeated by an ordinary uterine sound. Except in very rare cases of congenital or acquired contraction or stricture, both ora uteri are, in a state of disease, easily permeated by an ordinary uterine sound. The difficulties, very rarely insuperable, of passing a sound arise from missing the way, not from any obstruction. Both ora uteri may, when in a state of health, be easily and rapidly dilated to a considerable extent. By the use of bougies they may, in a few minutes and without any acute pain being excited, be dilated so as to allow a No. 9 or a No. 13, or even a higher number of the ordinary male urethral series, to pass; or, in other words, to allow a bougie a quarter of an inch in diameter to pass.

In cases of spasmodic dysmenorrhœa, the passage of a bougie, however small, through the internal os uteri causes great pain, identical with that of the spasmodic dysmenorrhœa; and not, in my opinion, identical with the tenderness elicited by the same kind of touching when the mucous membrane is inflamed, as in inflammatory or in membranous dysmenorrhœa. In such cases, the dilatation of the internal os by bougies causes great pain, like that of spasmodic dysmenorrhœa. Further, in such cases the internal os is occasionally small, sometimes transmitting an ordinary uterine probe with a little difficulty; and the dilatation of it must be by very slow degrees, if it is to be done by a gentle or slight force, without causing any split or laceration. The internal os uteri does not recontract to its pristine condition after dilatation, but remains large for a long time (years), if not permanently; at least in many cases.

The Nature of Spasmodic Dysmenorrhœa.—Dysmenorrhœal pains, resembling those of the characteristic spasmodic disease, may be produced by uterine contractions overcoming or attempting to overcome an obstruction. Examples of this are seen in the expulsion of clots, or of dysmenorrhœal membrane, sometimes also, but rarely, in cases of acute flexion of the uterus; but the pains are, in all these cases, generally of comparatively short duration, and not so severe as those of an ordinary bad spasmodic dysmenorrhœa.

I have elsewhere (*Edinburgh Medical Journal*, May 1872) given abundant reason for regarding obstruction or mechanical hindrance of discharge as having nothing to do with the great mass of cases of spasmodic dysmenorrhœa; yet it is well known that the attractive simplicity of mechanical obstruction has given it at present the chief place as a cause in the minds of gynecologists generally, who accordingly term the disease mechanical dysmenorrhœa.

The pain is spasmodic; it may occur before, during, or after the monthly flow. There is extreme sensitiveness of the internal os uteri and of the mucous membrane of the body of the uterus. It is quite possible that a condition of inflammation of the mucous membrane may exist, but it has not been demonstrated. Many attempts have been made to establish the diagnosis and treatment of chronic inflammation of the mucous membrane of the body of the uterus, but they are in the highest degree unsatisfactory and inconclusive. Although this be true of the present condition of these ingenious attempts, and although they do not throw any clear light on the theory or treatment of this kind of dysmenorrhœa, yet very much may be expected from investigations pushed in this direction.

The process of healthy menstruation has, as has been pointed out, a great resemblance to an acute catarrh—softening and thickening of mucous membrane, intense congestion, secretion of mucus, shedding of epithelial cells, and escape of blood. When conditions similar, but morbid, occur in the bladder, we often have strangury; when in the rectum, we often have tenesmus; when in the bowels, we often have

tormina; when in the bronchi, we often have asthma. So it is possible that, whether passing the bounds of health or not, the same conditions in the womb may induce spasms or spasmodic dysmenorrhœa. This is the nearest approach I can make to a theory of spasmodic or so-called mechanical dysmenorrhœa.

To this theory there is the objection, that it does not include and account for the sensitiveness of the mucous membrane of the body of the uterus, and the relief the disease got by dilatation of the internal os of the cervix: at the same time, it is to be observed that these two circumstances are not hostile to the theory, and may be quite reconcilable with it.

The Treatment of Spasmodic Dysmenorrhœa.—This may be divided into two parts; the general treatment, similar to that of all painful spasmodic diseases, and the special treatment of the uterus.

Of the former I need say nothing in this place, as it is well-known, extremely unsatisfactory, and has little connexion with the subject which is under discussion. Many cases of dysmenorrhœa recover under this kind of treatment; but it is difficult to apportion the due share of credit to the medicines and to time or the natural progress of the case.

A severe chronic case of dysmenorrhœa tests the powers of medical treatment; and the attainment of good results from it is at least not to be relied on. Yet there can be no doubt that diaphoretics, laxatives, narcotics, warm bathing, and hygienic treatment have a considerable range of utility.

The special treatment of the uterus by mechanical appliances is the only treatment which yields striking good results, and this so frequently in inveterate cases as to leave no doubt as to the direct connexion between the mechanical treatment and the improvement of the case.

Were catarrh of the cervix uteri a cause of spasmodic dysmenorrhœa, then, perhaps, good might arise from dilating by incision or otherwise the external os; just as good is said to arise in cases of irritable bladder from dilatation of a urethral stricture, and this even when the stricture is easily permeated by the urine. But I am of opinion that no distinct benefit arises from any kind of dilatation of the external os uteri; for this part has no relations with the disease of which I am aware. Yet it is well-known that authors of eminence, as Mackintosh, Simpson, and Sims, recommend this treatment.

Catarrh-like conditions of the mucous membrane of the body of the uterus are present in spasmodic dysmenorrhœa; this mucous membrane is preternaturally sensitive at all times in a woman suffering from chronic spasmodic dysmenorrhœa; the internal os of the cervix, the channel of exit from this cavity of the body of the uterus, is especially supersensitive; this internal os is also frequently diminished in size; it is with difficulty dilatable when compared with the same part in a healthy uterus; sometimes it is extremely difficult of dilatation. These circumstances, and the analogy of urethral stricture above-mentioned, prepare us for believing that some action on the internal os uteri might ameliorate or cure a spasmodic dysmenorrhœa. The action resorted to is dilatation. This is the mechanical treatment which yields striking good results frequently in inveterate cases,—in the worst cases.

In further giving my views on this mechanical treatment, I wish to be understood as expressing only my present opinions and with great reserve. Were it not for the misunderstanding of my views which I have found to exist by reading recent criticisms on my paper on Mechanical Dilatation of the Cervix Uteri, I would not have been induced to express again so early my opinions on this important practical matter.

The means generally resorted to for dilatation of the cervix are short metallic bougies allowed to remain, tangle-tents, and cutting instruments of which Simpson's and Greenhalgh's are well-known examples.* All of these means I have used, and I have had very extensive and long-continued opportunities of becoming acquainted with some of the results of their use in the practice of others. It is these means which have afforded the striking good results of which I have just spoken. But the striking good results, so far as the dysmenorrhœa was concerned, were equalled, if not surpassed, by other striking bad results, hæmorrhage, metritis, ovaritis, perimetritis, parametritis, with all their numerous attendant evils and dangers. This kind of dilatation is frequently resorted to by some to remove sterility; and so frequent have these bad results been, so far as I can judge, that, whatever may have been the results as to sterility in some individual cases, I am satisfied that, on the whole, they have caused more sterility than they have cured. The result of all this has been that many practitioners, including myself, have been gradually giving up the use of the remedy by dilatation. The evils and dangers of it, as hitherto practised, are too great, and fully counterbalance the good.

It was under these circumstances that I proceeded to investigate the

* Rigby's instrument I have used, but it is clumsy and unsuitable. I have never used Priestley's dilator, and regard it also as not well adapted for the object in view.

subject farther, and, among other things, resolved to try for the internal os uteri the treatment used for dilating the male urethra—the daily passing of ordinary male urethral bougies slightly modified, which are not allowed to remain, and whose size is day by day increased. This treatment I described in the *Edinburgh Medical Journal* for May, 1872. I have found that the striking good results already mentioned are, at least often, attained; and this, without the occurrence of the striking bad results. I am aware of only one case in which any evil result followed this method of gradual dilatation. In it there was a slight temporary attack of adhesive perimetritis; and I believe that this was the result, not of the treatment as I would now conduct it, but of the use of more forcible dilatation than was necessary.

Future investigations may enable us to discover some class of cases in which the older modes of dilatation are to be preferred. They may also change our views as to the utility of both older and newer.

I resort to dilatation in a virgin rarely, and with extreme reluctance, and only in very severe cases.

TWO CASES OF SACCHARINE DIABETES TREATED WITH LACTIC ACID.*

By JOHN W. OGLE, M.D., F.R.C.P.,

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THE following two cases of diabetes out of several† in which lactic acid alone, as a remedy, was administered in accordance with the suggestion of Cantani, were selected as presenting very favourable conditions for its employment. Both the cases were uncomplicated. The patients—one a male, the other a female—were at about the same period of life, and both came under medical care on the same day. The cases were especially watched, with a view of detecting indications of some lesion of the nervous system as a cause of the diabetic state, and of observing not only the supposed curative effects of the lactic acid, but also its alleged action in producing “rheumatic” symptoms. In both cases meat, with non-starchy food, gluten-bread, etc., were given for several days prior to the administration of the acid; and in both cases the lactic acid was increased until four drachms were taken in the day, and this was persisted in for several weeks. It will be seen that in one instance (Case II) a decided diminution of the amount of urine, without increase of its specific gravity, followed the use of the remedy. In both cases, flesh and strength were lost. In describing the cases, I have given in a tabular form a general view of the amount of the urine passed, of its specific gravity, also of the weight of the patient from time to time, and, on several occasions, of the temperature of the body.

CASE I.—Alfred S., aged 20, a healthy looking man, with florid complexion, but slender in frame, was admitted into St. George's hospital on March 20th, 1872. He stated that as long as he could remember he had had a large appetite, and been troubled with thirst. About eighteen months before admission, he had become very exhausted and unable to work; of late he had gained flesh. He had never had any blow or injury, and never fallen into venereal excesses, direct or indirect. He was not aware that any of his family had suffered from his form of illness.

On admission, the skin was dry, the breath had a very sweet and etherous odour, and the mucous membrane of the tongue and mouth generally was dry and “clammy”. The urine was free from albumen, but contained much sugar, and its specific gravity was 1034. His weight was 8st. 5lb. (in his boots). The quantity and specific gravity of the urine were daily registered, and also the weight from time to time, as will be seen in the table appended. There was no affection of the movements of any of the muscles of the body, or interference with general sensibility or special senses; and the uvula, tongue, and palate, presented nothing unnatural. The eyes were hypermetropic to seven inches. The patient was put on mutton-chop, with gluten-bread, greens, and milk; subsequently beefsteak. No fermented fluid was given. For some days after admission, no medicines were administered; and on the 25th, it was reported that the patient was a little stronger, and that he had no thirst, but complained of a sweet taste in the mouth.

On the 1st April, he began to take lactic acid in twenty-grain doses three times a day, and this was increased gradually; on the 5th, to forty grains; on the 8th, to fifty-five grains; on the 10th, to sixty grains, three times a day. On the 15th, he began to take two-drachm doses in the day in water as a drink; and on the 20th, three drachms. On the 6th, he commenced taking half an ounce in the course of the

day; about this time he began to suffer from constipation, his general health remaining the same. Calomel, senna, and castor-oil, with oil and turpentine injections, were adopted, and cold douching of the abdomen was ordered. Sometimes the bowels were not open for several days continuously. At one time only was the lactic acid discontinued, and that was for a week, when the bowels were so constipated. It was resumed May 21st, and continued until June 10th—i.e., twenty days—when opium in half-grain doses was given every six hours. No improvement appeared to result from the opium; and the patient left the hospital subsequently.

The following table shows the daily amount and specific gravity of the urine.

Urine.		Urine.		Urine.		Urine.	
Quantity.	Sp. gr.	Quantity.	Sp. gr.	Quantity.	Sp. gr.	Quantity.	Sp. gr.
March 22..... 128 ounces	1034	April 8..... 168 ounces.	1036				
“ 23..... 128 “	1034	“ 9..... 196 “	1036				
“ 24..... 144 “	1036	“ 11..... 106 “	1032				
“ 25..... 136 “	1036	“ 22..... 150 “	1034				
“ 26..... 144 “	1036	“ 23..... 130 “	1032				
“ 27..... 156 “	1034	“ 24..... 100 “	1037				
“ 28..... 148 “	1036	“ 25..... 134 “	1036				
“ 29..... 96 “	1036	“ 26..... 120 “	1036				
“ 30..... 140 “	1034	“ 27..... 106 “	1040				
“ 31..... 144 “	1034	“ 28..... 118 “	1039				
April 1..... 132 “	1034	“ 29..... 112 “	1039				
“ 2..... 144 “	1034	“ 30..... 96 “	1040				
“ 3..... 148 “	1034	May 1..... 96 “	1038				
“ 4..... 144 “	1034	“ 2..... 106 “	1038				
“ 5..... 144 “	1034	“ 3..... 92 “	1040				

Weight.

St. lb.	St. lb.
March 22 8 5	April 22 7 13
“ 24 8 2	“ 26 7 10
April 11 7 5½	May 9 7 8

Temperature.

A.M.	P.M.	A.M.	P.M.
April 10 —	102.8	April 14 99	100
“ 11 98.2	104	“ 15 99	98.4
“ 12 102	100.6	“ 16 97.4	98.4
“ 13 98	98		

REMARKS.—In this case, which was under care for seven weeks, no marked diminution of urine and no change in the specific gravity was noticed; but after the long use of the lactic acid, and possibly in consequence of it, great constipation came on, requiring active aperients. The weight fell from 8st. 5lbs. to 7st. 7lbs. The temperature was chiefly above the normal; on one occasion only being below, and then it was 97.4 deg. Fahr.; on one occasion it reached 102.8 deg. Fahr. No pain and no excess of perspiration existed during treatment.

CASE II.—Ellen D., aged 28, a lady's maid, was admitted into St. George's Hospital on March 20th, 1872. She had always enjoyed good health until about nine months previously to admission, when she began to complain of thirst, and to void much urine. At first she did not lose much flesh, but when the thirst became more intense she grew considerably thinner. She had been treated with quinine, opium, and bark (as she stated) in another hospital; and during the three months before admission she had lost much strength.

On admission, the patient was somewhat emaciated, and weighed 7st. 3lbs. The skin was dry, She had a reddish complexion, and had congenital coloboma of the iris of one eye, with corresponding gap in the choroid, as determined by the ophthalmoscope. The urine was acid, of the specific gravity of 1032, and contained a large amount of sugar. The odour of the breath was noticeably sweet. The tongue was clean, but reddened; the palate and uvula presented nothing remarkable; and the special senses and the muscular power and general sensibility were unaffected. The patient had never sustained any blow or injury. The pulse was regular, but rather quickened. No cough existed; but the respiratory murmur at the apices of both lungs was harsh.

On the day after admission, it was found that the amount of urine passed in twenty-four hours was 158 ounces, and that it was acid and free from albumen. She was then placed on a diet of mutton-chops, greens, milk, and eggs; and, later on, gluten-bread. She continued in much the same state generally; the bowels apt to be rather confined, the thirst very great, and the tongue red but clean. No medicine was given until April 1st, when lactic acid was administered in twenty-grain doses three times a day. The urine was almost daily measured as to quantity, its specific gravity was taken, and the patient was weighed from time to time, as will be seen in the table appended. On the 5th, the lactic acid was increased to forty grains; on the 8th, to sixty grains; on the 10th, the report was that thirst was much less and the strength greater; on the 12th, the acid was increased to seventy grains, thrice a day; on the 19th, she took three drachms daily in water; and on the 26th, the report was that she had gained strength decidedly.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

† Some of which have already been noticed in the medical journals.

The three drachms daily were continued up to May 6th, when she commenced taking half an ounce daily, which was persevered with until she left the hospital. For five or six weeks she also had a warm bath twice a week. At no time did she complain of any rheumatic or other pain during her time of treatment; and during her sojourn in the hospital no change of symptoms occurred, and no fresh one, such as cough, albumen in the urine, etc., came on. The temperature was registered night and morning, as before said, for several days, and as may be seen by the appended table. After a time the gluten-bread became very distasteful, even when tried in every possible mode, and its use had to be discontinued.

In spite of treatment and diet, the patient (though from time to time she varied in weight and strength), on the 8th of May, began decidedly to lose strength and spirits, and, at her own request, left the hospital eventually.

The following table contains the registration of the daily amount and specific gravity of the urine, and the occasional weight and temperature.

	Urine. Quantity.	Urine. Sp. gr.		Urine. Quantity.	Urine. Sp. gr.
March 21.....	158 ounces.	1022	May 4.....	70 ounces.	—
" 22.....	178 "	1028	" 5.....	60 "	—
" 23.....	108 "	1028	" 6.....	66 "	—
" 24.....	126 "	1029	" 7.....	46 "	—
" 25.....	170 "	1028	" 8.....	68 "	—
" 26.....	160 "	1030	" 9.....	60 "	—
" 27.....	160 "	1027	" 10.....	64 "	1030
" 28.....	172 "	1030	" 11.....	60 "	1030
" 29.....	112 "	1028	" 12.....	60 "	—
" 30.....	128 "	1029	" 13.....	46 "	1029
" 31.....	96 "	1030	" 14.....	60 "	1028
April 1.....	90 "	1030	" 15.....	40 "	—
" 2.....	96 "	1030	" 16.....	60 "	1028
" 3.....	96 "	1028	" 17.....	60 "	1028
" 4.....	64 "	1028	" 18.....	60 "	—
" 5.....	60 "	1028	" 19.....	60 "	1029
" 13.....	100 "	1028	" 20.....	80 "	1030
" 14.....	84 "	1030	" 21.....	70 "	—
" 15.....	88 "	1032	" 22.....	52 "	—
" 16.....	72 "	1030	" 23.....	70 "	—
" 17.....	70 "	1030	" 24.....	60 "	1022
" 18.....	76 "	1030	" 25.....	40 "	—
" 19.....	64 "	1032	" 26.....	44 "	—
" 20.....	80 "	1030	" 27.....	70 "	1029
" 21.....	74 "	1030	" 28.....	46 "	1030
" 22.....	72 "	1030	" 29.....	48 "	—
" 23.....	70 "	1029	" 30.....	46 "	—
" 24.....	80 "	1028	" 31.....	30 "	1022
" 25.....	60 "	1028	June 1.....	46 "	1020
" 26.....	60 "	1028	" 2.....	44 "	1026
" 27.....	60 "	1028	" 3.....	52 "	1027
" 28.....	60 "	1030	" 4.....	60 "	1028
" 29.....	48 "	1030	" 5.....	60 "	1028
" 30.....	74 "	1028	" 6.....	60 "	—
May 1.....	52 "	—	" 7.....	60 "	1030
" 2.....	50 "	—	" 8.....	64 "	1028
" 3.....	50 "	—	" 9.....	46 "	—
			" 10.....	54 "	—

Weight.

	St.	lb.	oz.		St.	lb.	oz.
March 21	7	3	0	May 1	6	10	4
" 28	7	2	10	" 9	6	13	0
April 4	7	0	0	" 16	6	10	12
" 11	7	0	4	" 23	6	10	12
" 17	7	0	0	June 6	6	8	8
" 25	6	13	0				

Temperature.

	A.M.	P.M.		A.M.	P.M.
April 10.. ..	97	98.4	May 8.. ..	98	97
" 11.. ..	97.6	97	" 9.. ..	97	97.4
" 12.. ..	99	97.6	" 10.. ..	97.6	97.6
" 13.. ..	97	97	" 11.. ..	98	97.4
" 14.. ..	96.6	97	" 12.. ..	97	97.6
" 15.. ..	97.2	—	" 13.. ..	98	98
May 6.. ..	97	98	" 14.. ..	98.4	—
" 7.. ..	98	98			

REMARKS.—In this case, which was under treatment for eleven weeks before the lactic acid was given, the urine ranged in quantity between 112 and 178 ounces a day; after the use of the acid, the quantity quickly diminished, and throughout its use fluctuated between 40 and 70 ounces a day, on one occasion being as low as 30 ounces. During all this period the specific gravity remained much the same as when the patient came to the hospital. The weight fell from 7st. 3lbs. to 6st. 8lbs. The temperature was almost always *below the normal*, being for the most part below 98 deg. Fahr. Neither the morning nor the evening temperature was uniformly above or below the other. In this case, it is to be observed that no rheumatic or other pains, and no noticeable perspiration, attended the use of the acid. The hay-like or sweet-smelling odour of the breath existed as in the former case.

In neither Case I or II was there any indication of interference with, or affection of, the nervous system; power of movement of the entire

muscular system, and sensibility, both general and of particular organs, being unaffected. In neither case was there albumen or excess of uric in the urine; and in neither was there any decided lung-mischief, though in Case II there was a degree of harshness of respiration.

As regards the results of treatment, it did not appear that in these cases any real benefit arose from the administration of the lactic acid.

METHYLENE ETHER AS AN ANÆSTHETIC.*

By LAWSON TAIT, F.R.C.S., Surgeon to the Hospital for Women, Birmingham.

By the introduction of this new anæsthetic, I feel sure that the days of chloroform as an anæsthetic for any but obstetric operations are numbered. The new substance has the following advantages over chloroform. Its action is much more rapid, and is entirely free from the muscular and cerebral excitement often seen in the use of chloroform; the quantity used is less; and sickness after its use is most exceptional, the recovery from the anæsthesia being extremely rapid and complete. Over sulphuric ether it has the advantage, that it is very pleasant to take, and that a tenth or twelfth of the quantity is sufficient.

I have used it about thirty times, and in only one instance was there any sickness, and in that case the lady had just before the examination been partaking freely of underdone mutton.

I have performed the following operations under its influence within the last six weeks, and in no instance has there been any sickness due to the methylene ether. A simple ovariectomy, in which only three drachms of ether was used; successful. Removal of both ovaries, in which the amount used is uncertain, but was probably about four drachms; successful. Removal of fundus uteri and both ovaries; a long and tedious operation, in which about two ounces of the ether was used, and in which no bad symptom has yet appeared (fourth day). This patient was sick some hours after the operation, but that was due to morphia. A long tedious operation for retained menstruation, in which seven drachms were used; successful. I have placed this patient under the influence of the ether eleven times, and she has never been sick. This repeated administration is for the passage of the finger up to the cervix, and the whole process, including the complete recovery from profound anæsthesia, never takes ten minutes. Removal of a large fibroid, and, in the practice of my colleague, Mr. Ross Jordan, the removal of the foetus from the broad ligament successfully, together with several minor operations, and its administration for purposes of uterine or vesical examination, complete my experience of this new anæsthetic; and I shall use no other for surgical work until I obtain some disastrous result, a misfortune that at present seems more unlikely than by the use of either ordinary ether or chloroform. I may add that its use is more economical than that of either ether or chloroform.

ON CANINE MADNESS: WHEN COMMUNICABLE AND WHEN NON-COMMUNICABLE TO MAN.

By E. P. PHILPOTS, M.D., F.R.G.S., etc., Poole, Dorset.

IT is often painful to witness the alarm occasioned by the bite of a dog, especially if the biting dog be "mad." Vague ideas, however, appear to prevail as to what a "mad dog" really is. It is generally supposed that only *one* kind of madness prevails amongst dogs, rats, cats, etc.; but I am prepared to show that this supposition is false; for, as mankind suffers from madness in more forms than one, so do the lower animals.

My observations having been limited to dogs, I must confine my remarks to them. There are two forms of dog-madness easily distinguishable from each other: the one communicable, and the other non-communicable to man. These two forms are named respectively hydrophobia, and distemper-madness. A person bitten by a hydrophobic dog is more or less certain of contagion; and, as sure as the disease is contracted either by man or by dog, so sure must death ensue from it. With regard to distemper-madness, the case is quite different. A person bitten by a dog that has this disease suffers merely from the local effects of the bite, which effects are, of course, in proportion to the severity of the bite, or simple lacerated wound, as it may be termed; the dog also, as a rule, recovers.

To enable medical men to diagnose the amount of danger in which their patients may be when bitten by dogs reported "mad," I have

* Read before the Birmingham and Midland Counties Branch.

drawn up a table, pointing out the great difference that exists between *real* hydrophobia and distemper-madness; and when I think of the large amount of anxiety and mental suffering that may be banished from the minds of those who have been bitten by dogs, by knowing the results likely to ensue from such bites, I consider that, however much it may belong to the veterinary surgeon to disclose and study these facts, it is not a waste of time for the medical man to give them a share of his attention.

HYDROPHOBIA.

Definition.—A fatal form of madness communicable from the lower animals to man; characterised (as the name denotes) by an intense dread of water.

Synonyms.—None.

Premonitory Symptoms.—Begin two days beforehand, loss of spirits, loss of appetite, general depression.

General Appearance during the Attack.—When let alone, the dog lies sullenly as if “out of sorts,” and depressed, notices little, but recognises his master by wagging his tail. Violently insane only on the approximation of water.

Fits.—Absent.

Foam at the Lips.—Absent.

Water.—Sprinkled over, or near him, causes violent convulsions.

Thirst.—Absent.

Desire for Water.—Absent on account of dread.

Appearance of Eyes.—Dull or heavy.

Howling and Barking.—Absent.

Muscular Affection of the Throat causing Inability to Swallow anything.—Absent, or not observable.

Causes.—None.

Prognosis.—Very bad, always fatal, no chance of recovery.

Terminations.—The symptoms do not vary to any great extent towards the termination.

Pathology.—Intense inflammation of the brain extending to the throat and lungs.

Prophylactic Treatment.—None.

It will be noticed by this table, that in hydrophobia there is a dread of water, and in distemper-madness there is a longing for it. In the latter disease, there is a spasm of the œsophagus which the dog tries to overcome by futile efforts to vomit.

The premonitory symptom of hydrophobia is a sullen depression; in distemper-madness the throat-symptoms are first observable. Regarding the general appearance during the attack: the hydrophobic dog is a sullen animal, merely appears much “out of humour,” and is only actually mad on the approach of water; but in distemper-madness the animal really *is* mad in every sense of the term. He bites, and gnaws, and snaps, and chews anything that he thinks will cause him to vomit. The hydrophobic dog has *no* fits (except on the approach of water), and he does not foam at the mouth; but with the dog mad with distemper there is a succession of fits, one of which may end his life; his saliva, some of it of a frothy nature (foam), dribbles, and exudes from his mouth, and water sprinkled over him has no effect upon him. The hydrophobic dog hates the sound, the sight, the thought, of water; he will fly from it madly; but the dog mad of distemper rushes to it to assuage his thirst, but this he cannot do, as spasm of the œsophagus will not allow his swallowing. The hydrophobic dog’s eyes are “fishy,”

DISTEMPER-MADNESS.

Definition.—A form of rabid madness non-communicable to man; characterised by foaming at the mouth, impairment of deglutition, and a desire to vomit.

Synonyms.—Rabies.

Premonitory Symptoms.—Loss of appetite, and slight husking in the throat.

General Appearance during the Attack.—The dog bites at any of its fellows, gnaws at his bed, or the wall, eats straw, snaps at his attendant.

Fits.—Present in a marked degree, in most cases.

Foam at the Lips.—Very much; the dog leaves it on the surface of the water he vainly tries to drink (the foam is caused by futile efforts to drink or swallow).

Water.—Has no effect upon him.

Thirst.—Intense, insatiable.

Desire for Water.—Very great.

Appearance of Eyes.—Dull, and green in their reflection.

Howling and Barking.—Present.

Muscular Affection of the Throat causing Inability to Swallow anything.—Well marked.

Causes.—Inflammatory action internally pervading the system.

Prognosis.—Good, or bad, according to the severity of the fits.

Terminations.—A fit.

Pathology.—Inflammation of the brain, often extending to the throat, the lungs, and the intestines.

Prophylactic Treatment.—Vaccination is a certain preventive.

dull, and sullen-looking; the dog ill of distemper-madness has bright green and savage-looking eyes, and he howls and barks. Dogs never recover from hydrophobia, but they do from distemper-madness, if the fits be not severe. Vaccination does not prevent hydrophobia, but it does distemper-madness.

From the foregoing remarks, which are founded upon a large amount of experience gained by many other observers besides myself, it will be at once seen that, collectively speaking, the bites of “mad” dogs are deprived of half their horrors. Happily, hydrophobic dogs and animals are *very* rare; but that “mad” dogs are plentiful, we have only to visit kennels of hounds, or the streets of large towns, to convince ourselves. Many people are bitten during the year by “mad” dogs, but never have hydrophobia.

The term “dog-days,” as applied to sundry summer days that are supposed to affect the canine race, is more or less a popular error; true it is, that excessively hot weather aggravates the distemper in dogs, or makes it visible or very bad in those animals which (were it not for the excessive heat) would only have a moderate attack of it, or have it so slightly as not to feel it at all, or at least but a very little (as many dogs do), but “dog-days” do not bring hydrophobia, or that disease would occupy a prominent position in the death-rate, instead of being one of the few diseases of which we seldom hear. There have been controversies lately carried on in the *Times* and other newspapers about canine madness. The futile assertions made by veterinary surgeons and others who (if only from their own observations) should know, have been successfully challenged and combated by the Hon. Grantley Berkeley, a name familiar to nearly every student of British Natural History. Mr Berkeley has, with the greatest courtesy and no small trouble, favoured me with the results of his observations on canine madness, which observations have extended over many years, and were made over many hundreds of cases amongst hounds in his own kennels and numerous other dogs; in fact, he has lost no opportunity of obtaining data from every possible source, being much interested in this matter. To him I am indebted for most indisputably deciding as to what is a hydrophobic, and what is a rabid dog. For promoting the advantages of vaccinating dogs for distemper, Mr. Berkeley has the hearty thanks of nearly every master of hounds in England.

I must not conclude this paper without remarking that the vaccination of dogs with ordinary vaccine lymph, as obtained from the human subject, produces perfect immunity both from distemper as a simple malaise, and from distemper in its more aggravated form of distemper-madness. I have repeatedly tried it, and have never found it to fail. I am at present engaged in further experiments upon the vaccination of dogs, and am making researches into the different forms of canine madness that at present exist; and shall not fail to make public any information that I shall gain thereby.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

EXCISION OF SHOULDER-JOINT: RECOVERY, WITH AN USEFUL ARM.

(Under the care of Mr. RIVINGTON.)

BENJAMIN BROMLEY, aged 20, was admitted under Mr. Rivington in September 1871. He was of a strumous habit, and had had bone removed by Mr. L. S. Little some years previously from his left femur and both tibiae. A few months before, he had been under Mr. Rivington for necrosis of the right humerus, and a large sequestrum, three inches in length, had been removed. The cavity left granulated healthily and filled up, a small sinus only remaining. This sinus led upwards to the head of the bone, and further interference in that direction would have risked the danger of implicating the shoulder-joint. The patient was therefore advised to go out of the hospital for a time, in the hope that a small piece of bone would loosen and be easily removed, and that then the sinus would close. At the end of a few months he returned, not in good condition, as he had fared badly outside the hospital. The sinus continued open and discharging rather freely, and an exploratory operation was proposed. Just before the operating day, the shoulder became the seat of inflammation of erysipelatous character, extending half-way down the arm, and terminating at a defined margin. Crepitus was now felt in the joint on the slightest motion, and it was conjectured that the head of the bone or

upper epiphysis had separated. The discharge became profuse. The temperature rose; the patient's condition was nearly at zero. As the irritation and inflammation were considered by Mr. Rivington to depend entirely on the fresh mischief at the joint, it was determined to perform excision the moment the erysipelatous inflammation ceased to spread. Accordingly, on October 11th, the patient was put under chloroform, and the joint was reached from the front by an excision over the track of the existing sinus. The head was found loose in the joint, and the glenoid cavity was denuded of cartilage. As much carious bone was taken from the humerus and scapula as was practicable, and the cavity was well washed out with a solution of chloride of zinc (one drachm to one ounce). Subsequently it was dressed from the bottom with lint soaked in a weak solution of chloride of zinc (two grains to one drachm). Under this treatment, with generous diet, the patient improved. Immediately after the operation, appetite returned; pain ceased; florid granulations sprang up; particles of affected bone became detached and were removed; the cavity rapidly filled in and contracted; and in four weeks the patient was able to get up, the wound being reduced to a mere sinus.

December 28th, 1871.—Rather more than two months had elapsed since the operation. The wound had healed, and the patient had good use of the hand and forearm, although there was little if any motion at the shoulder. Increased mobility of the scapula compensated for the loss. He could carry heavy articles, and had been using his arm to decorate the ward with devices expressive of gratitude to everybody. Altogether he had a most useful limb.

As unsuccessful cases should be published as well as successful ones, a brief account of another case of excision of the shoulder-joint ending fatally is subjoined.

CASE II.—William Whiteman, aged 52, of feeble constitutional power, came under Mr. Rivington's care in August 1871, with inflammation, apparently rheumatic, of the left shoulder-joint. Abscesses formed above and below the joint, and the patient's condition became deteriorated. Some operative interference was rendered necessary, as there was a constant drain on the system, due evidently to a removable source. Grating could be felt in the joint. Having regard to the apparent extent of the disease and to the condition of the patient, Mr. Rivington was in favour of amputation at the shoulder-joint, as affording, in his opinion, the best chance of recovery. In deference, however, to the opinion of colleagues present at a consultation, who thought that excision would suffice, the latter operation was undertaken, and performed without difficulty by a single straight incision from a point beneath the centre of the acromion process through the fibres of the deltoid, carefully avoiding the circumflex artery. The wound was treated with chloride of zinc lotions and dressing. Reparative action from the first was extremely feeble, and the profuse discharge from the large cavity, which had been a suppurating cavity before the excision, was very exhausting. Amputation was declined by the friends, and the patient gradually sank, quite worn out. An examination of the end of the humerus showed a powdery deposit of urate of soda, proving the gouty character of the original affection.

MIDDLESEX HOSPITAL.

SIMPLE HYDROCELE OF THE TUNICA VAGINALIS, ALREADY THREE TIMES TAPPED AND INJECTED: INJECTED A FOURTH TIME WITH IODINE.

(Under the care of Mr. HULKE.)

THE following case is interesting, from the repeated failure of injections to effect a lasting radical cure. Presuming that iodine was employed, the reason of the want of success is not apparent, for no obviously recognisable condition generally regarded as unfavourable to success—*e.g.*, sclerosis of the tunica vaginalis—existed. On the present occasion, a small quantity of the simple tincture of iodine (which is more strongly irritant than the compound tincture) diluted with an equal bulk of water, was injected and left in the hydrocele, a method which appears more effectual than the injection of a large quantity of a more diluted solution, followed by its removal after a few moments. A strong, healthy-looking constable, aged 27, was admitted into Forbes Ward on August 15th, 1871, with a hydrocele of the right tunica vaginalis, which, although not large, caused him much inconvenience. He said he had had it twelve or thirteen years, that it had been four times tapped and three times injected, but he did not know the nature of the fluid employed. Two ounces of dark serum were drawn off with a small trocar, and one drachm of tincture of iodine with one drachm of water was injected. This caused a little pain and moderate swelling of the tunica vaginalis, which after a few days subsided completely.

REVIEWS AND NOTICES.

THE DISEASES OF THE STOMACH, BEING THE THIRD EDITION OF THE DIAGNOSIS AND TREATMENT OF THE VARIETIES OF DYSPEPSIA. Revised and Enlarged. By WILSON FOX, M.D., F.R.C.P., F.R.S., Physician to University College, etc. Pp. 236. London: Macmillan and Co.

THE present edition of Dr. WILSON FOX's valuable work differs from the two former chiefly in the addition of articles on ulcer and cancer of the stomach. These two are an important contribution to the treatise, inasmuch as in them, too, dyspepsia is a symptom of moment.

The work begins with an account of the symptomatology of the stomach, commencing with the indications to be derived from the tongue. These are mainly dependent on the presence and character of its fur or epithelial waste. An unusual abundance of this fur may be due to local irritating causes—synchronous with similar changes in other parts of the alimentary canal—or dependent on a general pyrexial state. The first and last have here to be eliminated. Derangements of appetite and thirst are next considered: they are anorexia or loss of appetite, boulimia or excessive appetite, and pica or perverted appetite; the last commonly associated with progressive or nervous disorder in the female. Flatulence is a symptom of great importance. Dr. Fox recognises two sources: the direct swallowing of atmospheric air, and the products of the fermentation of food. The last named is the most important, and is due to (a) imperfect supply of the proper digestive fluids; (b) the undue supply of other fluids, especially mucus, in their places; (c) retention of food for an undue period in any part of the canal, but especially in the stomach. He rejects the idea that gas is ever directly secreted from the walls of the alimentary canal.

Acidity and pyrosis are commonly included in one category. Acidity is commonly supposed to be due to over-secretion of acid gastric juice, but it is rather due to the same kind of change which mainly induces flatulence, *viz.*, fermentation. This gives rise at once to free gases, as carbonic acid and compounds of carbon with hydrogen, and to acids such as the lactic, acetic, and butyric. In true excessive secretion, there may be excess of both acid and alkaline gastric secretions; with these are associated heartburn and pyrosis.

Pain, as a symptom of stomach-mischief, may be due to (a) the presence of irritating substances foreign to the stomach in its interior, *e.g.*, irritant poisons; (b) organic diseases affecting the structures of the viscus, *e.g.*, inflammation, cancer, and ulcer; (c) perverted secretions; or (d) perverted innervation, as neuralgia. Pain is not to be confounded with tenderness.

Vomiting is another symptom of importance, but this may be due to cerebral nervous diseases. If it be due to irritation of a local kind, the part affected may be the fauces, the stomach itself, or such neighbouring organs as the liver, bile-ducts, intestines, or genito-urinary organs. The matters vomited may include the contents of the stomach more or less altered, with sarcinae and bile, especially after straining; sometimes with rarer concomitants.

Indigestion is next discussed generally. It is defined as "any retardation or perversion of the changes normally undergone by the food in its process of conversion into a state suitable for the nutrition of the organism," the symptoms of which have been already enumerated. This condition may be indicated in many other ways, as by alteration in the nervous system, in the urinary secretion, in the generative system, the skin, the circulatory or respiratory organs, and especially in the general nutrition.

Dyspepsia may depend either on some unsuitability of the food consumed to the necessities of the case or of the individual, or it may depend on imperfection or disease of the viscera concerned. Thus food may be unsuitable as regards quality, if the substances necessary to support life and maintain health be not mixed in due proportion. It should neither contain too much albuminous, starchy (or saccharine), or fatty materials. It may possibly contain too much indigestible matter, or digestible matter improperly cooked, and so rendered indigestible. Another cause of indigestion is food which has undergone putrefactive or other similar change. So, too, food may be imperfectly masticated and mixed with saliva, or food may want those savoury substances often necessary to induce a free flow of the digestive fluids; whilst some people exhibit curious idiosyncrasies with regard to certain special articles of food. Food taken in excess of the wants of the body, whether at any given time or by frequent repetition, is a well known cause of dyspepsia. Irregularity and improper food, too, are powerful causes.

Indigestion may be directly referable to the condition of the stomach.

Thus there may be derangement of its movements, sometimes retarding, sometimes hastening, the passage of the food into the intestines. Alterations in the secretions are, however, more important and more frequent. These may be either perverted, as in various blood-states and local conditions, or in excess; more frequently they are diminished, as in local or general inflammatory conditions, nerve-influences, and the like.

The second or special portion of the work begins with some account of atonic dyspepsia, a malady almost invariably chronic, accompanied by no fever, and, when simple, without any actual pain. This condition is almost invariably present in elderly people, under conditions implying depressed vitality and the febrile state. Its chief sign is a feeling of weight and uneasiness after taking food, very likely flatulence and constipation, but sometimes diarrhoea with marks of general debility. The pathological changes, as far as they can be made out, are those of simple atrophy, and degeneration and wasting of the tubules. In cases dependent on the febrile state this, of course, is somewhat different. The treatment is essentially tonic. Briefly, the diet should consist of articles easy of digestion, yet nutritious, and the quantity should be adapted to the powers of the stomach. Much fluid at meals especially should be avoided. Rest should be abundant; yet exercise, short of fatigue, is a necessity. Cheerful society is a great advantage; the cold bath is not to be neglected. These are even more important than medicine; yet strychnine, quinine, and iron are of great service. An aromatic bitter is useful. As adjuvants to digestion, pepsine and hydrochloric acid taken at meal times are of undoubted value.

The next chapter is devoted to neuroses of the stomach. Certain of these are indistinguishable from atonic dyspepsia, if, indeed, they do not constitute that form of stomach-mischief; but others have widely different indications, such as pain, vomiting, interference with the secretions of the organ, and so with digestion and appetite. The most important determining cause of these morbid conditions is exhaustion, however brought about; but the most frequent associated maladies are hysteria and hypochondriasis. It is in hysteria that the peculiar symptom of depraved appetite is most commonly seen; but in certain cases there may be complete loss of appetite, or the reverse, one which is almost insatiable. In many cases pain is a prominent symptom, and vomiting, with or without pain, is also common. With all this the patient does not waste, and the pain not only remits, but is usually most severe where the stomach is empty. There is no fever. The great means of treatment consists in the removal of any source of irritation, especially in the female, with whom uterine disease is often the starting point of the malady. Iron, especially in the form of carbonate, and opium are two of the most important remedies. Bismuth is also of use, and so is arsenic. When vomiting is urgent, food must be given in the smallest possible quantities, and pepsine has been found to give speedy relief.

Gastritis or acute gastric catarrh furnishes the subject of the succeeding chapter. This name has been given to a great variety of conditions, and it is not always capable of being separated very clearly from the chronic form of the malady. Acute gastritis is generally due to some irritant substance taken into the stomach, but food improper or improperly prepared may act in this way. In certain instances it seems almost epidemic, especially during cholera times. The various forms of the malady enumerated by Dr. Fox are (a) acute indigestion and *embarras gastrique* of the French; (b) febrile forms, the fever depending on the inflammation of the stomach; (c) acute catarrh in infants; (d) the inflammation following irritant poisons; (e) catarrhal affections of the stomach such as accompany exanthems; (f) acute catarrh arising from the abuse of alcohol; (g) gouty affections of the stomach of an inflammatory kind. The acute indigestion here spoken of is what is commonly called a bilious attack, and is accompanied by sick-headache. In acute gastric catarrh the stomach itself is swollen, and the secreting tubules distended by these swollen secreting cells; these tending to break down or to become fatty. The true secretion of these glands is accordingly suspended, but the mucous secretion is increased. Sometimes ulcers are formed by a kind of sloughing of the lenticular glands. The first point in the treatment of such cases is rest, and tolerably complete abstinence from food for twenty-four hours will go far towards effecting a cure. Milk and soda-water are a good form of food if required. Small quantities only must be given. In the case of infants, an alkali, as lime-water or carbonate of soda, should be added to their food. Rest of body is equally essential. In many cases, an ipecacuan emetic is the best treatment, especially if the malady depend on undigested food. In milder forms, a mercurial purgative is the best treatment. In other cases, a saline purgative may be used. Alkaline effervescing waters do good after the first brunt of the attack is over. For some time after the diet must be greatly restricted, and care taken lest some other form of malady supervenes.

Chronic gastric catarrh includes many forms of stomach-mischief. The attack may be subacute from the first, or it may follow upon an acute attack. Diseases interfering with the circulation in the stomach are prone to induce this form of malady. Excessive eating and drinking are also prone to give rise to it. In its course it is irregular; often the patient seems well, but the slightest indiscretion throws him back again. There are weight and pain after food, a tightness across the chest, and often a pain in the back. There is often intestinal flatulence, and the appetite is capricious. Thirst is conspicuous, the breath is foul, and there is often an increased flow of saliva. The condition of the tongue varies. Very often this form of malady is associated with pulmonary phthisis and the condition called oxaluria. Vomiting and hæmatemesis also occur in certain forms of the disease.

The mucous membrane of the stomach is thickened and sometimes evaded; more frequently ash-grey spots are found all over its surface, with the peculiar appearance called mammillation. The glands atrophy and their epithelium undergoes a fatty change. There may even be associated with this state some degree of waxy degeneration.

The treatment varies with the nature of the case; if immediately subsequent to an acute attack, sedatives, especially bismuth, should be used. In cases of longer standing, nitrate of silver does good, and the mineral acids, given at meals, are of great service; if there is much flatulence, alkalies and bitters may be given in the intervals. Purgatives should be used with caution, but some mineral waters do good. Attention to food is all important, and with it may be given pepsine and iron.

The new portion of the work commences with chronic ulcer of the stomach and duodenum. This malady is twice or thrice as prevalent in females as in males, and in them is very frequently associated with amenorrhœa or chlorosis, less frequently with tuberculosis. The superficial form of erosion due to hæmorrhage alluded to under chronic gastric catarrh should not be included under this heading, no more should that occurring in the more crude forms. The ulcer here alluded to is the chronic perforating ulcer, either resembling a clean punched round depression, or later funnel-shaped with the surrounding tissues thickened and the various coats blended together. The average size is from a shilling to a halfcrown-piece, and the most common site on the posterior wall near the pylorus. Most frequently these ulcers end in cicatrization, or, extending, they may lead to hæmorrhage or perforation, with, it may be, escape of the contents of the stomach into the abdominal cavity. The causation of such ulcers is nowadays commonly supposed to depend on stoppage of the circulation in the vessels of the part, and consequent death and destruction of the tissues next the interior. Undoubtedly, both in their production and extension, the solvent action of the gastric juice exercises a powerful influence. As signs of the existence of such ulcers, pain, vomiting, hæmorrhage, disturbances of digestion and alteration of the secretions of the stomach are marked. The pain is mostly of a burning character, more or less constant, and generally increased by food. In other cases the pain is severer and more paroxysmal. The effect of food in aggravating the pain is generally marked, and such attacks often end in vomiting. The signs of hæmorrhage vary; but, if extensive, it is usual to have both hæmatemesis and melæna. Constipation is a very constant symptom; and there is usually a markedly anæmic appearance.

Simple ulcers tend to recover, but their progress admits of material modification by treatment. The principles involved in that are (a) rest, local and general; (b) the cure of the conditions of the stomach which cause undue acidity from fermentation or hypersecretion; (c) the relief of pain and the relief of vomiting; (d) the arrest of hæmorrhage; (e) the relief of constipation; and (f) the treatment of perforation.

Cancer of the stomach, strictly so called, is rarer than simple ulcer. It is a malady of advanced life, and may give rise to two totally different sets of symptoms. In one, the disease may be almost latent; in the other, pain, vomiting, and hæmorrhage are marked. Sometimes the disease may long lie latent, and then give rise to the serious symptoms above alluded to. In 70 or 80 per cent., a tumour may be detected, and this is a very important element in diagnosis. The cachexia is usually very well marked, and emaciation and loss of strength exceedingly manifest. The forms seen are scirrhous, medullary, melanoid, and colloid, to all of which ulceration is common. The main element in the diagnosis is the discovery of a tumour; the treatment resolves itself into that of the symptoms.

The remaining sections in the volume hardly call for detailed notice. They deal with such subsidiary subjects as hæmorrhage, hypertrophy of the walls of the stomach, stricture and obstruction of the cardiac orifice of the stomach, stricture and obstruction of the pylorus, dilatation of the stomach, softening, perforation of the stomach, rupture of the stomach, and tubercle of the stomach.

We have in this notice endeavoured to give an outline of the contents of an exceedingly valuable work. We have abstained from criticism, which could only be applied in detail, as we have abstained from unnecessary praise. The book is quite good enough to stand on its own merits, and constitutes one of the most important additions to the literature of the subject which has been seen in recent days.

ENGLISH MIDWIVES: THEIR HISTORY AND PROSPECTS. By J. H. AVELING, M.D. J. and A. Churchill, 1873.

In this little book, Dr. AVELING gives a detailed and interesting account of midwifery in the hands of women. He traces the history of English midwives from the time when, ignorant and superstitious, they held the whole of the midwifery practice in their hands, to the present date, when, outstripped in the race by superior education, they have only the poor entrusted to their care, and have become a by-word of contempt. It is a history of incompetence and inflicted suffering, of "murdered innocents and lost mothers," because a history of denied education, of frustrated attempts to gain knowledge, and of enforced ignorance. In 1616, the first proposal for the instruction and licensing of midwives was made to Government by Peter Chamberlen, who spent his life in this cause; and since then eighteen different proposals have been made by the midwives themselves, by physicians interested in the cause of humanity, and by various medical societies, but without success. To-day, about 50 per cent. of the wives of the labouring classes are attended in their confinements by midwives, who are uneducated, unregistered, and for the most part unqualified. England is in the rear of other civilised countries in this matter. Whilst the Governments of France, Russia, Prussia, and Austria have provided, by large and liberal schemes, for the registration and education of duly qualified midwives, the Committee of the House of Commons, as late as in 1813, replied, in answer to a petition of the Society of Apothecaries for the education of midwives, that "they would not allow any mention of female midwives." The last two chapters are the most important part of Dr. Aveling's book. In concluding the record of past errors and neglected duties, he turns to discuss the most recent plans for the education and registration of midwives. He gives an account of Miss Nightingale's well considered plan, and notices the impulse given to education by the efforts of the Ladies' Obstetrical College and the London Obstetrical Society; but he looks to the General Medical Council, which last year appointed a committee to draw up a plan for the educating, examining, and certifying of midwives, for the most active share in a measure of reform. Dr. Aveling concludes by giving a brief account of the Prussian system, and computes, according to the German calculations, that 11,500 midwives are required for England and Wales; and he urges the necessity for their adequate education. Dr. Aveling reviews the whole question in a candid and disinterested way, and from the wide standpoint of the necessities of humanity. At the present time, when the question will be again brought before Parliament and the public, it is in this spirit only that a comprehensive measure for the education and registration of midwives can be wisely framed and successfully carried out.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

CRYSTALLISED NITRATE OF SILVER IN CHRONIC CATARRH AND ULCER OF THE STOMACH.—Dr. Türk of Wiese (*Med.-Chir. Cent. Blatt*, No. 1, 1873), says that he has given nitrate of silver in several cases of perforating ulcer daily in the proportion of one grain to four ounces of distilled water, to which were added ten drops of tincture of nux vomica, and has obtained the best results—where acetate of lead, preparations of alum and opium had no effect. On the administration of this remedy, hæmatemesis ceased, and all other symptoms improved with unlooked for rapidity, so that (except some slight ferruginous treatment) no other drugs were needed, and complete cure followed. In cases of chronic sickness during pregnancy, chronic catarrh and cramps of the stomach, especially in hysterical women, he has found nitrate of silver, even in smaller doses, such as a quarter of a grain, most efficacious.

SUBCUTANEOUS INJECTION OF ATROPINE IN ACUTE AND CHRONIC RHEUMATISM.—Dr. De' Cavazzani, in *Lo Sperimentale* for January 1873, gives the results of his experience of the subcutaneous injection of atropine in cases of articular rheumatism, both acute and chronic. The solution which he generally uses is composed of 0.05 grammes (about three-fourths of a grain) of atropine, 6 drops of sul-

phuric acid, and 100 grammes (about 3½ ounces) of water. Of this he injects from six to fifteen to twenty drops, according to the condition of the patient and the results obtained. The injection is made in the neighbourhood of the affected joints; and, as soon as the symptoms have been alleviated, the use of the atropine is stopped. He relates, from among the cases which he has treated in this way, eight of acute and three of chronic rheumatism, in which the treatment was attended with success. In one of the cases, where symptoms of cardiac disease had set in, an injection of thirty drops of the solution over the course of the par vagum (and a blister to the præcordium) had the effect of arresting these.

SURGERY.

LIGATURE OF THE THIRD PORTION OF THE SUBCLAVIAN ARTERY AND AMPUTATION AT THE SHOULDER-JOINT.—Dr. Alfred Kinney, of Portland, Oregon, relates in the *Pacific Medical and Surgical Journal*, for November 1872, the case of J. S., aged 35, a healthy Irish labourer, who was run over by a railroad car, on June 6th. When he was seen by Dr. Kinney an hour later, the bones and muscular tissues of the left arm and the fore arm were found completely crushed; small fragments of the humerus having been driven in and around the shoulder-joint, lacerating the axillary artery as far up as its origin. The subclavian artery was tied in the third part of its course, and the arm was afterwards removed at the shoulder-joint. The spicula of bone having been removed and the lacerated and extravasated tissues cut away from the shoulder, the least contused portions of the integument were trimmed into flaps. The wound was united by silk sutures, leaving an opening at the most dependent part for drainage, and dressed with oakum and a weak solution of carbolic acid. The patient, who was suffering from shock, was given stimulants in large doses. There were no other symptoms than those usually following such severe injuries, until the fifth day, when gangrene commenced in the wound: the shoulder in the course of a few hours became œdematous; the integument changed to a darker colour, and a thin offensive discharge ran from the wound. Fever was very high, and the pulse 140 per minute. The partially united wound was laid open by free incisions, and thoroughly washed out with a strong solution of carbolic acid. The gangrene ceased, and in a few days the mortified parts began to separate. The patient improved from this time. Enough integument was left, after the separation, to cover the bony prominence, excepting a chasm anteriorly, which filled up with granulations and cicatrised over within two months after the time of the accident. The ligature came away from the subclavian on the seventeenth day. The patient recovered.

MIDWIFERY.

HÆMATOMETRA.—Dr. Wheeler of Boston publishes (*Journal of Gynecological Society*, July 1872) two cases of hæmatometra in the closed canal of a bicornite uterus with double vagina, observed in the Gynecological Polyclinic of Dr. W. A. Freund, in Breslau. In the first case, there was entire separation of the two uteri—a form not before observed in combination with hæmatometra. Even here the vaginal portion of the left uterus was so distended as to be nearly indistinguishable on the side of the tumour, and it was only after the operation that the entire separation could be made out. In the second case, where there was a real junction of the two cervixes, the disappearance of the left vaginal portion was still more complete; and the os, existing as a depression on the side of the tumour, was the guide to the uterus. Both tumours in the vagina were large below and contracted above, like a ninepin or a partially filled bladder. In these cases, a long incision was made, and the completion of the discharge left entirely to nature, the patient being kept quiet in bed till the process was completed. After the next menstruation, which in both cases followed immediately upon cessation of the abnormal discharge, a piece was excised in the first, and was intended to be in the second, in order to ensure a permanent outlet. Schroeder has reported fourteen cases of the disease. Neugebauer of Warsaw adds two cases of his own, and mentions six others reported since Schroeder. More recently still, Briesky of Berne has published two cases. With the two here reported, there are altogether twenty-six recorded cases. In sixteen, the diagnosis was correctly made. Operation was performed in nineteen, of which seven ended fatally. Of the seven cases not operated on, in one the tumour was accidentally opened through the uterine septum in an attempt to sound the healthy uterus—the patient recovered; one died at the age of 24, of heart-disease; and two deaths were the result of the malformation. The complete reports of the other three cases were not accessible to the compiler.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 8TH, 1873.

SCHIFF ON THE INNERVATION OF THE HEART.

BOLL (*Centralblatt für die Medizinischen Wissenschaften*, Nos. 1, 2, 3, 1873) continues his able abstracts of the reports given by Dr. Mooss of the researches by Schiff in the physiological laboratory at Florence.

On the subject of the innervation of the heart, Schiff's doctrines are at variance with the opinions now almost generally entertained. He still holds to his formerly expressed views that the vagus, in addition to inhibitory fibres, also contains accelerating nerves of the heart. He first discusses what is the cause of the diminution of the blood-pressure and frequency of the pulse when the spinal cord is divided. Von Bezold, who first pointed this out, attributed it to direct influence of the spinal cord; while Ludwig and Thiery explained it by dilatation of the minute blood-vessels. Schiff believes that it is not merely due to the increased rapidity with which blood escapes from the arterial into the venous system, but to dilatation not only of the small vessels, but of the blood-vessels, large and small, as a whole; so that the area is increased to such an extent that the animal is really rendered anæmic by being, as it were, bled into its own blood-vessels. If this were so, it should be possible to restore the heart's action on section of the cord, by transfusion into the vessels of a quantity of blood sufficient to raise the blood-pressure to its previous height. Schiff arrived at the result by immediate transfusion of the arterial blood of a large dog into the veins of a small one. It took a long time and a large quantity of blood to raise the blood-pressure to the normal; and, when it had arrived at this, the duration was slight, for, after a short time, the frequency of the pulse and the blood-pressure again sank. The dilatation of the vessels after section of the cord seems, therefore, to continue a long time; and the quantity of blood which at first is sufficient to bring up the arterial tension, no longer suffices to do so after a comparatively short interval. Transfusion was repeatedly performed in the same animal, in order to keep up the pressure; and it seems to result from the experiments, that the weakness of the heart's action after section of the cervical cord is due only to a relative want of blood, and not to any immediate influence of the nervous system. The heart acts as before when the blood-pressure is raised to its normal standard. This is not due to any stimulating effect of the transfused blood on the heart; nor is the restored blood-pressure due merely to the amount of blood introduced into the vessels, apart from the restoration of the power of the heart; for when the vagi (which were cut in the experiments) were irritated after the restoration of the blood-pressure, the heart stood still in diastole, and the blood-pressure sank rapidly, but rose again when the stimulation of the vagi ceased. The amount of blood necessary to restore the normal pressure after section of the cord in a dog of 5 kilograms was found to be from 230 to 300 grammes. The greater portion of the blood transfused accumulates in the veins.

In order to determine whether there exist any nerves which affect the rhythm of the heart independently of the blood-pressure, Schiff got rid of the influence of blood-pressure on the heart by the subcutaneous injection of atropia. A small quantity of atropia, a little more than is sufficient to cause dilatation of the pupil, renders the heart insusceptible

to the influence of the blood-pressure; so that this may be increased or diminished to any extent without affecting the frequency of the heart's action. By this method, he found that, in animals in which the vagus and sympathetic were cut in the neck, the strongest electric stimulation of the spinal cord and all the spinal and lymphatic nerves had no influence on the rhythm. Already, in 1847, he had stated that in the vagus, along with inhibitory, there were also accelerating fibres of the heart. The commonly received view is, that the accelerating fibres are contained in the sympathetic. Schiff had found that, in rabbits, irritation of the sympathetic in the neck, after the roots of the spinal accessory were torn out, had no influence on the heart; and he thought that any accelerating fibres it might contain were derived from the spinal accessory, which anastomoses at the base of the skull with the sympathetic. In his former publications, he regarded the vagus as the chief accelerating nerve of the heart, though it remained undecided whether it was the only one. The researches of Ludwig and Thiery, however, tended to show that alterations of the rhythm of the heart were to be attributed to variations in the blood-pressure, rather than to direct nervous influence. Schiff now, possessing in atropia the means of eliminating the influence of blood-pressure on the heart's action, returns to the question whether the vagus really contains accelerating fibres. When both carotids are compressed, the consequent anæmia of the brain causes rise in the blood-pressure and increased frequency of the pulse. He shows that this is due to direct nervous stimulation. When all the cardiac nerves are cut, the same operation causes rise in the blood-pressure, but no alteration in the frequency of the heart's action. In order to determine whether the accelerating nerves are contained in the sympathetic or not, he extirpated the superior cervical ganglion in cats, the middle ganglion in dogs, and the inferior cervical ganglion in both animals. After each and all of these operations, compression of the carotid caused, as before, acceleration of the heart's action. Hence the sympathetic does not contain the accelerating fibres. Next he sought to ascertain whether or not they run in the cervical portion of the vagus. After extirpation of the spinal accessory in curarised and atropinised dogs, and section of the vagi in the neck, it was found that compression of the carotids still had the effect of causing a rise of blood-pressure, but produced no alteration of the rhythm of the heart. It is not necessary to extirpate both the accessory nerves, as one is sufficient. Hence it appears that the accelerating fibres belong to the vagus, and are derived from the spinal accessory. The fibres run in the ramus internus of this nerve, which joins the vagus at the base of the skull, but leaves it before the vagus emerges from the second ganglion or plexus gangliformis. The accelerating nerves, therefore, seem to accompany the vagus as far as the second ganglion, but then leave the trunk and arise in some other way at the cardiac plexus. The nerves which leave the vagus below the ganglion in man are also found in the carnivora, but they run chiefly in the common sheath of the vago-sympathetic. There remain, therefore, only two nerves which do not take this course—one the ramus pharyngeus, which in the pharynx may possibly form anastomoses with the cardiac nerves; and the other the ramus laryngeus superior, which, in man and mammals generally, sends a small branch to join with the inferior laryngeal nerve. It therefore seemed possible that the fibre might run down the recurrent laryngeal, and so arrive at the cardiac plexus. Experiments on curarised and atropinised dogs with the vagi cut showed that compression of the carotids caused no alteration of the heart's action, after section of either the superior laryngeal nerve or the recurrent alone. Hence the greater part of the excito-motor nerves of the heart leave the trunk of the vagus above the hyoid, and go to the heart in the path of the superior laryngeal and recurrent. Direct irritation of these nerves causes great acceleration of the heart. Also, as Magendie found, painful stimuli cause acceleration of the heart reflexly through these nerves. Hence Schiff concludes that the vagus is the only nerve which contains accelerating nerves of the heart, and that these are derived primarily from the spinal accessory.

ARMY HOSPITAL STOPPAGES.

MR. CARDWELL having notified his intention of stopping the whole of the soldier's pay while he is in hospital for disease for which his own conduct is responsible, it is well to consider what would be the effect of so great a change in the present system of hospital stoppages, and to what extent it would be beneficial or otherwise. There is no doubt that such a punishment would, with justice, be applied to the soldier whose life is chiefly spent in prison or in hospital, who, no sooner than he has been cured of one disease, and by residence in hospital has been able to save a small sum of money, immediately resumes his utterly reckless existence, only ending in the usual routine of prison or hospital. These cases are, however, comparatively few. On the other hand, this stoppage would very severely affect soldiers who are quartered in garrisons where the Contagious Diseases Act is not in force, and where consequently enthetic disease is very prevalent. It would also apply very unequally, owing to the variable periods of treatment; and if, as we presume, constitutional diseases would come under the same rule, it would have a very wide application to diseases of military life. Then, again, it would be a source of great hardship to the young soldier who finally has to be invalided with little or no pension, and who now is able to save a few pounds before being sent to his home. Again, there are many who, with some reason, maintain that, though enthetic diseases are self-imposed, soldiers, as a rule, have a fair claim to sympathy in this respect, owing to the great restriction on matrimony, their monotonous existence, and the great temptations they have to fall into vicious habits. Granting, however, that Mr. Cardwell's proposition is right in principle, the great objection to its being adopted in its entirety is that it would tend to make the soldier do everything in his power to conceal his disease. It is not reasonable to suppose that the soldier would voluntarily inflict upon himself such a fine so long as he could avoid doing so; and it would therefore almost necessitate the return to special medical examinations (which, with a few exceptions, have ceased in the army), under peculiarly unpleasant conditions to the medical officers. Under these circumstances, we think Mr. Cardwell's proposition should only apply to those soldiers who, in the opinion of the medical officers, have wilfully neglected to report themselves at an early period for disease for which their own conduct is responsible, and then only for a period not exceeding two months, however long they may be in hospital beyond that time. Such a modification would obviate the above named defects, and would also tend to produce highly beneficial results in offering the best inducements to the soldier to report his disease as he detects it.

SCIENTIFIC ATHLETES.

AMONG the institutions which existed in classic ages, and exerted the greatest influence on the development of art and intellectual progress, there can be little doubt that the gymnasia must be regarded as the most important. To that source must be traced the excellence exhibited by the Grecian states in certain departments of art and science which made them pre-eminently superior to the rest of the world, and in some of which they have never been equalled. If we were to inquire more closely into the means by which such a system developed faculties of the most attractive nature—whether the appreciation of the beautiful, which characterised the Greek mind, or the cultivation of a certain sense of harmony in their daily life—we should be inclined to attribute the results entirely to the education which was pursued in the gymnasia. The subjects which formed the basis of education in these institutions could not alone have produced the condition to which we have referred, if they had not been studied in a peculiarly systematic manner. Grammar, music, and gymnastics, at the present day would appear to be very inefficient agents in education; and, though an Athenian boy regarded them very differently from one of the present day, we are still inclined to attach far greater importance to the system by which those studies were regulated than to any peculiar influence

possessed by them in developing the tastes that prevailed in those times.

One idea ever present to the mind of the Greek, that the preservation of bodily health should be the first care of life, was the probable reason why such attention was bestowed on the exercises of the gymnasia; and thus he was led to regard them of such importance, that this part of education occupied as much time as all the others put together. It was the value that was placed on the preservation of health that led him to regard the god of physicians as the proper deity to preside over the gymnasia; and he considered that this branch of education could be intrusted to none so well qualified to regulate it as to those best acquainted with the science of medicine. Such a system of education, it will be seen, was eminently secular in one respect; but we may learn a lesson that might be applied with benefit in this far more enlightened age.

The real object, however, of our remarks is to express considerable satisfaction at the evident desire that many members of the medical profession entertain, to inquire in an impartial and scientific manner into the subject of exercise in its influence on health. There used to be undoubtedly a suspicious glance cast by the most tolerant on the athletic sports which are pursued with energy at our public schools, academies, and universities; and here and there loud protests have been uttered against certain evils alleged to have resulted from them. In the discussion which took place at the Clinical Society last week, it was evident that many present were more favourably disposed to a fair inquiry than would have been the case a few years ago in any large meeting of a similar character; and we are decidedly of opinion that the Clinical Society may be congratulated on having taken the lead in acknowledging that the question is one deserving of serious attention. We agree with Dr. R. J. Lee in his remarks on the desirability of a scientific inquiry into the whole subject of exercise. It is, as he observed, by no means such a simple question as might be imagined; and it is not to be approached without a full appreciation of its difficulty by those who desire to arrive at some practical conclusions regarding it. To bring forward isolated instances of unfortunate results, or even to attempt to discover what degree of longevity had been enjoyed by a number of accomplished athletes, is by no means a scientific method of investigation. It is, indeed, high time for the medical profession to turn its attention to a subject of the greatest importance to the youth of this country. We have recently had evidence that steps are being taken in this direction, and we may expect before long to be favoured with the views of those who have already considered the subject in its different aspects.

FORTHCOMING DISCUSSION ON TUBERCLE.

WE publish in another column the abstract of a paper on the Anatomy of Tubercle by Dr. Wilson Fox, which has been laid on the table at the Pathological Society, and the thesis of which will be developed by Dr. Fox at the next meeting of the Society. We have before urged that it should be a principal feature of the Pathological Society to discuss with some elaborateness large questions in pathology, and that the old practice of confining the labours of the Society to the dry discussion of individual preparations was an error. The first indication that these views were shared by the Society itself was the debate on Pyæmia, opened by Dr. Burdon Sanderson with characteristic ability. This debate, however, fell flat, and ended prematurely. Surgical members especially found that by pyæmia Dr. Sanderson meant something altogether different from that which they meant, and they were not prepared to discuss the experimental form of acute septic poisoning which he introduced to their notice. The subject which Dr. Fox will open will be one on which many members would be ready to speak; but, under the existing regulations in reference to it, there is little probability that they will do so. Dr. Fox is limited to half an hour in opening the debate, which is quite insufficient to enable him to cover the ground he has to traverse; subsequent speakers, to ten minutes. If it were desired to prevent rather than to encourage a

instructive debate, and one worthy of the Society, no better means could have been devised. There may be some men of such skill in condensation as to be capable of reducing to a few paragraphs their well considered arguments and views on this subject; but half an hour is short time enough for a thorough and worthy exposition of views worth listening to; and it is not difficult to foresee that very few of those best entitled to be heard will take any part at all in the debate under such restrictions. The old superstition in favour of a very long service of soup-plates filled with common-place pathological specimens each night is, however, still very strong; and it is not probable that less than a dozen platefuls will at present satisfy the orthodox pathological appetite on any one night.

DR. ROKITANSKY has been elected a Member of the Anatomical Society of Paris.

SIR WILLIAM FERGUSSON will tie the external iliac artery at King's College Hospital on Saturday, March 8th.

THE largest number of deaths from scarlet fever in England from 1866 to 1870 was in 1870, when 32,543 died.

DR. BILLROTH has received the decoration of the second class of the Russian order of St. Anne.

HERR RITTER VON MAUTHNER has devoted the sum of 260,000 florins to the establishment of a hospital for children in Vienna.

MM. ROBIN and Littré have laid the new edition of their *Dictionary of Medical Terms* before the Académie des Sciences.

THE anniversary festival of the Metropolitan Free Hospital will take place on April 22nd; Alfred de Rothschild, Esq., in the chair.

LADY CHARLES KER has (the *Sporting Gazette* says) entirely recovered from her accident last season, and her sight is as good as ever.

DONATIONS amounting to £25,000 have been already received towards the special fund of £100,000 being raised to build the new wing at the London Hospital.

FUNDS to purchase a site and erect new premises for the Victoria Hospital, Chelsea, are required, as the present building has to give way to metropolitan improvements.

THE Norwich Town Council has resolved to resist an order made by the Home Secretary for the erection of a new pauper lunatic asylum in that city. The matter will come before one of the superior courts.

THE British Medical Benevolent Fund has received a donation of £100 from Mrs. Frances Osborne of Cawthorpe, through the Honorary Financial Secretary. It is hoped that this will aid the Committee in their endeavour to found another annuity, and thus help to lighten their long list of aged expectants.

THE subscription-lists of Hospital Saturday and Sunday in Manchester are now complete. The united sums amount to £8,070, of which £5,724 was collected on Hospital Sunday, and the remaining £2,346 subscribed in the different workshops and warehouses on Hospital Saturday.

ON January 2nd, a new European hospital was opened in Kioto, Japan, under the direction of Dr. Junker, who for some time was physician to the Samaritan Hospital, and who directed the English Red Cross Society Hospital at Saarbrück during the Franco-German war.

A QUARTERLY Meeting of the Governors of the Brompton Hospital for Consumption was held on February 28th. It was announced that six more houses had been purchased opposite the hospital, and had been furnished as the south branch. It accommodates seventeen male patients, and is now full.

ROYAL COLLEGE OF PHYSICIANS.

THE lectures of the present year will be delivered at the College on the following Wednesdays and Fridays, at five o'clock. The Gulstonian Lectures, on Elephantiasis Græcorum, will be given by Dr. Robert Liveing, on March 7th, 12th, 14th. The Croonian Lectures, on Mind, Brain, and Spinal Cord, in certain Morbid Conditions, will be delivered by Dr. Radcliffe, on March 19th, 21st, 26th. The Lumleian Lectures, on the Convulsive Diseases of Women, will be given by Dr. Barnes, on March 28th, April 2nd, 4th. Members of the profession will be admitted on presenting their cards. By arrangement with the lecturers, the text of the lectures will be published in the BRITISH MEDICAL JOURNAL.

CLINICAL SOCIETY OF LONDON.

A SPECIAL general meeting of the Clinical Society will be held on Friday, March 14th, at half-past eight o'clock P.M., for the purpose of rescinding until next year the following resolution, passed at the annual general meeting on January 10th, 1873:—"That the rules, as modified at the annual meeting, be collected, renumbered, and published in the next volume of the *Transactions*."

THE MEDICAL SOCIETY OF LONDON.

THE centenary dinner of the Society will be held at Willis's Rooms on Saturday, March 8th (this evening). The new and commodious premises in Chandos Street, Cavendish Square, will be opened on Monday, March 10th, when Dr. Habershon, the new President, will deliver an address. By the acquisition of admirable accommodation in the chief medical quarter of London, the Council will be enabled to carry out the liberal programme they have adopted of making the Society and library more useful than hitherto to members of the profession in the metropolis and provinces.

CHOLERA IN EUROPE.

DURING the week from January 26th to February 2nd, there were in Moravia 34 new cases of cholera, making, with 24 remaining from the previous week, a total of 58, of which 17 recovered and 21 died. To the 20 remaining under treatment there were added in the next week 24, making in all 44, of whom 19 recovered and 18 died; and, in the week ending February 9th, the total number of cases was 42, of whom 14 recovered and 18 died. In Silesia, where the disease appeared to have ceased, 18 cases occurred in the week ending January 25th, of whom 4 recovered and 12 died. In the next week 3 new cases occurred; of the 5 treated, 2 died. In the week ending February 16th, there were in all 29 cases, of which 7 recovered and 8 died. In Hungary, on January 24th, 982 cholera patients remained under treatment. To these were added 1286 new cases in the following week, making in all 2268, of which 1094 recovered and 471 died. In the first half of February, the total number of cases treated was 3193, of whom 1657 recovered and 964 died. In Bohemia, during the second half of January, there were 77 cases, with 28 recoveries and 30 deaths. In Galicia, during the same period (January 15th to 31st) the total number of cases under treatment was 1488; the recoveries were 793 and the deaths 395. In the first half of February, 750 new cases occurred, making a total of 1050, of whom 604 recovered and 298 died.

SANITARY STATE OF DONCASTER.

THE *Doncaster Chronicle* of February 21st gives an account of a special meeting of the Town Council convened to meet Dr. R. Thorne Thorne, to hear the report of a lengthened inquiry made by him into the sanitary condition of the borough. The inquiry was instituted on account of the heavy general mortality and high death-rate in recent years from enteric fever, diarrhoea, scarlet fever, and small-pox, and also of children under one year. Out of 1,626 deaths in three years, 425 (26.2 per cent.) occurred in children under one year. The general mortality in 1871 was 31.1 per 1,000; in 1872, 30.8 per 1,000. In 1871, 59 deaths, in a population of between 18,000 and 19,000, were

caused by enteric fever; in 1872, out of 588 total deaths, 328 were caused by enteric fever, diarrhoea, and scarlet fever. The inquiry proceeded to investigate the causes of this high mortality from zymotic diseases, and referred it to the water-supply, the drainage, and the insufficient means of disposing of excrement. The water-supply was stated to be derived, without filtration, from the river Don, which is practically an open sewer, containing the sewage of several hundred thousand people from Sheffield, Rotherham, Barnsley, etc., from which places enteric stools are constantly discharged into the river. Secondly, it is derived from wells in the porous sandstone and gravel soil. It was pointed out that it was wrong in principle to take water from the surface-soil of a large town, which had been covered for generations with middens, and which was traversed by sewers and private drains. The necessity of an improved system of sewer-ventilation was next insisted on by Dr. Thorne. He advocated a great number of shafts rising to the street-level. The quantity of steam in the sewers, arising from hot water from breweries, renders charcoal-baskets ineffective, the charcoal becoming caked by the steam. The means of disposal of excrement was shown to be very bad. The middens receive rainfall and drainage from roofs, causing moisture, and favouring the decomposition of the contents of the middens, and ensuring the washing of excremental filth into the water-bearing strata. From the condition of the courts behind the main streets, Dr. Thorne advised the adoption of the Artisans' and Labourers' Dwellings Act. The frequent overflow of the Don, leaving in the lower towns a deposit of sewer-filth, was shown to be cause of enteric fever and diarrhoea, and of infant mortality. A regular system of disinfection and isolation was advocated in cases of scarlet fever and small-pox. A fresh water-supply is promised for Doncaster; and large sums of money have recently been spent on a sewage-system which will remove the Doncaster sewage from the river Don. A vote of thanks to Dr. Thorne for his exhaustive paper concluded the meeting.

EDUCATION OF WEAKLY CHILDREN.

AN institution for the instruction of children who, on account of infirm health, are prevented from profitably attending the public schools, but who are capable of learning, has been opened in Vienna by the Society of the Friends of Children. Measures have also been taken by the same Society for providing instruction for the deaf and dumb and blind, and for children of weak intellect.

MONSTROUS BIRTH.

A CASE of monstrous birth is reported as having recently occurred at La Olmeda de la Cuesta in the province of Cuenca in Spain. There were two heads, a single trunk, and four legs. One of the heads was still-born—apparently from injury received during the labour; the other lived two hours. The preparation is to be deposited in the Anatomical Museum in Madrid.

DENTAL SURGERY IN THE ARMY.

THE question put by Dr. Brewer in the House of Commons to the Secretary of State for War, and which was first brought under the consideration of the members by Mr. Napier, is one of more importance than might be supposed. The education of the medical officers of the army and navy in dental surgery is, of course, attended to in some degree, and they are probably as well acquainted with the subject as other general practitioners. But it should be remembered that they may be called upon to preserve teeth, and, in localities where dental surgeons cannot be obtained, to perform operations of difficulty and delicacy. In distant countries especially, a knowledge of this branch of the profession would undoubtedly be extremely useful to themselves and highly beneficial to those entrusted to their care. We think that the best mode of obtaining the end in view would be to require special attendance on a course of instruction in this subject. There would probably be no objection made to such a proposition by those who are most interested in it—the medical officers of the army themselves.

A STRIKE AMONG SURGEONS.

A STRIKE has broken out among the surgeons in the district of Neunkirchen in Lower Austria. In some districts, physicians are allowed to dispense medicines at their own houses. A tax has recently been imposed on the private dispensaries, on the ground that they are sources of profit. The surgeons, however, have refused to submit to it, declaring that they will supply no more medicines, and that they will rather relinquish all their profits on the sale of drugs. The strike is limited to their position as apothecaries; they visit their patients, and prescribe medicines; but the latter are not to be had, for, except in Neunkirchen itself, there is not a single apothecary in the entire district.

PRIVATE MEDICAL BULLETINS.

DR. ALLIS SMITH of Bournemouth writes to us to say that, entirely agreeing with the purport of our observations on this subject, he had absolutely no connexion with the various and conflicting paragraphs which appeared in the daily papers on the subject of Mr. Corry's illness; and Mr. Robert Ellis asks us to make the same statement on his behalf. They are believed to have proceeded from an indiscreet member or members of the family. There was therefore the more need for our notice; and the explanations to which it has given rise are in every way satisfactory.

NATURAL SCIENCE AT CAMBRIDGE.

WE printed recently at length a list of the scholarships and fellowships which will be awarded at Cambridge during the present year for proficiency in natural science. The subject of medical education at our Universities has frequently been discussed in these columns, and we are glad to call attention to the encouragement which is now given to the study of those physical sciences which form an important part of the preliminary training for our profession. At Cambridge, in consequence of its mathematical pre-eminence, the physical sciences have always received a considerable share of attention. They were never so completely banished from the banks of the Cam as they were from the Isis; and accordingly Cambridge has been found more ready to respond to the demand which has sprung up of late years for instruction and examination in these branches of knowledge. A survey of the list of exhibitions and scholarships to which we have alluded shows that it is not one College alone, but many, which are thus desirous of encouraging a taste for natural science; and, when we consider that these numerous and valuable prizes will be awarded in a single year, we must acknowledge that Cambridge is doing her part towards raising the standard of medical education. It would be unreasonable to expect an University situated in a comparatively small town to afford a complete curriculum of professional study; it is only the great centres of population that can do this. But there is no reason why the older Universities should not supply a thorough training in anatomy, physiology, chemistry, and the allied sciences; and this it is which Cambridge is now doing. We trust that aspirants to our profession will not be slow to avail themselves of these advantages. We shall hope to hear that the prizes thus liberally offered are eagerly sought after and keenly contested. A few years spent at the University, though they may delay the date of a young man's entrance into practice, is time well bestowed, and will be found in the end to improve his position both in a professional and in a social point of view.

MR. SANDFORD ON COUNTER-PRACTICE.

AT a recent preliminary examination of students for admission to the register of apprentices of the Pharmaceutical Society, two ladies presented themselves, of whom one passed at the head of the list of over four hundred who went in for examination. The whole list was presented in the usual form, after payment of registration-fees, for election as associates of the Society. The ladies' names were, on motion, however, taken out of the list; and, after the whole of the men had been elected in ordinary course, the weighty question was mooted, What shall be done with the ladies? After a long discussion, a division was

taken, in which nine votes were given on the male side and nine on the female, and one epicene; the casting vote of the chairman was accordingly given for adjournment. The circumstances did not seem to us to call for much remark on our part. There is generally a good deal to be said for delay. The man who hesitates is not always lost. A lively discussion, however, marked by some spirited poetic effusions, has followed this vote; and the reasons which Mr. Sandford, the late President of the Society, now gives for his opposition to the admission of ladies into association with the Pharmaceutical Society, are such as to deserve attention. They suggest that, if vote he must, it may be desirable that in future he should fulfil that important function in silence, unless he wish to convert all his supporters into opponents, and effectually to ensure the success of the cause which he opposes. Of course he has sentimental objections. The opponents of anything which can benefit the material interests of women are always gushing in sentimental tenderness for them. But his solid objection is worthy of note. He thinks that women will not be fitted for "listening to the description of bodily ailments over our shop-counters". Now this is precisely what we should have thought they would not be expected to do over Mr. Sandford's shop-counter or any which he knew, recognised, or countenanced. If counter-practice be one of the occupations which Mr. Sandford thinks "fitting" for assistants at his counter or any other, it is very desirable that that should be distinctly understood. It is not, we believe, the opinion of the majority of respectable pharmaceutical chemists. It is certainly not that of the medical profession. No doubt the ladies would blush to be engaged in it. But we should have expected that Mr. Sandford himself and all his male assistants would have blushed, and that even the roseate bottles in the window would have assumed a deeper hue of red, with indignation at the suggestion that they ought or could or did engage in listening to the ailments of their customers. If a disinclination to that occupation be the distinguishing characteristic of the ladies, and if the only other objection be that they come out at the head of the classes—and these are the only two that have yet been urged—the general opinion will probably be that a female monopoly of the pharmaceutical business would, on the whole, be more beneficial to the best interests of pharmacy and medicine than a male monopoly. The *Chemist and Druggist* has an excellent, manly, and straightforward article on the whole subject, which may, we hope, be taken as expressing the general opinion of pharmacists.

ROYAL COLLEGE OF SURGEONS.

PROFESSOR FLOWER has chosen, as the subject of the Hunterian course of lectures for the present year, the Osteology and Dentition of Extinct Animals of the Mammalian Class. In the lecture given on Friday week, dealing with the scanty traces of mammalian life which hitherto have rewarded geological research into that portion of the crust of the earth which is older than the tertiary period; in other words, the whole of that vast series of fossil bearing strata which, commencing with the chalk, extend backwards in time, through the oolites, the lias, the coal measures, etc., down to the Cambrian and Laurentian rocks—Professor Flower made special mention of the remarkable jaw of a small mammal found in the Stonesfield Oolitic Quarries, near Oxford, which Mr. Charlesworth, in 1854, on the occasion of the meeting of the British Association at Liverpool, had the rare good fortune to make known to science under the name *stereognathus* (solid jaw). Since then, the roofing slates of the Stonesfield Quarries, studded, as they often are, with the petrified shells of molluscs, teeth of saurians and fishes, and more rarely with the wing-cases of coleopterous insects, have been assiduously scanned by Phillips and other enthusiastic workers in the field of palæontological research; but no second bone or tooth of *stereognathus* has been recovered to aid the comparative anatomist in the attempt to reconstruct the skeleton; consequently, all the available data for speculating upon the nature of this strange type of early mammalian life centres in the jaw shown by Mr. Charlesworth at Liverpool. The owner of the unique fossil, a Suffolk clergyman, died not very long after

the Liverpool meeting, and since his death it has been generally feared that the specimen was lost. Happily, however, this is not the case. The *stereognathus* jaw may be found fixed on a small wooden tablet in the wall-case of the semicircular portion of the upper gallery in the admirably arranged and most instructive Geological Museum in Jermyn Street. No history accompanies it; but, in the absence of information to the contrary, we are justified in assuming that this priceless record—fragmentary though it be—of the higher forms of life which, in obedience to the mysterious law of extinction, have long since been blotted out of existence, is now the property of the nation.

HOSPITAL SUNDAY IN LIVERPOOL.

FROM the treasurer's report of the "Hospital Sunday" fund in Liverpool, it appears that the amount realised by this year's appeals to the congregations was £8,246 odd, and the contents of the Saturday boxes amounted to £1,696 odd. These sums, added to the balance of £74 from last year, make a total of £10,017. Of this sum, £9,600 has been divided among the medical charities, against £7,800 so divided last year. The following is the comparative statement of the contributions for 1872 and 1873.

	1873.	1872.
Royal Infirmary	£2,880	£2,418
Northern Hospital	1,440	1,209
Royal Southern Hospital	1,344	1,053
Dispensaries.....	1,056	858
District Nursing Society.....	768	624
Ladies' Charity and Lying-in Hospital.....	576	468
Infirmary for Children	480	390
Eye and Ear Infirmary	384	312
Homœopathic Dispensary	192	156
Consumption and Chest Diseases Hospital...	96	78
Cancer Hospital	96	78
Stanley Hospital	96	78
Hospital for Infectious Diseases...	96	—
Dental Hospital	48	39
Dispensary for Skin Diseases.....	48	39
	£9,600	£7,800

THE SCIENTIFIC SOCIETIES' HOUSE COMPANY.

JOINT-STOCK enterprise is in this country the main panacea, and a very sound one, for all the ills arising from government inaction. It is now proposed to remedy the refusal of the government to provide accommodation for the learned societies by the operation of a Scientific Societies' House Company (Limited). When the Medical Council have exhausted their appeals to Mr. Lowe to relieve them from their proximity to the sufferers from tooth-ache, we may expect to find the members of the Council taking shares in the new company, and extracting an individual profit from their corporate destitution.

THE OLD WELSH APOTHECARY.

MR. LLOYD OWEN (Birmingham) writes to us: I am sure the members of the Association generally, and especially those who are interested in archæological studies, feel exceedingly grateful to Inspector-General Smart, C.B., for his very interesting "Notes towards the History of the Medical Staff of the English Army prior to the Accession of the Tudors," and fully appreciate the labour and the patient research necessary in order to collect and arrange such a valuable and suggestive series of "Notes". At page 168 of the *JOURNAL*, Inspector-General Smart observes that, in the army which Edward III led to invade France in 1346, the Welsh troops under his banner had a physician of their own race. In connexion with this statement, it may not, I trust, be considered out of place to offer, as a supplementary note, a reference to the ancient customs of Wales. In the *Ancient Laws and Institutes of Wales*, arranged and translated by Mr. Aneurin Owen, by direction of the Public Records Commission, we find, under the heading—"The Mediciner of the King's Household, his office, his privilege, his duty"—Clause 15, "He is to accompany the armies." These laws were collected from ancient sources and codified, by command of King Howel Dda (Howel the Good), about the

year 943. Hence it is on record that bodies of Welsh troops were attended by their appointed "mediciners", for at least three centuries (and probably much longer) before there is any trustworthy mention made of such officers in connexion with the English army.

SCIENCE AND POLITICS.

THE *Anfiteatro Anatomico Espanol*, in prominent type, "congratulates the whole human race, and the Spanish nation in particular, on the proclamation of the Republic having been effected without effusion of blood or any of the horrors which in similar circumstances have affected other peoples". It has no doubt that "this remarkable and magnificent event will contribute to the progress of science, of industry, of art and literature, in Spain".

LONDON OPHTHALMIC HOSPITAL.

A MEETING of the London Ophthalmic Hospital was held on the 4th inst., under the presidency of Sir John Lubbock. The finances were declared to be in a satisfactory state; the invested fund now being £27,800, and the patients were stated to have greatly increased in numbers; in 1872, there had been 1,313 in-patients, of whom 1,040 had been operated upon. Inquiries had been made into the alleged abuses of the hospital out-patient system, as far as affecting this hospital, and were found to be true to some extent, but exaggerated.

CHARGE OF UNLAWFULLY WOUNDING AGAINST A SURGEON.

MR. THOMAS STOKOE, a Cumberland surgeon, has been charged before the magistrates at Whitehaven with shooting Watson Mossop, a farmer. It appears that Mr. Stokoe owed Mossop money for some hay; that on Mossop calling for the money, a violent struggle ensued, in which Mossop held the surgeon by the throat till he was nearly choked, and Mr. Stokoe fired a pistol at the farmer, wounding him in the head. The prisoner has been admitted to bail.

THE PATHOLOGICAL SOCIETY.

THE meeting of the Pathological Society on Tuesday last, under the presidency of Sir William Jenner, was very largely attended. Great interest was excited by specimens of hæmatozoa from the human blood, which had been sent by Dr. Lewis of the Indian Medical Service and Dr. Lamprey of Hongkong, through Dr. Parkes of Netley. A long and interesting discussion ensued, in which Dr. Cobbold, Dr. Bastian, Dr. John Harley, and others took part. An important specimen of disease of the aortic valve, in which was deposited what appeared, by analysis and naked eye appearances, to be gouty deposit on the heart, was shown by Mr. Coupland.

CÆSAREAN SECTION ON THE DEAD BODY.

A CASE of *post mortem* Cæsarean section occurred in the Vienna General Hospital last month. A woman, aged 36, was admitted on February 6th, in an advanced stage of pulmonary consumption, she being at the time seven months advanced in pregnancy. She died on the 12th; and the Cæsarean section was at once performed by Dr. Blumenfeld, in the presence of Dr. Standthartner, under whose care the patient had been. The operation was commenced seven minutes after the death of the mother, and lasted scarcely three minutes; a living child, about seven months old, was removed, and died in three hours and a quarter.

THE CASE OF MR. CROFT OF SNITTERFIELD.

WE received from Mr. Lawson Tait last week, after going to press, a telegram announcing that the bill against Mr. Croft of Snitterfield, charged with having given a false certificate relating to the death of a child, had been ignored by the grand jury. We have before us the charge of the Lord Chief Justice Bovill. It entirely endorses the view which we had expressed, that the act in question was merely one of carelessness, and that no commitment ought to have been made. The whole offence was, that the surgeon had carelessly and wrongly signed the statement that he had attended the deceased, when, in fact, he had only seen him after death. The Lord Chief Justice, however,

dwelt on the evils which must accrue from laxity in signing printed statements of the kind; and in that caution we wholly concur. It is one which we have more than once repeated, and the facts brought out in the Auckland poisoning case are likely very strongly to emphasise it. Mr. Croft has suffered a very cruel persecution in consequence of his error, and one which has involved expenses which he is ill able to bear, and great suffering. We shall be glad to learn that he is likely to be more fully indemnified by friendly subscriptions than has yet been the case.

IRREGULAR MIDWIFERY.

IRREGULAR midwifery, attended with fatal results, has formed the subject of a coroner's inquest at Twickenham. The deceased lady had told a neighbour that she would have no more children born alive. On February 11th, she was visited by a Madame Moureys, from Westbourne Terrace, who described herself to the coroner as a French midwife, and exhibited specimens of her potions to the jury. A few days after Dr. Clark was called in, and treated the lady for abortion till the 18th, when she died. A verdict of manslaughter was returned against Madame Moureys.

CHARGE OF LIBEL.

AT the Lambeth Police-court a few days ago, a surgeon living in Hoxton, who had "lost his diploma," was charged on remand with uttering a false and defamatory libel concerning his niece, a young woman, who would appear to have been greatly injured by accusations which the defendant had brought against her. Intimating an intention to commit the prisoner, Mr. Ellison remanded him for the completion of depositions.

ACTION FOR SLANDER.

AN action for slander was brought by Mr. Thompson, an attorney in Newcastle, against Mr. Anthony Bell, a surgeon of the same town, for saying of the plaintiff that he, his father, the Rev. Mr. Thompson, and others, had conspired to get an old man named Captain Rogers, one of the brethren of St. Mary's Hospital, sent to an asylum as a lunatic. Mr. Thompson had, when a law-student, wilfully and foolishly annoyed Captain Rogers, making him very violent and irritable in temper and nervous in health. The Rev. A. Thompson, the Master of the Hospital, looked upon these symptoms as those of lunacy; and steps were taken to have him removed to a lunatic asylum. On this coming to the knowledge of Mr. Bell, he called on the Rev. A. Thompson, used very warm expressions of indignation at this conduct to the old man, and was declared to have threatened to "make the town ring with the charge of conspiracy against his son". A verdict was given for the plaintiff, with one farthing damages.

INCAUTIOUS USE OF CARBOLIC ACID.

A PARAGRAPH in *El Pabellon Medico* of January 28th refers to a case which has lately occurred in the San Antonio Hospital at Cadiz, in which a patient presented himself with one of his fingers nearly separated by gangrene. He had wounded the part, and a druggist had ordered an aqueous solution of carbolic acid. The acid being unequally distributed through the water, some of it had come into direct contact with the wound.

ACTION FOR LIBEL BY A SURGEON.

IN the Midland Circuit, before Mr. Justice Honeyman, an action was this week tried, which had been brought by Mr. Pearse, a surgeon practising at Brierley Hill, who lately held the appointments of medical officer and public vaccinator to a district, against the Rev. Mr. Dixon, Vicar of the parish of Quarry Bank and Chairman of the Local Board of Health, for libel and slander. The words complained of were used by the defendant in his speeches at the Board, where he stated that the plaintiff had failed to vaccinate the defendant's groom, having no lymph to perform the operation; and also suggested that the plaintiff had been summoned before the magistrates on a charge of

assault, and that his language was only fit for the diggings. One of these speeches the defendant asked a shorthand writer to take down *verbatim*, that it might be reported correctly in the newspapers, thereby making himself responsible for its appearance in print. The case lasted the whole of one day and part of the next; and in the end the jury were discharged, being unable to agree upon a verdict.

PHONOMETRIC EXAMINATION OF THE CHEST AND ABDOMEN.

DR. GUTTMANN has investigated the merits of a method of physical examination recommended some months ago by Dr. Baas. It consists simply in applying an ordinary tuning-fork to the chest or abdomen, and noticing the modifications of the tone produced by the part struck. The application may be made either directly or through a plessimeter; the latter, of course, being the more pleasant to the patient. The general result of Dr. Guttmann's observations is, that the use of the tuning-fork is inferior to ordinary percussion in cases of chest-disease; while, in regard to the abdomen, the only morbid conditions which it indicates are ascites, tumours, etc., which can quite easily be made out by manual palpation. The recommendation of Dr. Baas is, we believe however, not original. The same principle was advocated, we think, in a London contemporary a few years ago.

SCOTLAND.

A CASE OF LONGEVITY.

THE death of Miss Ann Wallace, said to be a lineal descendant of Sir William Wallace, is announced to have occurred lately at Glasgow, at the age of 103. Her birth is registered in the Barony Parish of Glasgow, in July 1770. Her brother, Sir J. Maxwell Wallace, K.C.B., was chosen to lay the foundation-stone of the Wallace Monument in the Abbey Craig, Stirling. He died at the age of 84.

KILMARNOCK FEVER HOSPITAL.

THE proposed extension of the building was decided upon at a special meeting of the subscribers on Thursday of last week. Already £1,300 has been subscribed towards the required fund, which is estimated at £1,900.

THE ANDERSONIAN INSTITUTION.

AT the annual general meeting of the Glasgow Ophthalmic Institution, held on Monday, a satisfactory annual report was read. It was stated that Mr. Ewing had intimated his intention of giving an endowment of £50 annually for ten years to the Chair of Ophthalmic Surgery in the Andersonian University.

IRELAND.

FOR the last week, Dr. Robert Law has been suffering from a severe attack of bronchitis; but we are happy to state that all danger is now over, and that he is now steadily improving.

THE UNIVERSITY OF DUBLIN BILL.

THE Senate of the University, at various meetings within the last few days, have discussed this proposed measure; and, with the exception of an insignificant minority, have pronounced decidedly against it. The opinion appears to be that this scheme, if carried out in its present form, will have the effect of lowering the standard of university education in Ireland, and of injuring Trinity College. Indeed, the opinion most commonly expressed in this country about this proposed measure is, that it will never succeed in becoming law.

DUBLIN SANITARY ASSOCIATION.

A MEETING of this body took place on February 27th, in reference to a report received from the Public Health Committee of the Corpora-

tion in answer to suggestions offered by the Association, which were published in a late number of the JOURNAL. From the answer, it would appear that the Public Health Committee are satisfied with, and intend to rely on, the very defective and insufficient arrangements which prevailed during the recent epidemic of small-pox, and which probably will be attended with similar fatal results on the recurrence of another epidemic. The Association hoped the Public Health Committee will reconsider their reply, as they have not recommended any measures which are not highly necessary for the welfare of the city and practically feasible. The whole matter lies in a nutshell. The Corporation are willing enough, no doubt, to do what they can; but what cripples them principally is the want of the sinews of war. Whether this deficiency of pecuniary resources arises from the way in which the funds of the Corporation are spent, from the large pensions paid to officials, etc., it is unnecessary to state. The result is the same: they have not sufficient money, and, without it, all the suggestions and hints towards making Dublin more healthy and less dirty are so much labour thrown away. We wish every success to the well meant efforts of the members of the Dublin Sanitary Association; but the truth must be told, in order to understand how the matter is at present.

LEGISLATION FOR IRELAND.

A RECENT fatal accident certainly indicates the propriety of extending the Arsenic Act to Ireland. Were it operative in that country as in this, life and health would have been saved in the following case.

At Osber Town, Naas, Ireland, a young man named Patrick Kelly died from eating poisoned bread, and the lives of six other persons were for some time in imminent danger. The facts of the case were these. His wife, having to make some bread, went to a neighbour to borrow some carbonate of soda. A little girl, named Ellen Carroll, looking in the cupboard, found some white powder wrapped up in paper in a box. This was believed to be the required powder, and was used accordingly, with the sad result we have described. The powder turned out to have been arsenic. It had been bought for sheep-washing, and the remnant had been laid aside and forgotten. Mixture with soot or indigo, such as the Arsenic Act requires, would have prevented this accident.

LECTURES ON PUBLIC HEALTH.

THE following are the subjects of the course of Saturday afternoon scientific lectures now being delivered in the Lecture Hall of the Royal Dublin Society:—Dissemination of Unadulterated Food, by Dr. Reynolds, Professor of Analytical Chemistry; Meteorology in its bearing on Health and Disease, by Dr. Moore, Physician to Cork Street Hospital; the Geographical Distribution of Disease, by Dr. Little, Professor of Practice of Medicine in the Royal College of Surgeons; Zymotic and Preventable Diseases, by Dr. Grimshaw, Physician to Steevens's Hospital; Liability to Disease, by Dr. Hudson, President of the King and Queen's College of Physicians; Antiseptics and Disinfection, by Robert M'Donnell, M.D., Surgeon to Steevens's Hospital; the Prevention of Artisans' Diseases, by Dr. Mapother, Medical Officer of Health to the city of Dublin; the Contagion Theory of Epidemics, by the Rev. Dr. Haughton, F.T.C.D.; the Construction of Dwelling-houses with reference to the Sanitary Arrangements, by George Henderson, Architect; Sanitary Legislation, by Robert O'Brien Furlong, Esq., Barrister-at-law.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—March 3rd.

BASTARDY LAWS AMENDMENT BILL.—The Earl of Shaftesbury moved the second reading of this Bill. The Marquis of Salisbury observed that in one of the clauses of the Act there were references to no fewer than six existing Acts of Parliament. He hoped that before the Bill passed those portions of the Acts in question which were sought to be continued would be made the subject of express enactment and not of reference. The Bill was read a second time.

THE ANATOMICAL RELATIONS OF PHTHISIS TO TUBERCLE.

THE following is a summary of the propositions to be brought forward in a discussion on "the Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lung", by Dr. Wilson Fox, at a meeting of the Pathological Society of London, to be held on March 18th.

The subject proposed for discussion involves, as its principal question, the influence of tubercle in producing the destructive changes found in the lung in pulmonary phthisis. This question embraces that which has been of late largely debated, whether under the term phthisis are included several essentially distinct diseases, or whether, for the most part, the anatomical changes found are traceable to one common pathological type.

It will be treated by the introducer of the discussion purely from its anatomical aspect; and, except by way of illustration, the descriptions given will be limited to those of changes found in the lungs. Etiological and clinical considerations will be omitted by him.

As very diverse opinions exist respecting the changes to which the term "tubercular" is to be given, the author proposes to examine, separately, the various processes occurring in the lungs of children dying of acute tuberculosis, and to consider whether these are of identical, similar, or diverse natures, and to apply the information thus obtained to other forms of pulmonary phthisis occurring in the adult. He believes that he will be able to show that the latter may traced, through various modifications, to anatomical changes identical in their origin and leading characters with those found in the lungs of children.

He excludes from this category the following diseases of the lungs, some of which have not been sufficiently investigated, while others are naturally excluded.

1. Simple ulcerative bronchiectasis—*i.e.*, bronchiectasis not associated with the forms of growth hereafter to be described. [*Rare.*]
2. Simple indurative pneumonia. [*Rare.*]
3. Ulceration succeeding simple acute or catarrhal pneumonia. [*Rare.*]
4. Indurative or ulcerative disease of the lung arising from the inhalation of dust of various kinds.
5. Cancer of the lung.
6. Syphilitic affections of the lung.

Nos. 1, 2, 4, and 5, require, in his opinion, further investigation. No. 3 is very rare, unassociated with growths to which, until within recent periods, the name of "tubercle" has been given.

The changes found in the parenchyma of the lungs of children dying of acute tuberculosis may be thus enumerated.

1. The semitransparent granulation (known as Bayle's).
2. Opaque white granulations, for the most part soft.
3. Similar granulations, with a certain degree of firmness; apparently transitional between 1 and 2.
4. Granulations like 1 and 3, but more or less yellow in their centres.
5. Yellow soft granulations, resembling No. 2, except in colour; variable in size from that of a poppy-seed to a mustard-seed; rarely of the size of a hemp-seed, but attaining sometimes that of a pea.
6. Caseous granulations, dry and friable, sometimes with, sometimes without, a grey transparent zone of induration surrounding them.
7. Groups of granulations, like 1, 2, 3, 4; most commonly like 2, 3, 4.
8. Indurated pigmented granulations.
9. Tracts of indefinite extent, sometimes of one or two inches, sometimes of larger area, irregular in outline, prominent above the surface, with a finely granular aspect, dry and friable (the so-called "caseous infiltration").
10. Tracts of grey semitransparent appearance (grey pneumonia).
11. In rare cases, red pneumonic infiltration.
12. Cavities sometimes very small, of the size of a pea or larger.
13. Granulations softening (mostly 2 and 3).
14. In some cases, œdema.
15. In some cases, injection or punctiform extravasation.
16. In some cases, emphysema.
17. In some cases, capillary bronchitis and dilatation of bronchi.

The red and grey infiltrations, being now generally admitted to be pneumonic, will not be specially considered. The points chiefly dwelt on will be those relating to the origin and structure of the different forms of granulation.

The author will endeavour to show—

1. That every grade of transition can be traced between the softer forms of granulation and the semitransparent granulation.
2. That they all present one feature in common, viz., a "lymphoid" or "adenoid" growth, which, in the softer forms, is mingled with inflammatory products derived from the lining membrane of the interior of the air-vesicles and bronchioles.

3. That yellow and caseous granulations are derived from the above forms by death of tissue induced by the destruction of capillaries in the parts so affected, occurring during the process of "adenoid" growth; and that this is the chief agency in the destruction of the tissues.

4. That the "caseous infiltration" has a structure in these respects analogous to the granulations, but extending over larger areas.

5. That induration of the granulations is the result of the development into a fibroid tissue of the new growth, this occurring in the walls of the air-vesicles and bronchi.

As conclusions from the above observations, the author believes—

1. That the characteristic feature of all these granulations is the new growth of lymphatic character.
2. That this constitutes the typical structure of the grey granulation.
3. That it also, when occurring in the soft granulation, is of the same nature as in the grey.
4. That it is this growth which is the distinguishing feature of "tubercle".
5. That, in the soft granulations, this growth is mingled with products of inflammation.
6. That it, however, distinguishes them from ordinary simple "lobular" or "vesicular" pneumonia.
7. That it also occurs in a diffused form; and that therefore the *specific form* granulation cannot be maintained to be the sole distinguishing feature of tubercle; nor that tubercle, under all circumstances and in all tissues, exists *only* in the form of the semitransparent grey granulation.
8. That this adenoid growth and the processes of ordinary inflammation may coexist as common elements of one disease. The inflammatory products are not distinctive, but the "adenoid" growths are.
9. That adenoid growths "tubercles" may exist without inflammation of the elements, other than the lymphatics of the parts in which they are found, but that, in many tissues, the two almost invariably coexist.
10. That inflammation may give rise to tubercles directly and indirectly.

11. That, in the lung, the greater number of the granulations found are thus associated with inflammatory products, and constitute a lobular or vesicular pneumonia, but that their essential nature is that they are tubercular.

12. That the caseous infiltrations present the same characteristics, but in a diffused form.

13. That tubercle has not any specific anatomical distinguishing features separating it absolutely from other forms of growths, but that practically it may be thus distinguished by vital and pathological tendencies.

In the lung, ordinary pneumonia, lobar or lobular, is not associated with this growth in the alveolar wall, while it exists in all forms of phthisis; and this growth occurs in all conditions of the lung to which the name "tubercle" has been given.

Applications to the ordinary forms of phthisis, changes similar to those found in the lungs of children dying of acute tuberculosis are met with in all forms of pulmonary phthisis with the exceptions before enumerated, and lead to the destruction of the lung.

The anatomical variations observed in phthisis depend on three causes principally—

- I. On the greater or less amount of pneumonic infiltration.
- II. On the greater or less tendency to caseous change.
- III. On the greater or less tendency to fibroid change, either in the tubercular growth or in parts affected by attendant pneumonia.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE Annual Meeting of this Society was held on March 1st, at 8 p.m.; T. B. Curling, Esq., F.R.S., President, in the chair.

Dr. Tilt and Mr. Christopher Heath were nominated scrutineers of the ballot for the new officers and council.

The Abstract of Income and Expenditure of the Society for the year 1872 was read. Its adoption was moved by Dr. Barclay, and seconded by Dr. Sieveking.—Dr. Althaus doubted whether it was good policy always to have a large excess of income over expenditure; and suggested that the council should take into consideration the subject of reducing the admission fees and annual subscriptions.—Mr. Charles Hawkins remarked that several of the sources of the Society's income were of so uncertain a character as to their continuance, that, independently of the question of policy, it would be highly dangerous to

entertain the question of such a reduction.—The motion for the adoption of the Report was carried *nem. con.*

The Report of the President and Council gave an analysis of the income and expenditure, the "ordinary" part of which was much the same in amount as announced in previous years. The "extraordinary" expenditure was very large, and included the whole of the cost of the recent New Library Buildings and alterations, amounting to above £1800.

The report stated that twenty-one new Fellows had been elected, including one Honorary Fellow (Dr. Claude Bernard); that twenty-two had died, and that the total number was now 652, slightly below that of several previous years. The sum received by the Society from the Committee of the Marshall Hall Memorial Fund had been placed in the funds in the names of trustees, in May last, as resolved in the report adopted at the previous annual meeting, and the interest now accumulating on the sum invested, £566, would be given as the first prize at the end of five years, in May 1877. The liberality of the Society in releasing the Society for the Relief of Widows and Orphans of Medical Men from further payment of rent, had been warmly acknowledged by that Society in a resolution carried at their last annual meeting. The motion for the appointment of a committee on the specimens submitted to the Society by Sir William Gull and Dr. Sutton, and by Dr. George Johnson, had been under consideration, but it had been found impossible to secure the cooperation of Fellows whose decision would carry sufficient weight. The rest of the report consisted of details relative to the addition of books to the library, and to the beneficial effects of the new buildings and alterations with regard to a very large increase of space, and to the more convenient arrangement and management of the library. The actual space gained was sufficient for about 30,000 volumes, making provision for more than thirty years, the term of the present lease held from the ground landlord by the society. The report particularly referred to the valuable services of the President, Mr. Curling, and of Mr. Charles Brooke, the Honorary Librarian, who had given their assiduous care and attention continuously in superintending the whole of the building alterations and redecoration of the society's rooms.

President's Address.—The President, in his address, said that two topics of more than ordinary interest had been before the Society during the session, viz., the condition of the heart and arteries in chronic Bright's disease, and vaccination-syphilis. With regard to the first, the report had mentioned the failure to secure a committee whose decision would carry sufficient weight with the profession; but he confidently hoped that, as the points at issue were matters of fact, they would sooner or later be worked out by independent observers. The importance of the vaccination-syphilis question in relation to the public health could not be exaggerated; but the very few instances in which syphilis had been communicated, while sufficient to induce increased care in the selection of the vaccine virus and the performance of vaccination, should have no disquieting effect on the public mind, or deter the authorities from the vigorous enforcement of this preventive measure. After an allusion to the success of the first conversazione of the society held in the past session, the President gave obituary notices of those Fellows of the Society who had died since the last annual meeting; viz., Dr. J. A. Gordon, Dr. C. J. B. Aldis, Mr. F. C. Skey, Mr. Alfred Poland, Mr. Thomas Hewlett (Harrow), Mr. Martin Ware, Mr. James Startin, and Mr. Holmes Coote; and with short notices of Mr. Caleb Burrell Rose (Yarmouth), Dr. Browne (Kirkcudbright), Mr. James Spark, Mr. William E. Masfen (Stafford), Mr. Weeden Cooke, Mr. Bowyer Vaux (the senior Fellow of the Society), Dr. T. T. Roscow (Brussels), Dr. John Davies (Hertford), Dr. Benjamin Godfrey (Enfield), Mr. W. R. Cooke (Slough), and Dr. James Walsh (Limerick). The President, in his notice of Dr. J. A. Gordon, alluded to his having originated the *Quarterly Journal of Foreign Medicine and Surgery*, and to his having been one of the first to draw attention to foreign medical literature, which was little studied by members of our profession in the early part of the century.

In concluding the obituary, the President alluded to the death of the Rev. Adam Sedgwick, Woodwardian Professor of Geology, Cambridge, the senior Honorary Fellow of the Society, who died in January, at the advanced age of 88; and to that of M. Louis, one of the Foreign Honorary Fellows of the Society, of whose important career, character, and professional labours he entered into considerable details.

Mr. Curling thanked the Society for the honour he had enjoyed as their President. After acknowledging how much he owed to the Secretaries for the cordial support they had afforded him, he concluded by expressing his satisfaction at being succeeded by a gentleman of high character and professional eminence, who would worthily maintain the distinguished position of the Society.

Votes of Thanks were given to the President, the retiring Honorary Librarians, and Mr. Thomas Smith, the retiring Honorary Secretary, for their valuable services during their term of office; and especially to the President and Mr. C. Brooke for their assiduous care and attention in the superintendence of all the building alterations connected with the meeting room and library.

Officers and Council.—The following officers and council were elected for the ensuing year:—

President.—Charles J. B. Williams, M.D., F.R.S. *Vice-Presidents.*—A. W. Barclay, M.D.; E. H. Sieveking, M.D.; W. White Cooper; J. A. Kingdon. *Treasurers.*—W. Wegg, M.D.; J. Birkett. *Secretaries.*—E. S. Thompson, M.D.; J. Cooper Forster. *Librarians.*—F. Sibson, M.D., F.R.S.; T. Holmes. *Other Members of Council.*—F. Davies, M.D.; H. J. Sanderson, M.D.; C. J. Hare, M.D.; J. W. Ogle, M.D.; G. O. Rees, M.D., F.R.S. W. Adams; T. Bryant; W. O. Chalk; J. T. Clover; E. Saunders.

SPECIAL CORRESPONDENCE.

PARIS.

(FROM A SPECIAL CORRESPONDENT.)

Case of Exophthalmos from Cystic Tumour of Orbit.—*Marriage of M. Galezowski.*—*Ball at the Salpêtrière.*—*M. Marchal de Calvi.*—*The Weather.*—*M. Daremberg's Library.*

M. RICHEL, Professor of Clinical Surgery at the Hôtel Dieu, recently delivered a very interesting lecture on that hideous disease called exophthalmos, but which he designates "exorbitism"—a term which, he says, is preferable, as it gives a better idea of the character of the lesion. The patient was a priest, aged 38, who had been the subject of the disease for eleven years. He had been seen by several oculists, who nearly all agreed that the cause lay in a tumour of the orbit, and that its treatment was more in the province of a surgeon. The poor priest, however, having been victimised by some unscrupulous quacks, and being reduced to penury, applied for admission to the hospital. The right eye was affected. There was considerable protrusion of the eye; and, on examination, it was found that a tumour existed in the upper and inner part of the orbit, pushing the globe of the eye downwards, outwards, and forwards, giving the patient a most hideous appearance. The eye itself was not much affected by the displacement, and the optic nerve seemed to have accommodated itself to the strain put upon it; and, with the exception of diplopia, and a certain degree of aberration of colours (green objects being supposed to be blue), vision was perfect. Examination with the ophthalmoscope showed that the papilla of the optic nerve was rather swollen and somewhat hazy, and the arteries and veins slightly injected, but the other parts of the eye perfectly intact. The lachrymal apparatus was free from disease, and so were the frontal and maxillary sinuses. The brain seemed unaffected, and the health of the patient was good. Reduction of the eyeball being found impossible by the ordinary means, M. Richet resolved to remove the tumour; but before doing so, he passed in review the various tumours likely to cause the displacement, and came to the conclusion that the present was a mucous cyst. This diagnosis was verified on its removal. The operation—which was performed, at the patient's desire, without the aid of chloroform—was attended with perfect success, as the eye was restored to its normal condition; and the patient left the hospital three weeks afterwards, in the best of health and spirits.

I was present a few days ago at a *soirée* given by Dr. Galezowski, which was a most brilliant affair, on the occasion of his marriage with Mademoiselle Tamberlik, daughter of the celebrated tenor of the Italian Opera in Paris. Dr. Galezowski is a Pole by birth, and one of the leading oculists of Paris. His marriage came about in rather a romantic manner; and, as it was accomplished in the exercise of his profession, I thought it worthy of notice in the JOURNAL, and this is my apology in offering it to your readers. Madame Galezowski, before her marriage, had been for a long time suffering from "parenchymatous keratitis", from which she was almost totally blind. Through the kind and skilful treatment of Dr. Galezowski she recovered her sight, and, in acknowledgment of the almost miraculous cure, she became his partner for life. May they live long and prosperously!

A fancy ball, which is annually given at the Salpêtrière for the entertainment exclusively of its inmates (female insane patients), took place on Shrove Tuesday with great *éclat*. There were about six hundred present, and the scene was at the same time ludicrous and heart-rending. The patients wore costumes according to their own fancy, some of them being in good taste; and, were it not for the ideas asso-

ciated with the locality and the eccentricity of a few, one would imagine himself in sane company. The costumes were for the most part well chosen, some sporting the male attire, and the characters were well sustained; but the most remarkable feature of the scene was, that madness in all its forms, with the exception of the furious type, was largely represented. The guests danced to organ music, played during nearly four hours, after which a supper was served out to them in three rooms. They then retired in perfect order.

It is with deep regret I have to announce the death of Dr. Marchal de Calvi, which took place on the 24th instant, at his residence in Paris, in the 57th year of his age, after only a few days' illness from apoplexy. Dr. Marchal de Calvi was no ordinary man, and his works are well known. He was an indefatigable writer, an able orator, and an accomplished physician. His contributions to medical literature are numerous and remarkable. He took his degree in 1837, and entered the army as an assistant-surgeon. Soon after this he became a Subprofessor of the Faculty of Medicine by concours, and subsequently Professor of Military Medicine at Val-de-Grâce. He filled this chair with rare ability; but, owing to some political broils in which he was involved at the commencement of the Empire, he was removed from his post and ordered to Algeria; as this, however, did not suit his taste, he resigned the service and took to civil practice. Dr. Marchal de Calvi was the author of several works, and his treatise on the *Accidents and Complications of Diabetes* is one of the best monographs on the subject, though the principles therein enunciated are in contradiction with his new doctrine, which since the year 1859 he had endeavoured to inculcate, and to which he gave the name of "holopathie", or "médecine holopathique", not to be confounded with allopathy. Holopathy, according to the author, is a system of medicine which regards the different diatheses as mere manifestations or phrases of a single morbid act (*unité morbide*), which morbid act he terms "acidisme", or the tendency of the organism to become acid. Thus arthritism, herpetism, rheumatism, gout, and diabetes, are manifestations of the above grand class. As for the so-called diseases, they also are mere manifestations or signs of a holopathic condition; in other words, the diatheses and diseases, whether local or general, are the divisions and subdivisions of some morbid unity of which the above is an example. I must say that all this is rather abstruse, and I do not believe he had won many converts to his new doctrine.

The weather is rather capricious, as indeed it always is at this time of the year. It cannot be said that we have had much winter; and, contrary to the predictions of the weatherwise, the winter was neither early nor severe. Even the migratory birds and animals seemed to have been out of their calculations; but, notwithstanding the mildness of the season, the weekly mortality is steadily on the increase: the weekly bulletin furnished by the municipality gives 964 as the number of deaths for the last week.

The beautiful collection of books (ancient and modern) belonging to the late Dr. Daremberg has been purchased by the Minister of Public Instruction, and presented to the Library of the Faculty of Medicine of Paris.

ASSOCIATION INTELLIGENCE.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting is appointed to be held at the Infirmary at Gravesend, on Tuesday, March 11th, at 3.45 P.M.; John Christopher ARMSTRONG, Esq., in the Chair.

Dinner will be provided at the Old Falcon Inn at 5.45 P.M.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, February 24th, 1873.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE first meeting for the present year of the above Branch will be held on Friday, March 21st, at 2.30 P.M., at the Castle Hotel, Hastings; F. TICEHURST, Esq., in the Chair.

Dinner will be provided as usual at 4.30 P.M. Charge 5s., exclusive of wine.

Notice of intended communications is requested by Wednesday, the 12th instant, in order that they may be inserted in the circular convening the meeting.

THOMAS TROLLOPE, M.D., *Honorary Secretary*.

35, Marina, St. Leonard's-on-Sea, March 4th, 1873.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at 11, Chandos Street, Cavendish Square, on Wednesday, March 12th, at 8 P.M.; when Dr. Aveling will read a Paper on the the Instruction, Examination, and Regulation of Midwives.

A. P. STEWART, M.D.

ALEXANDER HENRY, M.D. } *Honorary Secretaries*.

London, March 4th, 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting will be held at the Pavilion Hotel, Folkestone, on Thursday, March 13th, 1873, at 3 o'clock; Dr. WILDASH, of Hythe, in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

The following papers have been promised. 1. Mr. W. F. Teevan: Practical Remarks on Common Diseases of the Genito-Urinary Organs.—2. Dr. Bowles: Cases of Pleurisy and the Use of the Aspirator.—3. Dr. Parsons: Case of Incarcerated Placenta.

Gentlemen who intend to be present at the dinner, are particularly requested to inform me on or before Tuesday, the 11th instant.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, March 1st, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

THE next meeting will be held at Queen's College, Birmingham, on Tuesday, March 18th, at 7.30 P.M.

Members are requested to bring their microscopes, if possible.

WILLIAM HINDS, } *Honorary Secretaries*.

LAWSON TAIT,

Birmingham, March 3rd, 1873.

YORKSHIRE BRANCH.

THE spring meeting of this Branch will be held at Huddersfield, on Wednesday, March 19th.

Gentlemen intending to bring forward communications, or to be present at the meeting, are requested to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary*.

York, March 3rd, 1873.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held at the Wynnstay Arms Hotel, Ruabon, on Thursday, March 20th, at 1 P.M.; R. CHAMBRES ROBERTS, Esq., President, in the Chair.

Gentlemen having papers or cases to communicate, will please to forward the titles of the same a few days before the meeting.

The dinner, to which members may invite friends, will be at 3 P.M. Tickets 6s. 6d. each, exclusive of wine.

D. KENT JONES, *Honorary Secretary*.

Beaumaris, February 12th, 1873.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE fourth ordinary meeting of the Branch was held at the York House, Bath, on Thursday evening, February 27th; T. G. STOCKWELL, Esq., President, in the Chair. There were forty members and eight visitors present.

New Members.—The following gentlemen were duly elected members of the Association and of the Branch. Dr. Briscoe of Chipenham, Dr. Bradshaw and Mr. E. S. Jones of Weston-Super-Mare, Mr. Lovell of Compton Martin, and Mr. H. Alford.

The Parliamentary Committee.—Dr. Davey desired to be relieved of his duties and responsibilities as a member of the Parliamentary Committee of the Association; but, at the solicitation of Dr. Marshall, which was cordially supported by the meeting, he was induced to withdraw his resignation.

Chloroform.—Dr. MARSHALL read a paper on chloroform, and a long discussion, lasting the whole evening, ensued, in which Drs. Davey, Swayne, Thompson, Spender, S. Smith, Barnes, and Messrs. Tibbits, Dobson, Board, Hopkins, Fowler, Coker, and the President took part; after which Dr. Marshall briefly responded, and the meeting broke up.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH :
MICROSCOPICAL SECTION.

THE first meeting of this Section was held at Queen's College, Birmingham, on Thursday, February 20th ; Dr. WADE, President, in the Chair.

A set of rules were proposed by the officers, and adopted by the meeting.

Dr. HINDS showed some preparations of Urinary Salts mounted.

Mr. PRIESTLEY SMITH showed a section of True Bone from the Choroid mounted.

Dr. SAWYER showed specimens of Cancer of the Liver and Sarcina-Vomiting.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, FEBRUARY 18TH, 1873.

Sir WILLIAM JENNER, Bart., K.C.B., M.D., President, in the Chair.

Congenital Heart-Disease.—Dr. COOPER ROSE exhibited a specimen of malformed heart from a girl aged 13. She had all her life suffered on the slightest exertion from dyspnoea and lividity, which, however, disappeared in the highlands of Switzerland. After death, obstruction of the aorta was found.—Dr. CAYLEY thought the change due rather to endocarditis than to malformation.—Dr. PEACOCK said he had never seen a clear case of such malformation of the aorta, though it was not uncommon at the pulmonary orifice.—Dr. ROSE replied that the child had always suffered from the symptoms from the earliest age.

Vesical Calculi.—Dr. VANDYKE CARTER exhibited a collection of vesical calculi from India, intended to show the frequency of the disease in certain districts. The original basis varied : in one it seemed to consist of long hairs. He had examined most of them under the microscope, with a view to detect the mode in which they were formed. They were not mere aggregations of urinary deposits, but always contained a distinct animal basis. In the presence of this in solution, urates and oxalates tended to form globules rather than crystals. These globules united together and formed concentric layers. Oxalates might be found in a crystalline form, but they were for the most part spherules. By disintegration of the calculi, very peculiarly shaped crystals might be obtained. From this peculiar structure, which had been illustrated by Mr. Rainey's experiments on saline substances in the presence of organic matter, it was possible to conclude that we might succeed in arresting the formation of calculi by altering the composition of the surrounding fluid. We might even succeed in disintegrating them in this way, could we as certain that such a formation was going on.—Mr. HULKE wished to know the source of the hairs in the calculus alluded to.—Dr. CARTER was unable to make any suggestion. In reply to Mr. Butlin, he also said there was no particular structure in the animal part of the calculus.—Mr. BUTLIN said there was a female in St. Bartholomew's who was passing peculiar bodies containing lime. This could be removed by acids, but a fibroid substance was still left.—Mr. FAIRLIE CLARKE asked if there was any common condition pointing to the mode of origin of these calculi; but none such could be suggested.—Mr. ARNOTT said the nuclei of prostatic calculi were sometimes seminal; what was the character of the nucleus here?—Dr. CARTER said it was not easy to reach the nucleus to examine it properly, nor to obtain the animal matter sufficiently pure.

Elephantiasis Arabum.—Dr. CARTER showed drawings of elephantiasis Arabum in the early stage. It seemed to originate in small vesicles, apparently dilated lymphatics, either in the scrotum or in the leg, but more frequently in the former than in the latter. The characters were not exactly the same in the two situations. In the leg, the growth was mainly of subcutaneous connective tissue with many elastic fibres. In the scrotum, the muscular tissue of the dartos was also greatly enlarged, even so as to produce movements of a peculiar kind. The papillae were also enlarged, and the lymphatics were so affected that in some instances chyle seemed to exude from the upper part of the tumour.

Cancer of Duodenum.—Mr. COUPLAND showed a specimen of cancer of the duodenum and gall-bladder from a male aged 72. He had been healthy, and his illness began soon after a meal with vomiting. This continued, and the man soon after became jaundiced, and this, too, persisted. Finally he died comatose. There were thickening and ulceration of the duodenum, the margin of the ulcer being thickened.

This was adherent to the liver and gall-bladder, which last was represented by a solid mass in the substance of the liver, forming the base of the duodenal ulcer. The hepatic ducts were thickened and dilated, and a small nodule was found in the liver. In the kidney, there was also found a mulberry calculus blackened by the jaundiced urine. Probably the growth was epitheliomatous.

Sarcoma of the Femur.—Mr. WAGSTAFF exhibited a large tumour growing from the femur of a man aged 24. He had been ill six months, the illness commencing with some slight injury to the knee, which became inflamed. The inflammation subsided, but a lump remained and gradually increased. After a time it grew much more quickly. Latterly the pain was severe. The tumour measured twenty-five inches round, and was solid, but fluctuated in parts. The limb was removed at the hip-joint, and the patient has since done well. The tumour was found to grow from the outside of the femur, and was in part porous. From this projected a soft, succulent mass, and on the top of this was a blood-cyst. The growth had distended and infiltrated the muscles, and in some parts was bony. Apparently the growth was sarcomatous. The soft part contained myeloid and other cells, some being spindle-shaped.

Intussusception of the Small Intestine.—Dr. PEACOCK exhibited a specimen of intussusception of the upper part of the small intestine. The patient from whom it was removed was a young lady aged 19, a patient of Mr. Duke, of Canonbury. She had been for some time out of health, suffering from debility and anæmia, and becoming very thin, though the catamenia were regular. About the middle of January, she began to suffer from pain in the abdomen and sickness, the attacks coming on quite suddenly and as suddenly ceasing, and there being nothing peculiar in the matters vomited, and no connexion between the times of taking food and the attacks of pain and sickness, and the bowels acting regularly. On January 22, Dr. Peacock was requested to see her, under the suspicion that she might have some latent pulmonary mischief. On examining the chest, however, nothing amiss could be detected in the lungs or heart, and the abdomen was carefully examined, when she was undressed and in bed, with an equally negative result. The precise nature of the case was not clear, but a doubtful opinion was given that she might have an ulcer of the stomach, and treatment was recommended accordingly. For a few days she was better, but on the 31st she was taken with severe pain in the abdomen and urgent vomiting, which continued for two days and nights without ceasing, and in spite of soothing applications and the free exhibition of opiates. The symptoms then ceased, and she was tolerably free for thirty-six hours, after which they recurred, and she died exhausted on February 7th. Permission to examine the body was only conceded on the engagement that the upper part of the stomach only should be opened. The stomach and a portion of the duodenum were removed, but found quite free from disease. The hand was then introduced into the opening, and a mass about the size of the fist was felt in the bowel, immediately below and behind the seat of the greater curvature of the stomach; this was removed, and found to be an intussusception, apparently of a portion of the upper part of the jejunum. The intussuscepted part of gut was fully six inches long, and was intensely inflamed. The mucous membrane presented patches of lymph, and at the extremity the whole of the coats were gangrenous and broken down. Dr. Peacock suggested that the peculiar symptoms which the young lady had presented were probably due to the intussusception having occurred at intervals to a slight extent, and the gut rapidly recovering itself, so that no permanent obstruction was occasioned. In the severe attack which occurred a week before death, a larger portion of the bowel probably became firmly impacted, so as to produce permanent and fatal strangulation. There were no appearances of any inflammation of the peritoneum.—The PRESIDENT remarked that in some such cases small polypoid growths were found.

Ulceration of Colon.—Dr. GREENHOW exhibited a specimen of ulceration of the colon in typhoid. There was no diarrhoea during the greater part of the disease. There were few ulcers, some old and some recent, in the ileum, but many in the colon as far as the rectum. In reply to the President, Dr. Greenhow stated that the exact site of the ulcers had not been determined.

Melanotic Sarcoma.—Dr. PAYNE exhibited a melanotic sarcoma of the liver and lungs. There were also tumours in other parts of the body. The patient, a female, had suffered for seventeen years from a growth on the front of the tibia. Latterly it was attached to the bone. Within a few months tumours appeared in various parts. After death, tumours were found in the lungs, liver, and bronchial glands. They were all spindle-celled sarcomas, many being pigmented. The original growth contained little pigment, but looked like a kind of cicatrix. There was no trace of the channels of infection, the glands of the limb being sound, as were the vessels. There was considerable variety

in the forms of the cells.—Mr. ARNOTT said that in such melanotic growths the cells were generally round, and the subcutaneous connective tissue was usually alone affected. They were rare in the lymphatics.—Dr. GREEN said that in a case he had examined, nearly all the internal organs were affected. The growth was spindle-celled, and there was pigment also in neighbouring parts.

Papilloma of the Brain.—Dr. KELLY showed a specimen of papilloma of the fourth ventricle. The subject, a boy, had his head injured. By-and-by he became heavy and disinclined to move, and lost sight and the power of walking. He slept pretty well. In moving his legs he threw them out as in ataxy. He had double optic neuritis and slight right facial palsy. His pupils were dilated. Latterly there was internal squint of the right eye. He became comatose, his temperature went up to 107.4 deg., and he died. In the brain, on the right side of the medulla oblongata, was a large growth pushing out the lobes of the cerebellum. The growth was papillary, and covered with epithelium.—Dr. MOXON alluded to the case of a lad who was rather slow, but not otherwise remarkable. He died suddenly; and from the surface of his brain projected what looked like a bleb. He thought at first it was a hydatid tumour, but it was found to be the distended lateral ventricle, the exit from which was stopped by a papillary growth of the fourth ventricle.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 14TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Malignant Tumour in the Parotid Region.—Mr. HENRY ARNOTT read the notes of a case of soft malignant tumour in the parotid region of a man, aged 35, cured by caustics. The patient had first come under his notice nearly five years ago, with a soft infiltrating brain-like tumour bulging from the neck below the left ear. Repeated severe hæmorrhage had brought the man into a state of great peril. He was admitted into the Middlesex Hospital; the common carotid artery was tied, and Mr. Moore commenced to destroy the fungating mass with chloride of zinc paste. The treatment was continued from time to time for more than twelve months, Mr. Hulke finishing the case after Mr. Moore's death. The man finally left the hospital with a sound cicatrix, and there has been no return of the disease since. Mr. Arnott introduced the patient to the meeting. He was a wiry small man, working hard all day as a stableman; and, by his own statement, no longer feeling anything of the painful mass which seemed likely to kill him speedily five years ago. Mr. Arnott directed special attention to the encouragement afforded by such a case as this to those surgeons who are disinclined to attempt other treatment than clean incision in cases of cancer, and dwelt upon the importance of repeated attacks upon returning nodules of the disease. He also pointed out that the cachectic look—once very marked in this case—had completely disappeared with the relief of the local ailment.—Mr. CROFT asked for more explicit information why Mr. Arnott considered the tumour malignant.—Mr. CALLENDER was of opinion that little was to be gained from the result of one case; and that, besides, the microscopical evidences of the malignancy of the tumour, resting on the information obtained from one puncture by a grooved needle, were perhaps barely sufficient.—Mr. ARNOTT explained that the malignant appearance of the man and the coarse characters of the growth were so pronounced as to lead to the belief that the case was malignant. The microscopical characters, so far as obtained, were those of malignant disease. Moreover, the entire surgical staff of the Middlesex Hospital, the members of which had all necessarily very extensive experience of cancer, agreed as to the malignant character of the affection.—Mr. HULKE said that the histological demonstration fell short of absolute proof of the malignancy of the tumour; but there was really no reason to doubt that the disease was of a malignant character. He thought the tumour probably to have been rather a soft sarcoma than a carcinoma.—Mr. BARWELL said that it was interesting to observe that the tumour grew more rapidly after ligation of the carotid artery. He should like to know if the surgeons at the Middlesex Hospital found it necessary to tie large arteries when they applied caustics.—Mr. DE MORGAN replied that from the facial and arteries of about that size there was usually little or no hæmorrhage. In the present case and others, it had been the custom at the Middlesex Hospital to remove as much with the knife as possible, and then apply caustic, which reached where the knife would not, and with the best results. No inflammatory action and no constitutional disturbance had been in his experience created by these caustics—as, for instance, in cases affecting of the palm of the hand or the exposed pleura, as well as in a remarkable case of a man eighty-five years of age with cancer of the face.

Congenital Absence of the Upper Extremities.—Mr. THOMAS SMITH showed a boy with congenital absence of the upper extremities. He was very intelligent, and demonstrated to the members his ability in using his feet as prehensile organs by picking up sixpences from the table.—Mr. CALLENDER remarked that one interesting point in the case was the sudden break in the continuity of the upper extremities at the shoulder-girdle. All the parts connected with the last subaxial or exoccipital arch from the base of the skull were perfectly developed, including the clavicle, the scapular ring, and the muscles passing from these structures to the chest, head, and neck. The abrupt ending of the upper appendicular structures at the extremity of the exoccipital arch would seem to class this deformity with those dependent upon arrest of development, as distinguished from so-called intrauterine amputation of limbs.

Thyrotomy.—Mr. PUGIN THORNTON read a paper on two cases of thyrotomy for the removal of growths from the larynx. The first case was that of a man aged 24, a wool-stapler at Halifax, whose voice, in December 1868, became slightly hoarse, and in the following month aphonic. Three years later he came under Dr. Morell Mackenzie's care, and at that time his voice was almost suppressed and his breathing affected. With the laryngoscope, great thickening of the left aryepiglottic fold and slight ulceration of the left ventricular band were seen. The lungs were perfectly healthy. In the beginning of 1872, Dr. Mackenzie found the whole of the larynx covered with large vegetations. He was wearing a tracheal cannula; tracheotomy having been performed six months previously by Mr. Charles Smith of Halifax, on account of suffocative dyspnoea. He was now admitted into the Hospital for Diseases of the Throat, and thyrotomy was performed by Mr. Thornton. Growths were found attached to all parts of the laryngeal mucous membrane, which were removed with cutting forceps, and nitrate of silver applied to their bases. The left aryepiglottic fold was seen to be much thickened. The cannula was not returned until the second day after the operation, when it had to be replaced in the trachea, on account of the difficulty of breathing. Microscopical examination of the growths showed them to be of an epitheliomatous character. Six weeks after the operation, dysphagia came on; and two months later, on examining the patient, the left arytenoid cartilage was observed to be displaced, and it was evident that perichondritis had taken place. From this time the difficulty in swallowing rapidly increased; and from the end of October to the time of his death (December 14th), he had to be fed through an œsophageal bougie. No *post mortem* examination was allowed.—The second case was that of a boy two years and a half old, admitted into the Throat Hospital under the care of Dr. Semple on June 11th, 1872, suffering from stridulous breathing, and there was some lividity of face. It was said that from his birth his cry had been weaker and harsher than that of other children's; and that when two years old he had had "a severe attack of croup", after which his voice was much harsher, and his breathing slightly stridulous. At the time of his admission, his respiration was so oppressed that he could not walk across the room, and it was difficult for him to get any sleep at night. Dr. Semple discovered with the laryngoscope a number of small warty growths on both vocal cords. Five days after the child's admission, the dyspnoea having become suddenly severe, Mr. Thornton performed tracheotomy; and two days later, at Dr. Semple's request, having removed the cannula, he carried the incision up through the cricoid and thyroid cartilages. The divided portions of the cartilages and the trachea being held back, several warty excrescences were found. On each vocal cord there were also two small growths on the mucous membrane below the right vocal cord. These were removed, as in Case 1, and the parts brought together with silver sutures, the tracheal cannula not being replaced. The child passed a good night, and slept with his head low. A month after the operation, his voice was tried and found harsh and feeble; his breathing was normal. He was soon afterwards made an out-patient. On December 13th, however, his breathing became slightly stridulous; and on January 10th, tracheotomy had to be performed for the second time. Mr. Thornton remarked that there was no doubt that recurrence of the growths had taken place in this case, although, from the child being frightened from previous operative measure, it was impossible to make a laryngoscopic examination. He also remarked upon the difficulty of effecting complete removal by thyrotomy. The author observed that he should not be prepared to recommend the operation in a case similar to the first, which was one undoubtedly of cancer. In this instance it was undertaken; on account of the aphonia making it impossible for the patient to gain his livelihood. In speaking of the second case, the author thought the operation appeared more justifiable, the tender age of the patient having rendered laryngoscopic treatment impossible: nevertheless, as in the cases of Dr. Gouley, Dr. Voss, and Mr. Davies-Colley, recurrence had taken place.

CORRESPONDENCE.

THE PREPARATIONS OF IPECACUANHA IN THE APPENDIX TO THE "PHARMACOPŒIA."

SIR,—I perceive from the remarks made in the JOURNAL of the 15th instant, that some objection is made to the introduction into the appendix of the forthcoming edition of the *British Pharmacopœia* of the *acetum* and *oxymel* of ipecacuanha. It is urged that a tincture of this rhizome already exists in some foreign Pharmacopœias, and that it would be desirable to learn the value of this before adopting Mr. Johnson's vinegar of ipecacuanha. But the value of this tincture has been ascertained; and in a paper which I read before the Pharmaceutical Society of Great Britain about a year ago, and which was noticed in our JOURNAL of March 23rd, 1872 (p. 318), I showed that this preparation was, like the wine of ipecacuanha, a very unstable one. Without question, the best menstruum for this drug is acetic acid, by which all the virtues of the rhizome are held permanently in solution. This cannot be said of sherry or of dilute alcohol, for the wine and the tincture allow the gradual deposition of cephælate of emetia, and thus these preparations become more and more feeble. In my paper, I urged the adoption in the next edition of the *Pharmacopœia* of Mr. Carteighe's formula for an acetum and an oxymel, but I also recommended that so well known a remedy as the ipecacuanha wine should not at present be expunged from that codex.

I am, etc., DYCE DUCKWORTH, M.D.

February 25th, 1873.

*** Our observation, which Dr. Dyce Duckworth somewhat misapprehends, was as follows. Some hesitation is required in introducing another liquid preparation of ipecacuanha. The tincture is already in some of the foreign Pharmacopœias; and it would be desirable to learn the value of this, before adopting the vinegar of ipecacuanha recommended by Mr. George Johnson several years ago. It may be well to refer to the literature of the subject. Mr. George Johnson's communication may be found at length in the *Pharmaceutical Journal*, vol. xx, 1860-61, p. 303; vol. xxv, 1865-66, p. 179. The advantages of the acetum over the vinum ipecacuanhæ were very fully set forth then, and brought by him under the notice of the last Pharmacopœia Committee in the first communication, and again renewed before the publication of the *Pharmacopœia* of 1867. The formula of Mr. Carteighe appears to be in the main that of the acetum and oxymel ipecacuanhæ, of which Messrs. Ferris and Co. of Bristol have for some time been accustomed to prepare and sell large quantities. The main object of our comment was to call attention to the fact, that the acetum and oxymel ipecacuanhæ had both been very carefully brought under notice by Mr. George Johnson on the occasion of the previous edition of the *Pharmacopœia*, and had apparently not been appreciated; and that the proposal to admit it now should therefore be considered with reference to its actual antecedents, and to the proposition, which dates back beyond Dr. Dyce Duckworth's communication.

EXERCISE AND TRAINING.

SIR,—The great interest which the subject of exercise and training possesses for many at the present time, both young and old, induced me to communicate to the editor of *Bell's Life* (November 2nd, 1872) the results of observations which I thought might be useful in establishing the principles on which exercise should be regulated. To imagine oneself again in the society of zealous oarsmen was necessary, in order to write in such a way as could be understood by them. I am inclined now to think that the subject requires some knowledge of physiology in order to be able to understand the simplest propositions; and it becomes more necessary, therefore, for our profession to devote attention to it.—I am, etc.,

ROBERT J. LEE.

March 3rd, 1873.

EXCISION OF THE KNEE.

SIR,—Your report of the meeting of the Medical and Chirurgical Society on February 1st states that "Mr. Croft said in some cases they had performed the operation (excision of knee-joint) at St. Thomas's Hospitals on patients over 40. Mr. Sydney Jones had performed it for rheumatic arthritis on a patient somewhat advanced in life." I have just looked over the particulars of excision of the knee-joint in the *St. Thomas's Hospital Statistical Reports*, I find that, out of sixty-six cases operated on between 1856 and 1872, and eight cases reported by Mr. Jones in the current volume of the *Hospital Reports*, there were two patients over

40 years of age—viz., one aged 42, and a second aged 44 years. I was not certain of the age of the subject of rheumatic arthritis for whom Mr. Sydney Jones excised the joint. He has informed me that the man was under 40. At the meeting, I said that the operation had been attended with very good success at St. Thomas's. The published reports support my statement. Out of seventy-four cases operated upon in the period mentioned, fifty-six recovered; four recovered after subsequent amputation, one left the hospital unrelieved, and thirteen died.

I am, etc.,

JOHN CROFT.

61, Brook Street, March 3rd, 1873.

THE CASE OF MR. CROFT.

SIR,—Will you kindly allow me, through the medium of your valuable columns, to tender my sincere and grateful thanks to the gentlemen who nobly formed themselves into a committee for the purpose of bringing my very painful case before my professional brethren and the public, and raising a fund to enable me to meet the very heavy expenses necessarily incurred by my defence? I cannot express how sensibly I feel indebted to those gentlemen who, with the Committee, have so handsomely contributed to assist me in my very great distress.

The case came before the Lord Chief Justice Bovill at the Warwick Assizes last week; and, upon his lordship's very lucid explanation of the law relative to medical certificates in his charge to the grand jury, I am thankful to say that both bills for felony and misdemeanour, which the prosecution had filed against me, were at once ignored. It is my intention to have a number of copies of his lordship's charge struck off; and I shall be pleased to forward one to any of my professional brethren who will apply for one. Again asking my many kind friends to accept my very grateful thanks through your JOURNAL,

I am, etc.,

THOS. H. W. CROFT.

Snitterfield, March 5th, 1873.

HÆMATOZOA AND CHYLURIA.

SIR,—With reference to Dr. T. R. Lewis's important discovery of living nematoid worms in the blood of persons affected with chyluria, I may add to the excellent abstract of his paper given in the JOURNAL for February that the occurrence of the same, or very similar, parasites in the human urine in cases of this disease was observed by Wucherer about two years ago, very nearly at the same time that they were noticed there by Dr. Lewis himself. I have not seen Wucherer's original paper, so do not know the exact priority of the two observations; but this is a matter of very small moment. The same or similar parasites had been previously observed in the urine of dogs, as you mention, by Gruby and Delafond, and the discovery of them as human hæmatozoa belongs exclusively to Dr. Lewis.

Dr. Crevaux of the French navy published a memoir on the same subject a few months ago (*De l'Hématurie Chyleuse ou Graisseuse des Pays Chauds*: A. Delahaye, Paris, 1872); and a drawing which, though less elaborate, agrees with those of Dr. Lewis appeared in the *Montpellier Revue des Sciences Naturelles* for last September, by Dr. A. Corre, from specimens supplied by Dr. Crevaux. The dimensions given, .2 to .265 of a millimeter long by .006 to .007 broad, are very nearly those given by Dr. Lewis.

The "active linear vibrios," common in decomposing fluids, on which Dr. Priestley writes to you in the JOURNAL for February, have, of course, nothing to do with these nematoid *flariae*; unless, indeed, we adopt very advanced views on transmutation not of species, but of classes.

I am, etc.,

P. H. PYE-SMITH.

February 27th, 1873.

OBITUARY.

JOHN BISHOP HAYNES, F.R.C.S.Eng., OF EVESHAM.

OF that small body of medical practitioners who, in 1832, responded to the call of Sir Charles Hastings to co-operate with him in the formation of the Provincial Medical and Surgical Association—now better known to most of its members under the title of the British Medical Association—there can be now but few survivors. One of them has recently passed away. Mr. John B. Haynes, of Evesham, who, at the meeting in Worcester, in 1832, seconded Sir Charles Hastings's proposal for the formation of the Association, died on February 17th, at the age of seventy. Mr. Haynes was educated at Guy's Hospital; he passed the examination of the Apothecaries' Company in 1825, and that of the Royal College of Surgeons in 1826, and he was elected a Fellow of the College in 1852. For some time he was a demonstrator

of anatomy at Guy's, but, owing to failing health, he was obliged to leave London. He then practised for a few years at Whitchurch, in Hampshire, but left that place in 1832, and settled at Evesham, where he remained in active practice until the last three or four years. He conducted a large practice, and was well known in the neighbourhood as a skilled operator. In 1846 he was made Mayor of Evesham, and soon afterwards was placed on the commission of peace for the borough. Mr. Haynes took great interest in the welfare of the Royal Medical College, Epsom. He was one of the honorary local secretaries from the time of its foundation, and by means of his exertions added largely to the funds of the institution.

HENRY STERRY, Esq.,

MR. HENRY STERRY, late of Streatham, Surrey, died on February 12th, aged seventy-two. He was the son of Mr. Samuel Henry Sterry, a highly respected and much esteemed member of the medical profession, who carried on an extensive practice in Bermondsey for fifty years. Henry Sterry was generally educated at Merchant Taylors' School, professionally at the school of the united hospitals of Guy's and St. Thomas's. He was in partnership with his father during the later period of his life, afterwards joining his old pupil, Dr. Richard Sharpe. He was surgeon to the School for Indigent Blind many years, and after his retirement took a very active and useful part in its management.

In the year 1861 he retired from the active duties of his profession, but was still generally foremost in any charitable or good work in his immediate locality. In 1861 he was appointed to the commission of the peace for the county of Surrey, and energetically and efficiently performed his duties. He succeeded the late Mr. Probert as treasurer of the Royal Medical College, at Epsom, and most worthily carried out the intentions and wishes of his predecessor, the kind-hearted founder of the institution. He retired from his post in consequence of failing breath.

The loss of Mr. Sterry will be severely felt, not only by his immediate friends, but by many whose cares and anxieties he was foremost to assuage. He was a man of high and sterling principles, faithfully fulfilling all the various relations of life, both socially and morally.

WILLIAM PETTY RUDDOCK, M.R.C.S. & L.A.C., LEEDS.

MR. RUDDOCK died on January 7th, at his residence in Leeds, at the age of sixty-one. After studying at King's College, Webb Street, and Guy's and St. Thomas's Hospitals, he became a Member of the Royal College of Surgeons of England in 1835, and in the following year a Licentiate of the Society of Apothecaries. He settled in Leeds, and practised to the year 1869. He was appointed District Medical Officer and Public Vaccinator under the first Board of Guardians formed in Leeds in 1845, and held that appointment till 1869, when the Leeds Union was formed. He then resigned his office, receiving a superannuation allowance of £102 *per annum*. Whilst holding the office of District Medical Officer, he passed through two periods of cholera and several of fever, one of the latter being what was called the Irish famine fever, to which several professional men fell victims. His kindness towards the poor won for him a large amount of esteem during the twenty-five years that he held the appointment of a public officer.

JOHN PRINCE HALTON, F.R.C.S.

MR. HALTON was the eldest son of the Rev. John Halton, M.A. of St. Peters, Chester, in which city he was born in 1797. He pursued his professional studies at the University of Edinburgh, and at Guy's Hospital under Sir Astley Cooper. Before establishing himself in Liverpool, Mr. Halton travelled for some time on the continent, an unusual advantage for a young student at that time. In 1826, he was elected Surgeon to the Liverpool Royal Infirmary, and held that office for thirty years; on his resigning that appointment in 1856, he became one of the consulting surgeons. The rule by which no one should hold the appointment of surgeon to the Infirmary who practised pharmacy, originated with Mr. Halton.

Although a skilful operator, Mr. Halton regarded the use of the knife as in no sense worthy to be compared with the accurate distinction and patient treatment of surgical diseases. He held that the surgeon of a great hospital should, as far as possible, limit himself to surgical cases; the varied and urgent responsibilities of which he considered more than sufficient for any one mind, however vigorous. By his consideration towards his professional brethren, especially the younger members of his calling, and by his high bearing, Mr. Halton did much to elevate the dignity of surgery in Liverpool. He was a

worthy successor of Park and Alanson. Mr. Halton entertained a steady objection to provincial schools, thinking that a sterling professional education could be obtained in universities and in capitals only. Mr. Halton retired from practice in 1865. Early in life he had married a daughter of the late John Foster, Esq., of Liverpool; she died in 1871. He died at his residence, at Grasmere, Westmorland, on January 27th.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

Mr. J. P. PURVIS, public vaccinator for Greenwich, has been awarded a grant of £34 : 11 by the Local Government Board for the efficient manner in which vaccination is carried on at his station.

THE Chesterfield Rural Sanitary Authority have rescinded their resolution appointing the Poor-Law Union medical officers medical officers of health, and intend to appoint one for the entire rural sanitary district.

THE Liskeard Board of Guardians have rejected the application of Mr. Stephen Clogg, late medical officer of district No. 2, for a superannuation allowance under the Act of Parliament, notwithstanding his having held office for the long period of nearly thirty-three years.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, February 27th, 1873.

Boulger, Isaac, Gravesend
Foster, Reginald Henry, Brighton

The following gentlemen also on the same day passed their primary professional examination.

Bullen, Beresford Robert, St. Thomas's Hospital
Hamerton, George Albert, St. Thomas's Hospital
Reynolds, Edward Osmond, Guy's Hospital
Whitten, William John, Dublin School of Medicine

As Assistants in compounding and dispensing medicines.

Cann, Charles John, Hammersmith
Dyson, Alfred, Elland, Yorkshire
Jones, Richard Edward, Welshpool
Rees, Llewellyn Vosper, The Mumbles, Glamorgan
Rhodes, Samuel, Oldham

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 11th, 12th, and 13th of February, the following candidates passed for the License to practise Medicine.

Casey, Philip Forth
Ellis, John Lloyd
M'Cloghry, James
Magrane, Charles William
Mulock, Edward Ross
Ross, Nicholas Crawford

For the Diploma in Midwifery.

M'Cloghry, James
Ross, Nicholas Crawford

UNIVERSITY OF DUBLIN.—At the recent examination for the degree of M.B., held on Wednesday and Thursday, February 19th and 20th, the following were the successful candidates, the names being arranged in the order of merit.

McKane, Nathaniel H. K.
M'Neill, John P.
Martin, Brownlow R.
Russell, Robert F.
Young, Frederick S.
Woods, Thomas A. } equal
Jones, Lewis

At the examination for the degree of M.Ch., held on Friday and Saturday, February 21st and 22nd, the following candidate passed.
Meredyth, John Edward

MEDICAL VACANCIES.

THE following vacancies are announced:—

ATCHAM, Bridgnorth, Church Stretton, Cleobury Mortimer, Clun, Forden, Ludlow, Madeley, Newport, Shifnal, and Tenbury combined Rural Sanitary Districts—Medical Officer of Health: £800 per annum. Applications to W. Layton Lowndes, Linley Hall, Bridgnorth.
BARNET, Hemel Hempstead, Hendon, Watford, and Welwyn Rural Sanitary Districts, and Barnet Urban Sanitary District, combined—Medical Officer of Health: £700 per annum. Applications to Richard Pugh, Esq., Watford.
BOURNEMOUTH URBAN SANITARY DISTRICT, and Christchurch and Ringwood Rural Sanitary Districts, combined—Medical Officer of Health: £225 per annum. Applications to Henry Pain, Esq., Christchurch, Hants.

BORRISOKANE UNION, co. Tipperary—Medical Officer for the Cloughjordan District: £100 per annum.

CHARD RURAL SANITARY DISTRICT—Medical Officer of Health: £350 per annum. Applications to T. B. Gould.

CLOUGHJORDAN, co. Tipperary—Medical Attendant to the Royal Irish Constabulary.

CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.

CRIMINAL LUNATIC ASYLUM, Broadmoor, Berks—Assistant Medical Officer.

ELGIN—Parochial Medical Officer.

HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester—Resident Medical Officer: £100 per annum, residence, and board.

JOINT COUNTIES LUNATIC ASYLUM, Carmarthen—Assistant Medical Officer: £100 per annum, furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

KILBURN DISPENSARY—Resident Medical Officer: £100 per annum, apartments, attendance, coal, etc.

KILDALTON in ISLAY—Parochial Medical Officer: £70 per annum, and £60 per annum from another source. Applications to Colin Hay, Ardbeg, Port Ellen, Islay.

LEEDS—Public Analyst: £100 per annum. Applications to C. A. Curwood, Esq., Town Clerk.

LEEDS GENERAL INFIRMARY—House-Physician and House-Surgeon: £100 per annum each, with board, residence, and washing.

LEEDS URBAN SANITARY DISTRICT—Medical Officer of Health: £500 per annum.

LETTERKENNY UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Letterkenny Dispensary District: £100 per annum, and fees. Applications to Robt. Ramsay, Esq., Lisnenan, Letterkenny.

LIVERPOOL HOSPITAL FOR CANCER AND SKIN-DISEASES—Dispenser.

LIVERPOOL ROYAL INFIRMARY—House-Surgeon: £100 per annum, board, lodging, and washing.

LOUDOUN, Ayrshire—Parochial Medical Officer: £50 per annum.

LOUTH RURAL and URBAN SANITARY DISTRICTS—Medical Officer of Health: £375 and £125 per annum. Applications to J. W. Wilson, or T. F. Allison.

METROPOLITAN FREE HOSPITAL, Devonshire Square—House-Surgeon: £80 per annum, apartments, board, coal, and gas.

NEW ROSS UNION, co. Wexford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Arthurstown Division of the Fethard Dispensary District: £80 per annum, and fees. Applications to James Haughton, Esq., Chelsea Lodge, Duncannon.

OXFORD MEDICAL DISPENSARY AND LYING-IN CHARITY—Two Surgeon-Apothecaries. Applications to Thomas Mallam, Esq.

PORTREE, Parish of, and the Southern Division of the Parish of SNIZORT—Medical Officer and Public Vaccinator: about £80 per annum. Applications to Murdo Macdonald, Esq., Portree.

PORTSMOUTH URBAN SANITARY DISTRICT—Medical Officer of Health: £450 per annum, and about £50 per annum as Public Analyst for the Borough. Applications to S. J. Elliott, Esq.

ROSCREA UNION, co. Tipperary—Medical Officer for the Shinrone Dispensary District.

ROYAL ACADEMY OF ARTS, Burlington House—Professor of Anatomy. Applications to John Prescott Knight, Esq., R.A., Secretary.

SHEFFIELD URBAN SANITARY DISTRICT—Medical Officer of Health: £600 per annum.—Public Analyst: £100 per annum. Applications to John Yeomans, Town Clerk.

SHINRONE, co. Tipperary—Medical Attendant to the Royal Irish Constabulary.

SOUTH DUBLIN UNION—Resident Medical Officer to No. 4 or Grand Canal Street Dispensary: £125 per annum.

ST. MARY, MARYLEBONE—District Medical Officer: £100 per annum.

TENDRING RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum. Applications to David Mustard, Esq., Manningtree.

WARWICK COUNTY LUNATIC ASYLUM—Assistant Medical Officer for the Idiot Branch: £100 per annum, furnished apartments, board, and washing.

WESTRAY and PAPA WESTRAY, Orkney—Parochial Medical Officer: £50 per annum, and residence.

WITHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £150 per annum.

WORCESTER UNION—Medical Officer for District No. 2: £45 per annum, and fees. Applications to A. W. Knott, Esq.

OTTLEY, Walter, M.B., appointed Assistant House-Surgeon to the General Hospital, Nottingham, *vice* L. W. Marshall, Esq., resigned.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BROCKLEHURST, Thomas Howard, Esq., appointed House-Surgeon and Dispenser to the Devonshire Hospital, Buxton, *vice* William Bull, Esq., resigned.

LEADMAN, Alex. D. H., Esq., appointed Medical Officer to the Boroughbridge District of the Great Ouseburn Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

CARTER, Wm., M.D., of Richmond Row, Liverpool, aged 32, on February 22nd.

COOKE, William, M.D., at Upper Clapton, aged 87.

MILLETT, J. T., Esq., Surgeon, at 22, East Street Terrace, aged 74, on Feb. 7th.

WILKIN, Thomas, Esq., Surgeon (late of Sheriff Hutton, Yorkshire), at Wickhambrook, Suffolk, aged 72, on February 16th.

At a meeting of the Royal Geological Society of Ireland, held on February 12th, Dr. Andrew C. Johnston, R.N., Stoneyford, co. Kilkenny, was elected a Fellow of the Society.

Dr. D. LLOYD ROBERTS of Manchester has been elected a Corresponding Member of the Obstetrical Society of Berlin.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. President's Address; Dr. Tilbury Fox, "On Acne."

WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Smart, C.B., "On Cholera in Insular Positions."

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Barwell, "On a Case of Foreign Body impacted in the Bronchus"; Mr. Christopher Heath, "On a Case of Recto-vesical Fistula in the Female, successfully treated by Operation"; Dr. John Ogle, "Case of Acute Rheumatic Fever, Pericarditis, and Pleurisy: expected necessity for Tapping the Pericardium."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. LUPTON (Liverpool).—The matter is, we think, entirely one for private arrangement.

SYNCOPE DURING OPERATIONS WITHOUT CHLOROFORM.—Mr. Charles Gaine, Dental Surgeon to the Royal United Hospital at Bath, writing on the influence of anaesthetics, says:—"The nearest approach to fatal syncope, not actually fatal, I have ever seen, occurred some short time since in my practice where no anaesthetic was administered. Had such an agent been employed, and death had ensued, the anaesthetic would have been considered the cause."

DRUNKEN ASSISTANTS.

SIR.—In a period extending over twenty years of practice, I have found that one of the most grievous annoyances possible for a medical man to endure is that of having a drunken assistant. I think the matter of so grave a character in connexion with the whole medical world, that I am induced to suggest a remedy which, I think, will be found to be efficient. Let every medical man, in referring to an assistant's last employer, put the question plainly—Is he drunken or an habitual drunkard? Let every medical man honourably answer yes or no. Thus the truth would be learned and an efficient stop put to one of the principal miseries which medical men suffer, for the drunkard would soon find that he could get no one to employ him.

February 24th, 1873.

I am, etc.,
DELTA.

M.B. should not have performed the *post mortem* examination until *after* the order came from the Procurator-Fiscal. He would then have been able to claim his fee: as it is, we fear he cannot.

PRIVATE MEDICAL BULLETINS.

SIR.—I most heartily concur in the principles expressed in the article on "Private Medical Bulletins" in last week's number of the BRITISH MEDICAL JOURNAL; but, as reference is therein made to my name, which appeared in last Wednesday evening's *Standard*, I beg that, in common fairness, you will allow this letter to appear in your next number. I most distinctly deny ever having written, telegraphed, or given information in any way respecting Mr. Corry's illness to any newspaper or newspaper agent whatever. Neither did I know of the existence of the paragraph in question, until led to search for it by your article. Mr. Corry was so much annoyed by the inaccurate notice of his illness which first appeared, that I invariably referred any one who inquired of me concerning the state of his health to his own residence here for information. No one can have a greater abhorrence than myself of the system of medical puffing and advertising, so properly denounced in your last week's JOURNAL.

Mount Vernon, Bournemouth, March 1st, 1873.

I am, etc.,
W. ALLIS SMITH.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE DEATH FROM ANÆSTHETICS AT THE WEST LONDON HOSPITAL.

SIR,—On reading Mr. Wyman's case in your issue of February 22nd, I at once concluded that the death was due to the ether and not to the chloroform; and I was glad to find a confirmation of this view by so eminent an authority as Mr. Clover. The grounds on which this opinion was based are the following. Out of very many cases in which I have administered anæsthetics, I have special notes of twenty-one in which chloroform produced symptoms of danger, and one in which similar symptoms attended the use of bichloride of methylene. In seventeen of these, including the methylene case, the first symptom noted was irregularity of pulse accompanied by a deadly pallor, which significantly contrasts with the "dusky redness" of the face noted by Mr. Wyman. It is evident that, while no doubt some chloroform was still uneliminated from the system of Mr. Wyman's patient at the moment of the fatal result, ether also must have been present in a largely preponderating quantity, as well as in a highly concentrated form. When, therefore, the general symptoms then observed—viz., rise of pulse and dusky flushing of the face—harmonise with the known effects of ether and not with those of chloroform, the conclusion seems incontestable, that the former and not the latter was, to say the very least, the agent mainly answerable for the unfortunate issue. Nothing could be more striking than Mr. Clover's beautifully apt citation of his experiment on the dog. Like him, also, I have frequently observed the pulse beat irregularly in the early stages of anæsthesia; and, on suspending the chloroform for a few moments (and sometimes simultaneously lowering the head), have found the pulse right itself, and have then safely resumed the chloroform.

One other point of much interest to all who have occasion to administer anæsthetics, is connected with the previous preparation of patients by brandy. Mr. Wyman mentions that his patient received a little brandy at 2.30, and that at 4.30 inhalation of the anæsthetic was begun. This is clearly too long an interval. The effects of the stimulant must have almost passed away. The result of personal experience in preparing patients is, that an interval of twenty minutes is not too short to secure the most suitable condition of the circulation; while, so given, the stimulant materially obviates depression from natural timidity. To shorten the interval still further is to increase risk and discomfort from the liability to emesis during the operation. To split hairs over the method of administration of the chloroform (viz., on lint) employed in this case, as Mr. Marshall has done, is manifestly absurd.

I am, etc.,

FRANK H. HODGES,

House-Surgeon York County Hospital, formerly Resident Surgeon Birmingham and Midland Eye Hospital.

PSYCHOLOGICAL COMMITTEE OF THE ANTHROPOLOGICAL INSTITUTE.

WE are requested to publish the following notice relating to the Anthropological Institute of Great Britain and Ireland.

In order to remove any apprehension that might arise in the minds of some members of the Anthropological Institute (particularly of those residing in the country), from statements made, that, in consequence of the recent change in the composition of the Council, a preference would be given to papers of an ethnographical class over those relating to other branches of anthropology, the director, with the full concurrence of the president, has thought it advisable to assure the members of the Institute that no such result need be feared. Papers on every branch of anthropology will always be cordially received, provided they comply with the requirements demanded in all communications to a scientific society intended for publication; amongst which, a very essential one is, that they should contain either "new facts or new applications of admitted facts."

As a further assurance that all proper subjects will receive due and equal attention, it will be as well, in the first place, to state in general terms, what may be regarded as proper subjects to be brought before the Anthropological Institute. They may be included under the following heads:—1. The Physical History of Man and of the Human Race. 2. Psychology. 3. Comparative Philology. 4. Præhistoric Archaeology: *a.* Prehistoric; *b.* Protohistoric. 5. Descriptive Ethnography: comprising the Reports of Travellers and Explorers on the Physical Characters, Derivation and Relations, Manners, Customs, Religion, Language, etc., of Various Races or Nations. 6. Comparative Ethnography. 7. The Relations between Civilised Man and Aboriginal Savage Peoples.

In this programme, it will be seen that any subject properly coming under the cognisance of the anthropologist, may find a place. And, in order to insure confidence that each and every subject will receive due attention, it is suggested that committees might, if thought desirable, be formed of such members of the Institute as may take especial interest in any of the above branches of inquiry, whose function would be, each in its own sphere, to promote the collection of materials and the production of papers relating to the subject in which they may feel particular interest.

In this way, it is clear that all the subjects will be placed on an equality, and it is to be hoped that each in its turn will receive the same attention.

As the first step in this direction, it may be stated that a Committee was formed at the first meeting of the new Council, on the 4th February 1873, for the purpose of promoting psychological research: consisting of Mr. Francis Galton, F.R.S. (Chairman); Sir John Lubbock, Bart., F.R.S.; and Messrs. John Beddoe, M.D.; Hyde Clarke; David Forbes, F.R.S.; Col. A. Lane Fox; Geo. Harris; E. B. Tylor, F.R.S.; and A. R. Wallace; with power to add to their number, and to confer with other scientific bodies.

E. W. BRABROOK, Director Anthropological Institute.

THE LATE MR. ISAAC BAKER BROWN.

SIR,—May I trespass once more on your kindness, and be permitted, through your JOURNAL, to inform the subscribers to the "Baker Brown Fund" that it is proposed that Mrs. Brown be permitted to draw from the balance of the fund (£217 17s. 10d) £2 2s. weekly for the support of herself and three young children, respectively aged eight, seven, and five, as well as to aid in the maintenance of a crippled daughter of Mr. Brown by a former wife?

I beg to acknowledge the receipt of a donation of £5 from "An Old Patient," sent since Mr. Brown's death by Dr. Nicholl of Denmark Hill.

I am, etc.,

FORBES WINSLOW, M.D.

Cavendish Square, March 3rd, 1873.

* * It is difficult to suppose that this is really the most judicious way of disposing of the fund.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

A VICTIM.—If our correspondent can point out any medical degree which is printed or used in our columns by any gentleman who obtained it by purchase *in absentia* from an American or any other University, it certainly shall not appear again. With other than medical degrees, we have no concern. The particular title to which our correspondent refers was we believe known, and published at the time, as a purely honorary one, and how far it is honourable is best known to the gentleman who uses it. We believe our correspondent to be in error as to its source.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

IT is stated in an American paper, that one of the results of having a young medical woman as city physician in Springfield, Massachusetts, is, that a young gentleman has had himself vaccinated by her twenty-one times within a few weeks.

HOSPITAL ADVICE.

SIR,—Now that the abuse of hospital out-door relief is on the tapis, and very justly too, it is only right that the general practitioners of the sister isle should have a voice in the matter. As regards having an association like their Saxon brethren, or getting anything like unanimity amongst them, is, I fear, totally out of the question. I am not aware that in England the surgeon or physician attached to an hospital gives advice gratis at his own residence; but here this has been the case for a period of some years; and, latterly, it has gone a step further. Patients—*i. e.*, any one—are seen during an hour in the evening, and the question is put: "Are you able to buy the medicine?" The answer, as a rule, is, "No." The prescription is then written accordingly; and they are told to take it down to the Dispensary in the morning, where it will be dispensed gratis. The next thing that suggests itself is, Why is this done? To get practice; to visit those same patients when they are bedridden; and to get a guinea for two, three, or four visits, or for the whole duration of the malady, in some instances.

It is as well to observe *en passant*, that this is the usual scale of fees adopted in Dublin by nine-tenths of those whose fee is a guinea. An eminent physician of this city, in reply to a lady patient as to why he visited some persons more than once for his fee (he had already told her that he was sworn in by his College not to take less than a guinea), said that the extra visits were charitable ones.

This is all very well; but is it charity, or rather common honesty, to try to get practice by supplying the medicines belonging to hospitals, supported partly by a government grant and partly by voluntary contributions, gratuitously and indiscriminately? As this system appears to be unique, as well as a grievance, I trust my trespassing on the space of your valuable JOURNAL, will be excused.

Dublin, March 1873.

I am, etc., HAMPDEN.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, March 1st; The Manchester Guardian, March 5th; The Aberdeen Daily Free Press, March 1st; The Bath Express, March 1st; The Birmingham Daily Post, March 3rd; The Hampstead and Highgate Express, March 1st; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Jonathan Hutchinson, London; Sir Henry Thompson, London; Dr. George Johnson, London; Dr. J. Matthews Duncan, Edinburgh; Dr. C. Handfield Jones, London; Dr. C. Parsons, Dover; Mr. J. B. Langmore, London; Mr. P. Thornton, London; Mr. Lawson Tait, Birmingham; Dr. Burney Yeo, London; Dr. R. J. Lee, London; Mr. R. S. Fowler, Bath; Mr. Royes Bell, London; An Associate; Mr. Myers, London; Dr. Cobbold, London; The Secretary of the Epidemiological Society; Dr. Farquharson, London; Dr. Dalby, London; Our Liverpool Correspondent; Mr. Lupton, Liverpool; Dr. Handsel Griffiths, Dublin; Mr. Clover, London; Mr. Poole, London; Dr. Playfair, London; The Secretary of the Clinical Society; Dr. Waldenburg, Berlin; Mr. Wilkin, Newmarket; Our Paris Correspondent; Mr. Hickinbotham, Birmingham; Dr. Heaton, Leeds; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Surgeon-Major Atchison, London; Dr. A. Smith, Calcutta; Dr. De Renzy, Lahore; Dr. Procter, York; Mr. Lattey, London; Our Dublin Correspondent; Mr. Hodges, York; Dr. Lloyd Roberts, Manchester; A Member; Dr. Skrimshire, Clydach; Dr. W. A. Smith, Bournemouth; Mr. R. Ellis, London; Dr. Duckworth, London; Dr. Pye-Smith, London; Dr. Crichton Browne, Wakefield; Dr. Southey, London; Mr. Gaine, Bath; Mr. Balmanno Squire, London; Mr. H. Marks, Dublin; Mr. Croft, Snitterfield; Mr. G. Bowman, Manchester; Mr. Wilders, Birmingham; Mr. A. Durham, London; Mr. Palmer, Great Yarmouth; Rev. Dr. Haughton, Dublin; Dr. Delbranche, Brussels; Mr. Tickler, Bawtry; Dr. Trollope, St. Leonards; Mr. Morgan, Waters Upton; Dr. Little, Manchester; Mr. Haviland, London; Mr. R. H. Cooke, London; Scrutator; Dr. Marshall, Bristol; Mr. Alfred Coleman, London; Dr. W. M. Cooke, London; Dr. John Ogle, London; etc.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE IV.—CHRONIC BRIGHT'S DISEASE WITH A LARGE WHITE KIDNEY.

General History of the Disease: its Causes and Progress.—Condition of Urine in different Stages.—Various Forms of Tube-Casts, and their Significance.—Morbid Anatomy and Pathology of the Kidney in the three Stages of (1) Simple Enlargement, (2) Granular Fatty Degeneration, (3) Atrophy, with Coarse Granulations on the Surface.—Symptoms.—Dropsy.—Pulmonary Complications.—Inflammation of the Serous Membranes.—Endocarditis.—Dyspepsia.—Vomiting.—Diarrhœa.—Hypertrophy of the Heart.—Cerebral Symptoms.—Hæmorrhage, etc.—Defect of Vision.—Hæmorrhage from Mucous Membrane.—Diagnosis.—Prognosis.—SIMPLE FAT KIDNEY, OR GENERAL FATTY INFILTRATION OF THE KIDNEY.—History.—Microscopic Characters of the Kidney.—Pathology and Clinical History.—Points of Difference between it and the Granular Fat Kidney.

I NOW propose to give you the pathological and clinical history of those cases of chronic Bright's disease in which the kidneys are found, after death, always more or less anæmic and pale, usually enlarged, soft in consistence, and smooth on the surface, but sometimes contracted, indurated, and coarsely granular.

A large white smooth kidney is often a sequel of an acute inflammatory attack. Acute Bright's disease, the result, it may be, of scarlet fever or of exposure to cold, is imperfectly recovered from. The dropsy passes away; the patient regains his strength and his colour; the urine is normal in quantity, appearance, and specific gravity; but it continues to be more or less albuminous. The albuminuria which thus continues after acute Bright's disease many remain for many months, and even for a number of years, before the appearance of symptoms consequent on chronic and incurable degeneration of the kidney. At length there is, perhaps, a return of dropsy, or the patient is cut off by some of the results of uræmia, either of an inflammatory or neurotic character. After death, the kidneys may present one of three distinct appearances. 1. They may be large, almost uniformly white, and smooth on the surface. This appearance is admirably represented in Dr. Bright's fourth Plate, Figs. 1 and 2. I call this simply a "large white kidney". 2. The kidney may present the same general appearance, but with this addition, that the cortical surface and the surface of a section of the cortex are, to use the words of Dr. Bright, "interspersed with numerous small yellowish opaque specks". This appearance is represented in Fig. 3 of Dr. Bright's third Plate. I shall presently show you that these yellow opaque specks are spots of fatty degeneration; and I call this a "granular fat kidney", or a "large white kidney with fatty granulations". 3. The cortical portion of the kidney may be found more or less atrophied, with an uneven granular surface; the yellow specks of fatty degeneration being in some cases still visible on the surface and on section.

The various appearances which I have described are results of successive stages of the same pathological process; in the majority of cases, but not always, following upon an acute onset. A kidney which has contracted and become granular, after having been enlarged, differs from the contracted granular kidney which I described in my last lecture, in being of paler colour, of firmer texture, and more coarsely granular on the surface. The microscopic appearances of the kidney, the history, and the symptoms of the disease, also differ greatly, as we shall presently see.

There is a class of cases in which, with a clinical history different from that of the cases to which I have just now referred, the kidneys are found, after death, pale and wax-like in colour and consistency, usually enlarged and smooth, but sometimes contracted and granular. This is the "lardaceous degeneration" of the kidney. The subjects of this form of disease have usually been strumous or otherwise cachectic before the onset of the renal disease, which, in the great majority of cases, begins as an insidious chronic malady. A similar degeneration of the liver and spleen is often associated with that of the kidney. In my next lecture, I shall discuss the clinical and pathological history of lardaceous degeneration of the kidney.

I now proceed to give you a more detailed account of those cases which are associated with a large white kidney, with or without the fatty granulations, with or without subsequent contraction and coarse granulation on the surface.

In a large proportion of cases, the commencement of the disease dates from an attack of acute Bright's disease resulting from exposure to cold, scarlet fever, diphtheria, typhus, enteric fever, or other zymotic disease. In several instances, I have traced the disease back to an attack of tropical malarious fever; I have seen it as a sequela of ague in this country; and I have known it follow upon an attack of dysentery. The acute disease may or may not have been associated with dropsy. The dropsy, if present, usually passes away, and for a time the only evidence of incomplete recovery is to be found in the condition of the urine. In some few cases, the disease comes on as an insidious chronic malady, and it is impossible to determine either the date of its commencement or its probable cause. It is not unfrequently a result of, or, to say the least, it is often associated with, an excessive consumption of food and of alcoholic stimulants, with consequent dyspepsia. In cases thus originating, the approach of the disease is gradual, insidious, and often unsuspected until it has reached an advanced stage. The disease occurs at all ages from infancy to extreme old age. I have seen it fatal at the age of seventy-five. Beyond childhood, it is more common in males than in females—probably because males are more exposed to cold, and more intemperate, than the other sex. This form of disease has, as a rule, a more protracted course than any other form of Bright's disease; and for a period of years it may be unattended by any obvious symptoms apart from the indications afforded by the urine. A patient recovers from the dropsy and other symptoms of acute Bright's disease; he feels and declares himself to be quite well; but the urine shows that recovery has not been complete. The urine may for a long time be normal in quantity, colour, and specific gravity; but it contains albumen, varying in amount from a mere opalescence, with heat and acid, to a dense and copious precipitate; the albumen being usually more copious after food and exercise. The urine, placed in a conical glass, may remain quite clear, and show no appearance of tube-casts or renal epithelium; or it may either occasionally or constantly deposit a light cloud, in which are found small hyaline casts, in some of which a few oil-globules may perhaps be seen, while others contain an epithelial cell or two, or some fragments of cells. This condition of urine may continue with little or no change for many months, and even for several years, before there is any indication that the general health is suffering from the state of the kidneys. The scarlet fever-poison and its products, which originally excited the acute renal disease, have passed away, a certain amount of injury having been inflicted upon the kidney, from which it has not recovered; but there is, up to a certain period, no progressive disease of the gland. The convoluted tubes have been left enlarged; the cortex probably has a somewhat anæmic and mottled appearance, resulting from compression of the intertubular capillary network by swollen tubes. This compression of the intertubular capillaries to some extent impedes the circulation; there is consequent engorgement of the Malpighian capillaries, and hence a transudation of serum into the tubes, which, mingling with the urine, renders it albuminous. This explanation of the albuminuria will readily be understood by a reference to Fig. 1 in my first lecture. Its mode of production is analogous to that of the albuminuria and the hæmaturia, which Dr. George Robinson first, and Frerichs and others since, have produced in rabbits by putting a ligature on the renal vein. In addition to this mechanical hindrance to the passage of blood, it is not improbable that, as a result of acute Bright's disease, the Malpighian capillaries may undergo some physical change, which for a time, or even permanently, favours the transudation of serum through their walls. After a variable period of months or even years, the albuminuria may at length cease, and the cure is complete; but persistent albuminuria, or the state of kidney which gives rise to it, involves, sooner or later, serious structural changes in the kidney, and, as a result of these changes, some of the secondary results of renal degeneration. The state of things which results from persistent albuminuria following the incomplete cure of acute Bright's disease, is analogous to that which occurs when acute endocarditis has passed away, but has left a thickened and defective valve. For a time, hypertrophy of the heart's walls compensates for the imperfect valve, and the circulation appears to be unimpeded; but there is a limit to this conservative process. At length, the muscular tissue of the heart ceases to respond to the increasing demands which are made upon it, and it undergoes degenerative changes, the circulation flags, and the serious trouble begins. In like manner, for an indefinite time, the urine, although more or less albuminous, is freely secreted, and contains its due proportion of solids to liquid, there being no indication or symptom of defective secretion.

Sooner or later, however, the urine loses its natural sherry-colour, and gradually becomes paler. The secretion is less copious. The specific gravity rises. With a scanty secretion, it may be as high as 1020, or even 1030; but, with a more copious secretion, it may be as low as 1010. By this time, probably, the sediment in the urine will have become more copious; and it may contain small hyaline and oily casts and cells in considerable numbers. These appearances indicate with absolute certainty that, in some of the uriniferous tubes, the gland-cells are undergoing fatty transformation; and the kidney will present, after death, those small yellow spots of fatty degeneration to which I just now referred.

The kidney has now passed from the first stage of a simple large white kidney to the second stage—namely, that of a granular fat kidney; and the disease is usually fatal in this stage; but it may pass on to the third stage of contraction and atrophy, with coarse granulations on the surface, the small yellow fat granulations being still visible. This stage is indicated by the appearance of large granular and large hyaline casts in the urine. The large size of these casts shows that they were moulded in tubes which have been deprived of their lining of gland-cells. The destruction of the gland-cells is followed by atrophy of the gland; and the amount of urinary sediment containing the large granular and large hyaline casts is an index of the rate at which the disease is making progress. The granular casts in part consist of disintegrated epithelium, while some result from disintegration of the fibrous material of which the hyaline casts are composed.

I have in many instances traced the transition from acute to chronic disease; and in chronic cases I have traced, by the microscopic appearances and other physical changes in the urine, the successive stages of a large white smooth kidney, a granular fat kidney, and, lastly, a contracted and coarsely granular kidney. This sequence of events occurred in a case the later stages of which are illustrated by Figs. 25, 26, and

27. The disease began in a man aged 23, as an acute attack, in October 1846. It passed into a chronic stage, with oily casts and cells, which continued for a period of nine years. Then the oily casts and cells were mixed with, and afterwards replaced by, large granular and large hyaline casts. Death occurred from uræmia in October 1856, ten years after the onset of the disease. The kidneys were pale, had many yellow fat granulations in the cortex, and were much atrophied, their combined weight being only 7½ ounces. Their appearance is represented by a chromo-lithograph illustrating a paper of mine in the forty-second volume of the *Medico-Chirurgical Transactions*. The microscopic specimens from which Figs. 25, 26, and 27 are taken, retain their characteristic appearances after an interval of seventeen years; and they are placed for your inspection beneath the microscopes on the table.

Morbid Anatomy and Pathology of the Kidney.—When death has occurred before oily casts and cells have appeared in the urine, the kidneys will be found in the first stage of degeneration—that is, large, white, and smooth on the surface. The weight of each kidney may be from seven to ten ounces. The cortical portion is increased in thickness, and appears more or less anæmic; while the medullary cones are pink and vascular. The lobular markings on the surface, which are in fact the radicles of the renal vein, are more or less obliterated, so that perhaps there remain only a few isolated vascular patches, as represented in Dr. Bright's fourth plate. Rarely some hæmorrhagic spots are scattered over the surface or through the substance of the cortex. The capsule readily peels off, and leaves a smooth surface. On a microscopic examination, the greater number of the convoluted tubes present no other change than that of being larger and more opaque than usual. The epithelium is unusually granular and opaque, and apparently contains a more than ordinary amount of solid matter; while the central axis of the tube is lighter than the margins, and free from deposit or accumulation. The appearance of the tubes is precisely the same as that which I described in cases of acute Bright's disease unassociated with epithelial desquamation (see *ante*, Lecture II, Fig. 12). In some tubes, the central canal contains the fibrinous material which appears in the urine in the form of small hyaline casts. The hæmorrhagic spots, when present, are seen to be convoluted tubes filled with blood from ruptured Malpighian capillaries (see *ante*, Fig. 11). The Malpighian capillaries usually have their walls more or less thickened and opaque, and they often have a wax-like appearance. The muscular walls of the minute arteries are sometimes hypertrophied; but hypertrophy is not constant in this stage of the disease. As a rule, the hypertrophy of the arterial walls bears an inverse relation to the general enlargement of the kidney. I shall presently suggest an explanation of this fact. The intertubular capillaries and veins present no structural change, but they are much compressed by the enlarged tubes; and this explains the disappearance of the lobular markings from the surface of the kidney. The enlargement of the cortical portion of the kidney is mainly a result of a kind of hypertrophy of the gland. Many of the tubes are certainly enlarged, and their epithelium is unusually opaque and bulky. The transverse sections of many tubes have twice the normal diameter, and these large tubes must contain an increased number of secreting cells. This increase in the diameter of the secreting tubes is analogous to the increased thickness of fibre in a growing and hypertrophied muscle. When one kidney has been destroyed by disease or accident, as by the impaction of a calculus in the ureter, the other does double work, and, in so doing, doubles its size, without undergoing structural change; the gland is simply hypertrophied. The pathological enlargement of the kidney is like this, but with a difference. When acute Bright's disease leaves such an amount of



Tube-casts at three successive periods of the same case.

Fig. 25.—Period of Fatty Enlargement of the Kidney.

Fig. 26.—Commencing Atrophy and Contraction.

Fig. 27.—Advanced Atrophy and Contraction. *a a a a*. Oily Casts and Cells. *b b b b*. Granular Casts. *c c c c*. Large Hyaline Casts.— $\times 200$.

swelling of tubes and consequent impediment of the circulation as interferes with the prompt and complete excretion of urine, there will continually be some excess of retained urinary products in the blood; and this accumulation of urinary excreta will act as a stimulus to increased growth and development of glandular tissue. For the tissues in question may be said to feed upon those materials for which they have a special affinity; and the growth of a gland is in proportion to the amount of the materials for its proper secretion with which it is supplied by the blood.

The hypertrophy goes on up to a certain point, and then a process of atrophy begins. The commencement of this is indicated during life by the appearance of oily casts and cells in the urine; and then, after death, the kidneys are found in the second stage—namely, that of fatty granulation, as before described, and as represented in Fig. 3 of Dr. Bright's third Plate.

These yellow specks are usually numerous in the cortex, but are never seen in the cones. Place a section of a yellow spot under the microscope, and you see that, as a hæmorrhagic spot is a convoluted tube filled with extravasated blood, this yellow speck is a tube filled with oil, mostly within cells, but partly loose. It is evident that, in this stage, the epithelium in certain sets of tubes has undergone fatty degeneration (See Fig. 28.) The fatty nature of the material is



Fig. 28.—A Yellow Speck or Granulation magnified 100 diameters, and thus shown to be a Convoluted Tube, with its contents in a state of Fatty Degeneration.— $\times 100$.

proved by its solubility in ether, and by the smaller particles fusing and forming larger globules when gently warmed. The probable explanation of these spots of degeneration is, that the swollen tubes so compress the intertubular capillaries, and thus impede the circulation, that the nutrition of the tubes is impaired, and their cells undergo the fatty degeneration. The phenomena are analogous to the softening, with fatty transformation of the brain-tissue, as a result of embolism in a cerebral artery. They also resemble the circumscribed patches of fatty degeneration of the muscular walls of the heart consequent on obstruction of branches of the coronary artery distributed to the diseased parts. (See, upon this point, Dr. Quain's classical paper on Fatty Degeneration of the Heart, *Med.-Chir. Trans.*, vol. xxxiii, p. 147.)

But the degenerative changes may proceed further, and lead to a rapid disintegration of the gland-cells, and their replacement by unorganised fibrine. This change is indicated during life by the appearance of large-sized granular and hyaline casts in the urine (see Fig. 27), and after death by some of the tubes being filled with the same materials. These destructive changes in the gland-cells explain the atrophy and the granular contraction of the kidney in the third stage of the disease. I may mention here that a large white kidney, the result of acute Bright's disease, sometimes passes on into the stage of atrophy with a coarsely granular surface, without going through the intermediate stage of fatty degeneration. This I know to be a fact, from close observation of the urine during life, and a comparison of its microscopic characters with the appearances in the kidney after death. In such cases, you may find here and there microscopic evidence of fatty degeneration within a tube; but the change is so slight as to be invisible by the unaided eye. No fatty granulations appear upon the surface or on a section of the gland. In the more advanced stages of this chronic disease, more especially in the stage of atrophy, the muscular walls of the arteries are almost always more or less hypertrophied. The explanation of the fact which I just now mentioned—that, as a rule, there is an inverse relation between enlargement of the kidney and hypertrophy of the arterial walls—is, that up to a certain point the increased growth of the glandular tissues obviates the necessity for that stop-cock action of the minute arteries which occurs when the glandular tissue is wasting, and which results in hypertrophy of the arterial walls, as I explained to you in my last lecture. The rule is, that the arterial hypertrophy commences when the glandular hypertrophy ceases, and is

succeeded by atrophic changes in the gland-cells and tubes. The Malpighian capillaries are usually more thickened, glistening, and wax-like, than in the earlier stages of the disease. This apparently is a result of the continued transudation of albuminous and fibrinous materials through their walls, and their consequent infiltration with these products.

We occasionally find that the walls of some of the renal arteries have undergone a peculiar change which gives them a homogeneous wax-like appearance. I shall hereafter describe and explain this form of degeneration in connexion with lardaceous disease of the kidney. In the stage of atrophy and contraction, some convoluted tubes may be seen denuded, some being contracted, and others dilated. These appearances are the same as are found in the small red kidney. In the advanced stages of the disease, too, the basement-membrane of some of the tubes and the capsules of the Malpighian bodies are somewhat thickened, but less decidedly and constantly than in the contracted granular kidney.

[To be continued.]

ABSTRACT OF THE GOULSTONIAN LECTURES ON ELEPHANTIASIS GRÆCORUM.

Delivered at the Royal College of Physicians, 1873.

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LECTURE I.

ELEPHANTIASIS Græcorum, or true leprosy, is a disease that has existed from prehistoric times down to the present day, and has been aptly described by a traveller of the seventeenth century as a "distemper so noisome, that it might well pass for the utmost corruption of the human body on this side the grave."

Leprosy may be briefly defined as an incurable constitutional disease of young adult life, which is especially prevalent in tropical and sub-tropical countries. It is met with in three principal forms. First, macular leprosy, characterised by an eruption on the skin, accompanied by anæsthesia; secondly, anæsthetic leprosy, of which the chief features are, anæsthesia and discolorations of the skin, and atrophy of the muscles, with ulceration and mutilation of the hands and feet. The third form, or tuberculated leprosy, is constitutionally the most severe, and is characterised by a bronzing and tuberculated thickening of the skin, especially of the face, ears, hands and feet, followed by similar changes in the mucous membranes of the upper part of the alimentary and respiratory tracts, ending fatally in from two to fifteen years, by intercurrent disease in some vital organ.

It is to this disease that I have the honour to direct your attention in the present course of lectures. In dealing with this subject, which is very extensive, I find that it is impossible to do more than to give a slight sketch of the history, geographical distribution, etiology, and pathology of leprosy.

The present lecture will be chiefly devoted to an account of the history of the disease in Europe, during the Middle Ages, with a very brief notice of Jewish leprosy.

In the second lecture, I shall discuss the geographical distribution of the disease at the present day, in particular countries, with reference especially to the external circumstances of climate, soil, and the occupations of the inhabitants of those countries or districts, and other points connected with the etiology of the disease.

In the third lecture, I propose to give a sketch of the clinical features and morbid anatomy of the malady.

The nomenclature of leprosy or elephantiasis, and the confusion of names which arose from combining the Arabian and Greek literature, has often been explained; I shall, therefore, touch upon it but very slightly.

Hippocrates and the old Greek writers employed the name *lepra* (*λεπραί*) to designate patches on the skin covered with white rough scales, exactly corresponding to our psoriasis. True leprosy was at that time unknown in Greece, and therefore it did not attract much attention, it was to the early Greek writers only a matter of hearsay.

In the time of Aretæus, however, leprosy had appeared in South-Eastern Europe, and was accurately described by him as a disease with which he was personally well acquainted under the name of *leon-*

tiasis. Lucretius and Celsus use the term elephantiasis to designate the same disease; and the latter introduces it in the following terms: "Ignotus autem pene in Italiâ, frequentissimus in quibusdam regionibus is morbus est, quem ἐλεφαντίασις Græci vocant." Thus we have the terms, lepra græcorum, signifying our psoriasis, and elephantiasis, or leontiasis græcorum, signifying true leprosy; so far all was clear. But unfortunately the Latin translators of the Arabian writers used also the word elephantiasis for "Dal-fil, or elephant leg," a disease which was evidently our Barbadoes leg, and was probably unknown to the Greeks. Hence, we have elephantiasis applied to two distinct diseases, which we are obliged to distinguish from each other, by the names elephantiasis *Græcorum*, and elephantiasis *Arabum*. Again, the same translators employed the term lepra, not in the sense in which it was used by the Greeks (*i. e.*, psoriasis), but to designate true leprosy. In this sense it is also used in the Septuagint.

Constantinus Africanus, in the eleventh century, appears to have introduced a modified form of the Arabian teaching into the school at Salerno; and the authors of that school, to satisfy the theory of the four juices, divide true leprosy into four varieties; elephantiasis, leonina, alopecia, and tyria. With them lepra is the general term for a disease, of which elephantiasis is only one particular form.

We can understand then how, in the fourteenth century, when the old Greek and Latin authors were re-introduced, great confusion arose in consequence of the same names being applied to very different diseases, and this confusion has hardly disappeared even in the present day.

To state the matter in a concise form, we have

1. Elephantiasis Græcorum, equivalent to lepra Arabum, or true leprosy.
2. Elephantiasis Arabum, or the Barbadoes leg, unknown to the early Greeks.
3. Lepra Græcorum, answering to our psoriasis.

Leprosy of the Jews.—Whoever reads carefully the account of leprosy (zaraath) given in Leviticus, must arrive at the conclusion that several distinct diseases are included under one and the same name. One reason for this belief, which is alone almost conclusive, is that the recovery of some of those afflicted with leprosy is evidently assumed as a possible, if not a likely occurrence; and provision is made for their readmission into the camp. Now, if there is one thing certain about leprosy in the present day, it is its incurability; indeed, we should look upon any curable malady as essentially distinct from leprosy; once a leper, always a leper, is painfully true. It is highly probable, however, that true leprosy, together with many other diseases of the skin, such as eczema, psoriasis, scabies, and possibly syphilis, existed among the Jews, but they were not distinguished from each other in the early stages of development. Those who are acquainted with the insidious way in which leprosy sometimes begins, will not be surprised that the Jewish priests should have had some difficulty in making a correct diagnosis. The error of our translators has evidently been that of rendering the generic term zaraath by a specific name leprosy. Whatever diseases were included under this term (zaraath) it is quite evident that some at least were believed to be contagious, and that the exclusion of the leper was not, as has been often stated, simply a religious rite. This is indicated by the directions given to burn the clothes supposed to be infected, and by the repeated washings and shavings of the head, beard, and even eyebrows of the cured leper. His being required to sleep in the open air, instead of in his tent, for seven days after he was pronounced clean, points also to the fact that practical rules were mixed up with religious observances, which is in perfect harmony with the double capacity in which the Jewish priests acted.

It is not my purpose to enter into an antiquarian account of leprosy during the Middle Ages. A complete history of the kind, though very interesting, would be far beyond the scope of these lectures. In dealing, therefore, with this part of the subject, I shall confine my observations to those historical facts which appear to have some bearing on the origin, prevalence, and final subsidence of the disease in Europe.

I shall refer, briefly, to the supposed causes of its rapid increase, and to the vigorous and systematic attempts which were made to stamp it out, by the complete exclusion of lepers from legal rights and social intercourse with the rest of mankind. And I shall endeavour to show that erroneous views have been entertained by many historians with reference to the origin of the disease in Europe, and also with regard to the effect of exclusion as a means of exterminating it.

The method adopted had no doubt an effect, not, as has been supposed, by preventing contagion, but by destroying the race of lepers. It exposed them to many hardships, it deprived them of their civil rights, and precluded them by oath from propagating their species. Even amongst the wealthy and powerful, who were less under the

tyranny of the priests, the horror with which the disease was regarded, and its known hereditary tendency, had a marked effect in checking marriages.

History records the fact that leper-hospitals existed in Palestine at a very early period of the Christian era. In the seventh century, the merchants of Amalfi had already established at Jerusalem the Hospital of St. John, where they maintained certain persons, afterwards called Johannites, to attend upon the sick.

A little latter, the remarkable society of the Knights of St. Lazarus was founded, in order that lepers among the higher classes might not be deprived of their knightly honours and fame. These knights were employed in superintending the leper-hospitals, and providing for the wants of the inmates. They not only admitted leprosy persons into their order, but during the early period of their history they were bound to elect a leper as grand master. This rule was, however, revoked at a later date, by Pope Innocent IV, and the Lazarites gradually ceased to fulfil the functions for which they were originally celebrated.

St. Louis brought twelve of these knights into France, for the express purpose of instructing others in the management of the leper-hospitals of that kingdom.

The introduction of leprosy into Western Europe has often been attributed to the Crusades. The disease, however, was known in Spain, Germany, France, and even in England, long before that time. Both Pepin and Charles the Great made laws regarding it; and the former, in 757 (at Compiègne), enacted that the appearance of the malady in either husband or wife, was a sufficient cause for divorce.

Again, several leper-houses were founded before the first English crusade, in the reign of William the Conqueror, two in the neighbourhood of Canterbury, and one in Northampton.

The circumstances which have led most of our own historians to erroneous conclusions with regard to the introduction of leprosy into Europe, are easy to understand.

In the first place, there can be no doubt that the disease increased rapidly about the time of the Crusades; and to those who looked upon it as contagious, nothing would appear more natural than that it should have been imported from the East.

Secondly, a great stimulus was given by the Crusaders to the foundation of Hospitals. In Palestine they had seen old-established leper-houses in good order and constant use; they therefore favoured the introduction of a similar plan of dealing with lepers in Europe.

Thirdly, distinguished physicians of the West began to give their attention to the subject, so that the history and nature of the malady became far more widely known than at any former period.

These three circumstances mainly contributed to foster the belief that the disease which had thus suddenly come into prominence had been newly imported.

During the twelfth and thirteenth centuries, leprosy increased to a terrible extent throughout Europe, and especially in England, Italy and France. Velley, in his history of the latter country, says that Louis VIII promulgated a code of laws, in 1226, for the regulation of leper hospitals in France, and that the number of these hospitals was computed at that time to be not fewer than two thousand. At a later period the number had increased, so that there was scarcely a town in the country unprovided with a leper-house. The late Sir J. Simpson has collected records from the *Monasticon Anglicanum*, and other sources, of no fewer than ninety-five of these religious hospitals for lepers, besides innumerable smaller pest-houses, nearly all of which were founded in Great Britain during the thirteenth, fourteenth, and fifteenth centuries. In addition to these, there were at least fourteen houses of the first order in Ireland. The total number of similar institutions in Europe was estimated by Matthew Paris at nineteen thousand.

I have prepared a map, which indicates the position of the chief leper asylums in the British Isles. A glance at it will show that they were very unequally distributed, the majority being found in the East and South Coast counties, and in the towns on some of the larger rivers, such as the Thames, the Severn, and the Ouse.

Norfolk was especially a home for lepers, for no fewer than seventeen hospitals of the first order existed within that county. Five of these were at Lynn, and six at Norwich. In Kent there were at least nine, and in Suffolk seven.

At first sight, it would seem as if the distribution of the leper-houses would be a fair indication of the relative prevalence of the disease in different parts of the kingdom; but further investigation makes us pause before accepting this conclusion, for the foundation of so many hospitals might be equally accounted for by the fact that the South and East coasts of England, being the parts of the island nearest the Continent, were the districts most thickly populated, and contained the chief centres of civilisation. The same remarks apply to the towns situated on large and navigable rivers.

Treatment of Lepers in the Middle Ages.—We find, that in France, in the thirteenth and fourteenth centuries, the greatest care was taken to prevent, on the one hand, lepers from remaining in social intercourse with the unaffected, and on the other, to guard those in whom there was no evidence of leprosy, from being erroneously condemned to exile from society. No doubt lepers were often concealed for a time by their relations and friends, in spite of the almost universal belief in contagion, and the acknowledged danger of such a proceeding.

In a case of suspected leprosy, the medical examination was conducted with the utmost formality and care, and often occupied several days. Special rules were laid down for the systematic investigation of doubtful cases, and even where no doubt could have existed in the mind of the examiner, the same routine seems to have been generally followed. Kind and considerate treatment of the unfortunate lepers was strongly inculcated, and consolations were freely given; by some, indeed, they were looked upon almost as martyrs, and were treated with far more kindness and compassion than they now meet with in Eastern, or even in some European countries.

The exclusion of lepers from society was considered by all a high moral duty, simply because the disease was believed to be dreadfully infectious. The examination of the supposed leper was conducted, as I have said, with much formality. He was first sworn to speak the truth, and to answer fully all questions put to him. The investigation then began with an inquiry into his previous history, respecting any family taint, or other predisposing cause; whether he had held communication with lepers, or had been otherwise exposed to contagion. Next, an examination was made of the colour, sensibility, and general aspect of the face; the skin was pricked, to ascertain if the sense of feeling was perfect.

The physician was especially directed to determine whether the eyebrows were thickened, or had lost their hair; whether the nose was enlarged or ulcerated, the voice harsh, the breath foetid, and the features changed or frightful. Then the patient was to be stripped to the skin, and the whole body examined for dark spots, thickening or irregularity about the joints, and wasting or numbness of the limbs. Water was poured over the body to determine whether it was unusually greasy, an oily skin being one symptom of the disease. The urine and blood were to be tested. The examination of the latter was justly regarded by some of the eminent physicians of that day as of little value. Bernhard Gordon, Professor of Medicine at Montpellier, says, (in his *Lilium Medicinæ*), "The blood, when drawn and washed, contains black, earthy, rough, sandy matters, and other marks, which authors prominently mention; but for me, those suffice which are to be found in the face." The mode of testing the urine, as described by Lemnius, consisted in throwing into the water of the suspected person the ash of burnt lead (litharge?); if this sank to the bottom, the individual was in good health, but if the material floated on the top, he was infected with leprosy. A rough way, no doubt, of testing the specific gravity of the fluid.

Lastly, the physician was particularly cautioned not to arrive at a hasty conclusion, but to ponder over all the features of the case before giving a verdict which might condemn a healthy man to perpetual banishment in a colony of lepers.

In doubtful, or recent cases, the suspected leper was never at once consigned to the hospital, but simply confined to his own house, and tended by the physician, but was not allowed to associate with the healthy; and, amongst the wealthy and influential, here the proceedings often ended. Not so with the poorer classes. As soon as the signs of the disease had developed, the leper was given over to the ecclesiastical authorities. But if, on the other hand, the physician pronounced him sound, he was supplied with a medical certificate to that effect, and allowed to go free.

When the condemned man was handed over to the priests, certain religious ceremonies were performed to celebrate and legalise his removal from the outer world to the abode of lepers. He was sprinkled with holy water, a mass for the dead was said over him, a handful of earth was thrown upon him in token of burial, and he was then transferred from the church to the hospital. On admission, each leper was provided with a special dress, and a rattle or pair of clappers, without which he was on no account allowed to leave the house. By the dress he was at once recognised, while the clappers served to give timely warning of his approach. The dread of contagion was so great, that lepers were strictly forbidden to enter inns, churches, mills, or bake-houses; to touch or eat with healthy persons; to wash in the common springs or streams; or even to walk in narrow footpaths. They were allowed to enter the towns on certain days only, and to touch with a stick what they wished to buy. If they met anyone on the road, they were obliged to hurry away from him, or so place themselves that the wind should not carry their exhalations towards the healthy. In short, the

dread of infection led people into many absurd practices, some of which were continued down to the seventeenth century. Evelyn mentions that, while on a journey to the Hague in the summer of 1641, he "observed divers leprous, poor creatures, dwelling in solitary huts on the brink of the water, and permitted to ask the charity of the passengers, which is conveyed to them in a floating box that they cast out."

I have dwelt somewhat at length on the belief that existed in the Middle Ages in the infectious character of leprosy, because it was at the root of all the laws and regulations affecting lepers; and also because it explains why, for so many centuries, they were so carefully shunned by all except those who desired to perform some signal act of penance or piety.

Volz considers that leprosy in the Middle Ages was by no means so contagious as might be inferred from the severity of the seclusion practised; but that this may be rather attributed to the custom of the age, when those who were of the same class in social status, culture, necessities and distresses, often united to form themselves into a society or brotherhood, which was kept together by a religious bond. The isolation from the rest of the world which hundreds of thousands practised voluntarily, was required as a duty from the lepers, who retired to the leper house, where they usually led an indolent life, supported by the alms of the charitable, or at the cost of the foundation. The spirit of the time, also, often endowed them with a certain odour of sanctity, and set a martyr's crown on their heads.

Lepers being excluded from the orders of knighthood and from monasteries, had hospitals appropriated to them; so that, though their disease deprived them of the honours and privileges which the world and the church valued, they might yet retain the benefits arising from a religious life.

In England and Scotland, the laws and customs in force with regard to lepers were very similar to those I have described as obtaining in France; the chief difference, as far as I can learn, being the very partial development of the religious ceremonial in our own country. The matter was left more in the hands of the magistrates and doctors, but the result, as far as it affected the leper, was the same in all—viz., his complete exclusion from society, the special dress, the cap and clapper, with all other provisions to prevent, if possible, the spread of the disease. In some establishments, the rules were very stringent. Dr. Shapter, in his account of the leper hospital at Exeter, says that one rule provided that "no brother or sister shall go or pass out of the house beyond the bridge without the gate of the said hospital, without the license of the warden or his deputy, upon pain to be put into the stocks, and have but bread and water for one day."

At Edinburgh, the penalty for breaking the rules of the house was far more severe, being nothing short of death; and Arnott, in his history of that city, tells us that a gallows was erected near the hospital for the immediate execution of offenders.

John Stow, in his *Survey of the Cities of London and Westminster* (1720), mentions a record of Edward III., that the king in 1346 sent "a commandment under his Great Seal to the Mayor and Sheriffs of London, willing them to make proclamation in every ward in the city and suburbs, that all leprous persons within the said city and suburb should avoid within fifteen days, and that no man suffer any such leprous person to abide within his house, upon pain to forfeit his said house and to incur the king's further displeasure. And that they should cause the said lepers to be removed into some places of the fields, from the haunt and company of all sound people."

At a later period, however, considerable relaxation of the old laws regarding lepers was tolerated, till the time arrived when leper-houses were totally abolished. Nevertheless, dread of contagion, and the strict exclusion of lepers from intercourse with the rest of mankind, existed scarcely more than a century ago in some parts of Scotland and the Shetland Isles, where the custom long prevailed of exporting all lepers to the Island of Papastour; and in 1737 (according to Sir James Simpson), Mr. Fiskien, a minister in Papa, thus writes to Sir John Pringle: "This disease (speaking of leprosy) is found by experiment to be very infectious, and seems also to run in blood, most persons that have taken it without infection from another, having been related to three families in the island. It affects any age or sex; and it is observed that young persons bear it longer than those of more advanced age, some having lived ten years under it, others only two, some four, some six, etc., but none ever recover after the symptoms do appear. The persons that fall into this direful case are, as soon as it is observed, obliged to retire to a solitary little hut, built on purpose for them, at a distance from all houses, and are not allowed any converse with their husbands, wives, or nearest relatives, but have their necessities of life furnished for them by a contribution from all the inhabitants of the isle, and brought to their hut, which they take in when the person who brought it has retired to the windward of their house, at some distance.

I shall digress for a moment to point out that the very stringent laws of the Middle Ages closely resemble those now in force in China. A recent report from that country by Dr. Hobson states that lepers are so effectually excluded from society, through the fear of their infecting the healthy, that they are as among the dead. This separation is so complete, and its consequences are so much dreaded, that persons becoming leprosy are known very frequently to terminate their lives by opium, or by hanging or drowning themselves. The Chinese never permit marriage with the progeny of leprosy parents; its appearance in a family not supposed to have any hereditary predisposition, puts an effectual stop to all matrimonial engagements. Lepers themselves only intermarry with those of the same grade or type of disease; for example, a leper of the fourth generation with no external appearance, but known to be of leprosy origin, will only marry a woman who is in the same circumstances herself. Their progeny is considered free from taint, and need no longer be excluded from society.

It must not be supposed that the leper-houses of the Middle Ages were hospitals under medical supervision for the treatment and cure of patients. The more celebrated ones were endowed religious asylums, and entirely under civil or ecclesiastical, but not medical control. The smaller establishments were nothing more than wretched abodes, which just sufficed to shelter a few miserable creatures, who lived from hand to mouth, and depended for their subsistence on the charity of their neighbours. In England and Scotland, the flesh of diseased animals which could not be sold in the public market was often sent to the leper-house outside the town for the use of the patients. Under these circumstances, we are not surprised to learn that cures were never effected except by miraculous agency.

Although hospitals were founded with the primary object of suppressing leprosy and preventing contagion, yet it can hardly be doubted that there remained in the minds of many a remnant of the old Jewish superstition, that the disease was religiously as well as physically unclean; in other words, that it was a special Divine judgment on individuals, and that therefore a life of seclusion and penance was the one most suited to their condition. And this explains the fact that greater care was bestowed on the spiritual than on the temporal wants of the sufferers, many of whom would gladly have bartered the future benefits attached to their religious exercises for a present supply of wholesome food.

Decline of Leprosy.—It is not easy to determine the exact time when leprosy reached its zenith in Europe. It did not arrive at its maximum of development in all countries at the same time. For instance, it appeared in Scotland long after it was known in England, and was declining in the latter country before any sign of abatement was observable in the north. As far as we can judge, the disease appears to have been most prevalent in France and England at the end of the thirteenth century, and in Germany somewhat later.

The greatest number of leper-hospitals was founded in England in the twelfth century, while the thirteenth provided almost as many, but after that period very few were added. The last one of any note was founded at Highgate in 1472 (just four centuries ago), but long before that time many of the old leper-houses had fallen into disuse, and their revenues into the hands of the priests.

Matthew Paris mentions that in the middle of the fourteenth century the number of lepers at St. Alban's had greatly diminished; for in the preface to the statutes of that leper-house, published in 1350, it is stated that the number of lepers that presented themselves for admission had diminished so much by that time, that their expense of maintenance was below the revenue of the institution; "in general," it is added, "there are now not above three, sometimes only two, and occasionally only one."

The hospital of St. Mary Magdalene, at Ripon, was established in 1139, for the relief of all the lepers in that district. In the time of Henry VIII it contained only two priests and five poor people to pray for all "Christen sowlez".

At Illeford, in Essex, a hospital was instituted in the reign of Henry II for thirteen lepers. In one of the reports of commissioners for suppressing colleges, hospitals, etc., in the time of Edward VI, it is observed in regard to the state of this Illeford Hospital, that, though founded "to find thirteen poor men, being lepers, two priests, and one clerk, thereof there is at this day but one priest and two poor men."

We find from these and other accounts that, in the latter part of the fourteenth century, leprosy was rapidly disappearing in England. It lingered on, however, in some parts of Scotland and the Shetland Isles till the middle of the eighteenth century, but then, with the exception of a few isolated cases, it finally departed. In 1742 a day of public joy and thanksgiving was appointed in Papa for the total disappearance of this plague.

On the continent, Philip Gabriel Hensler has clearly demonstrated

that towards the end of the fifteenth century scarcely a trace of the so-called "knotty leprosy" could be found; a milder form, however, known to the authors of the time as "scabby leprosy," was still common in some countries, especially in Germany and Holland. In the first half of the sixteenth century, Francis I of France ordered that the privileges of the leper-houses should be revised, and the number of true lepers determined. This led to a redistribution of the funds, which were found to be too large for the requirements of the few remaining lepers. About a century later, leper houses were finally abolished by Louis XIV, and their property given to the Carmelites, one hospital alone being retained for its original purpose. Thus, we may safely conclude that the disease had quite disappeared from the chief countries of Western Europe by the end of the seventeenth century.

The history of elephantiasis in the Faroe Islands supplies us with an interesting link between the past and present, between the disease of the Middle Ages and that of our own day; it carries us on from the time that it was dying out in Europe to the beginning of the present century, and proves, if proof were wanting, the identity of the disease in both ages.

In the latter half of the seventeenth century, when leprosy was extinct in France and England, it was very prevalent in the Faroe Islands, as we learn from the writings of the Rev. L. J. Debes, a translation of which was published in 1676. From the time that account was written, about two hundred years ago, up to the beginning of the present century the disease existed in those islands. The reason of its final disappearance has been attributed by Dr. Hjort to hygienic causes. He says—"We learn from the Faroe Islands that the disease has there diminished, and is now almost unknown, since the great sea-fishings were relinquished, and more attention has been paid to agricultural pursuits."

The history of leprosy in the Middle Ages suggests the following points for consideration:—1. How did the disease become common in Europe? 2. Was there any ground for the almost universal opinion that it spread by contagion? 3. Did the mode of life of that period influence its progress? 4. Did the isolation of lepers tend to its rapid decrease in the fifteenth and sixteenth centuries, and to its almost complete extinction in the seventeenth century?

With regard to the first question, the broad fact is evident, that the disease, though present in Europe long before it became common, yet received in the twelfth century a sudden accession of strength, and swept like a wave across the continent from south to north; and that in the main it subsided in the same order, first in Italy and the greater part of Spain, then in France, England, and part of Germany, thirdly in Scotland, Holland, and Denmark, and lastly in Sweden and the Shetland and Faroe Islands. In its retreat, it left behind foci of disease wherever circumstances favoured its permanent development. There was, in short, an *epidemic* accession to a disease that was already, more or less, *endemic*. In affirming that leprosy was epidemic in Europe during the Middle Ages, I am well aware that it only amounts to stating the fact that we do not know the true cause which produced this remarkable feature in the history of the disease. It is better, however, to acknowledge this, than to bolster up erroneous theories as to its mode of propagation.

Secondly, the question of contagion as a propagating cause of leprosy in the Middle Ages, is one of difficulty. The universality of the belief in its infectious character is no proof that the belief was well founded, for every epidemic disease was in those days regarded as contagious. Now we know that leprosy is not so in Europe in the present day, at least, not in any appreciable degree; has it then, we may ask, changed its nature during the last two centuries? While, therefore, I cannot admit that there is much evidence of the spread of leprosy by contagion, I fully agree with those who hold that many Europeans acquired it in the east during the Crusades, and thus brought into Europe a constant supply of new cases. Admitting the disease to be hereditary, the effect of this in a few generations would be obvious. Hirsch remarks that—"At a time when syphilis was not recognised as a specific disease, either in its primary, secondary, or tertiary form, it was often taken for leprosy; and to that mistake is to be ascribed, in some measure, the popular and professional idea of the contagiousness of leprosy. In the seventeenth and eighteenth centuries the belief in this theory began to disappear, and scarcely one modern observer holds it."

Thirdly, with reference to the effect of the mode of life and diet in use during the Middle Ages, little reliable information can be obtained from the writers of those times. Even amongst the best educated and most enlightened of observers, absurd notions prevailed as to the causes of diseases in general, and of leprosy in particular. Stow, for example, mentions that the smoke of coals was looked upon as a noted source of disease, and their use was at one time actually prohibited in London and Southwark. Some held that leprosy was produced by an excess of animal food, while others believed that a vegetable diet had the chief

hare in its production. The combination, however, of milk and fish, seems to have been considered especially unfavourable to the disease. In short, there was scarcely any kind of food that was not condemned by one writer or another, so that if their united directions had been followed, the progress of leprosy would have been effectually forestalled by death from starvation.

Lastly, with regard to the isolation of lepers, I have already hinted that it tended to prevent marriages with those infected, and thus, to a certain extent, checked the spread of the disease; or rather, I should say, that when the epidemic character of leprosy was subsiding, this, among many other secondary causes, assisted in its final extermination.

STRAIN IN ITS RELATION TO THE CIRCULATORY ORGANS.*

By J. MILNER FOTHERGILL, M.D., M.R.C.P.

THE subject of strain in its relation to the circulatory organs is one of high importance, not only from a pathological point of view, but also for its practical bearing on the prevention of disease no less than on its treatment, and, more remotely, on the equable proportioning of wages in those classes in which diseases of these organs are most commonly found.

So far back as 1856, Virchow pointed out how disease of the aortic valves led to mitral disease, as a consequence of the more forcible closure of the mitral valve under those circumstances. More recently, the inquiry into the subject has been extended; and in 1871 Dr. Clifford Allbutt published his well-known pamphlet *On the Effects of Overwork and Strain on the Heart and Great Blood-vessels*. Since then, the importance of the subject has been more generally recognised, and some review of its present position may be interesting to you all—I can scarcely presume to add instructive.

To commence with the more generally known effects of strain will perhaps be desirable. It has been long recognised and taught that aneurism, dependent upon degenerative changes in the arterial coats, is found most commonly at points where the vessels are most exposed to strain. The fact that in foetal life the right side of the heart is much more largely affected than the left, and that in extrauterine existence this position is reversed, as regards primary disease, has long been well known. No less established is the fact that, when mitral disease has allowed a great portion of the weight of the systemic circulation to fall upon the pulmonic circulation and the right heart, disease manifests itself once more in the latter. Thus we see that, when the right side of the heart is subjected to conditions allied to those of intrauterine existence, the morbid changes of that condition are again induced. For, when the mitral valves are incompetent, the regurgitation of blood on the ventricular systole is opposed by the blood in the pulmonary vessels and right heart, and so the expression that the weight of the systemic circulation is thrown upon them, is not incorrect.

A similar series of changes are inaugurated when a contracted mitral orifice offers an obstruction to the flow of blood into the left heart. These changes are (1) thickening and dilatation of the pulmonic blood-vessels, constituting the condition known as atheromatous; (2) dilatation and hypertrophy of the right ventricle and auricle; (3) disease of the tricuspid valves; (4) changes in the pulmonic valves; this last being less frequent than the others. Similar changes arise from obstruction existing in the lungs without the left heart being affected; but this merely shows more plainly that it is obstruction, with its consequent strain, which is the exciting cause of these changes.

The changes which go on in the muscular walls and in the valves are of a different nature. Increased exertion in muscles leads to their hypertrophy if the conditions of life be favourable. The demand upon them is met by increased growth, giving of course increased power. But in the arterial coats and the valves the changes induced are those of parenchymatous inflammation—a hyperplasia of connective tissue elements. In the muscle, there is hyperplasia of normal muscular fibre giving strength; in the other, there is hyperplasia of primitive cell-elements. Do they give strength too? This question cannot be answered yet. But we do know that this nutritive change leads to distortion and mutilation of the valves; in some cases the free edges are puckered up and contracted, in other cases being agglutinated and welded together. In the first series insufficiency, permitting regurgitation, ensues; in the latter stenosis, producing obstruction, results.

As changes in the right heart follow valvular disease in the left heart, so changes in the mitral valves very commonly follow affections of the

aortic orifice. Virchow has taught that valvular endocarditis is more common in the left than in the right heart, in consequence of the greater muscular force of the left ventricle; so we find that, when aortic disease has led to hypertrophy of the left ventricle, changes in the mitral valves become frequent—less in aortic stenosis, where the hypertrophy is not so great; more in aortic regurgitation, where hypertrophy attains its highest development. The increased force with which the mitral valves are closed induces those nutritive changes entitled chronic endocarditis. It must not be overlooked that in aortic regurgitation the mitral valves are closed by the aortic as well as by the ventricular systole; and, as Traube points out, this is not without its effects on the valves and their attachments.

More interesting still, and even of greater importance in the prevention of disease, are the changes in the aortic valves themselves, and the causation of those changes. Placed at the base of the aortic column, they are closed by the aortic systole on the arterial recoil. Every increase in arterial tension will close the semilunar valves with greater force. Aortic valvulitis is met with under two totally different circumstances—(1), in the gouty individual with chronic renal disease; (2), in the young and robust who pursue certain forms of labour.

At first sight, there seems little in common betwixt the action of gout-poison and the labour of the hammerman. Still the morbid processes induced by these two totally different causes are, apparently, not only identical, but even the manner of their immediate causation is the same. In both cases the aortic valves are exposed to violent closure from increased arterial recoil, and in both cases valvulitis from strain equally results.

We will take the striker's or hammerman's case first. Here we find that for certain periods of time, recurring at brief intervals, the muscular power is being displayed; not the arms merely, by which the blows are delivered, but also almost all the other muscles are in action, so as to secure such an attitude that the blows may be delivered with the greatest effect. There exists, indeed, a condition of general muscular contraction, a condition most unfavourable to circulation through the muscles. Not only so, but, as Wardrop observes in his work *On Diseases of the Heart*, a book all too soon lost sight of, the muscles in many cases cross or compress the arterial branches, and thus obstruct the forward progress of the blood. This matter forms the second chapter of Wardrop's book, and is entitled by him "The Musculo-Cardiac Function." The first effect of this obstructed circulation is muscular hypertrophy of the heart, which enables the ventricles to contract with greater force, and so to empty themselves of their contents, and to deliver them into the arteries with greater force to meet the increased obstruction. The blood is forced into the elastic arteries under greater pressure while the flow forward is impeded. This leads to increased arterial distension and augmented recoil, and thus the aortic valves are closed under greater pressure. Under these circumstances, we find aortic valvulitis very common. Possibly in some cases, the amount of fluids imbibed, by increasing the vascular fulness, adds to the already mentioned causes of valvulitis.

We now come to aortic valvulitis in connection with chronic renal inefficiency, known by the various designations, chronic of Bright's disease, granular kidney, etc. Without entering into the question of a recent discussion with which all are familiar, we can review the changes in the organs of the circulation in chronic Bright's disease here so far as they bear on the subject of strain. In a large number of cases, if not in all cases of chronic renal disease, there exists hypertrophy of the muscular tunics of the arterioles. It is enough for our present purpose that we have two separate authorities for this statement, each of whom is a competent observer capable of defending his position, viz., Dr. Traube of Berlin, and Dr. George Johnson. These two eminent authorities hold that, in a large number at least of cases of chronic renal disease, there is hypertrophy of the muscular tunics of the arterioles, a condition which does not permit the blood to escape so readily from the arterial system, the result being increased arterial tension, and consequent hypertrophy of the left ventricle. Here, then, we have the blood forced into the arteries under increased pressure, while the flow forward is obstructed by hypertrophied arterioles; the elastic tubes which connect these two muscular ends of the circulation are unduly distended, the arterial recoil is increased in force, and aortic valvulitis follows from this augmented force and violent closure.

Thus we see that the circumstances under which aortic valvulitis is most commonly found are really identical, though at first sight so dissimilar. The importance of the recognition of this fact is very great. In the first place, we can see how remedial measures may affect those changes inaugurated by renal inadequacy. In the second place, we may be enabled to aid the working man, in whom these changes are being established, to avoid further damage by changing his form of labour for some other less trying occupation. For if this form of

* Read before the Metropolitan Counties Branch.

labour cannot be abolished, and thus the changes engendered thereby be obviated, some good at least can be achieved by substituting some other form of labour, some other method of obtaining a livelihood, for this which has induced disease in healthy organs, and can, if continued, but aggravate the morbid processes which it has inaugurated. That under favourable circumstances these morbid processes may be retarded, is almost if not quite certain. In the case of voluntary efforts, which can be abandoned when becoming distinctly harmful, this can be really seen; in other cases where the struggle for existence necessitates a continuance of the labour, the unfortunate consequences of continued strain upon the circulatory organs are painfully apparent.

A general recognition of these facts would lead to some more equable and fair remuneration of the men exposed to disease from mechanical strain. The rate of wages should be such that the man can, if so inclined, make provision for himself when this form of labour must be abandoned, and some easier occupation substituted in its stead, and also for his family when he is taken away, as he almost certainly will be, before he reaches what we term the allotted span of existence.

In addition to the changes in the heart and its valves, let us see what are the effects upon the blood-vessels themselves of this continued strain. While we have seen that aortic valvulitis is induced by increased arterial recoil from augmented distension, it is impossible to overlook the effect of this distension upon the walls of the arteries themselves. Under these very circumstances just mentioned, we find that atheroma is induced in the arterial coats, the same parenchymatous inflammation, in fact, which in the valves constitutes valvulitis. It has long been known that atheroma is most frequent at points of greatest strain or tension, the arch of the aorta, especially the outside of the curve, at points of junction of vessels, at points of flexion, etc.

It is also well known that the pulmonary artery and its branches become atheromatous when subjected to increased strain in mitral disease. It is also well known that the walls of a vein become atheromatous when an artery opens into it. The lining membrane of the auricle becomes firm, thickened, and rigid, behind a diseased mitral valve, when the auricular wall is subjected to great and increased distension. Under these circumstances the auricular wall is sufficiently rigid not to collapse when cut into, and its internal appearance is not unlike that of a dilated and atheromatous aorta. Arteries are also liable to atheroma in proportion as they are exposed suddenly and immediately to great distension, as in the cases of the renal and coronary arteries, both short vessels coming off at once from the great arterial trunk.

General atheroma is common in aortic regurgitation where the vessels are suddenly and extensively distended by a large mass of blood being thrown at each stroke into the arterial system; and, that too, under the augmented pressure of a highly hypertrophied ventricle, for in aortic regurgitation the ventricular cavity is enlarged as well as the walls hypertrophied. So, too, in the hammerman and in the gouty person the elastic tubes which connect the two muscular ends of the circulation are liable to become atheromatous, from the increased distension to which they are subjected. We have, then, atheromatous vessels and aortic valvulitis found together, a combination, as we know clinically, common enough.

This view of the causal association betwixt atheroma and strain is not original, and is commonly held and taught in Germany, while in this country it has been enunciated by Dr. Clifford Allbutt, as well as by that accomplished pathologist, Dr. Moxon. (On the Nature of Atheroma in the Arteries. *Guy's Hospital Reports*.) That certain constitutional conditions may favour the development of atheroma is probable; but there is every reason to agree with Dr. Moxon's conclusions, viz.—“1. That what is called atheroma of arteries is sub-inflammation of various degrees, of which the lower degrees end in fatty degeneration of the coats, along with the inflammatory products; and 2. That the determining cause of the occurrence of this change is mechanical strain.”

If, then, mechanical strain leads to atheroma and its terrible consequences, aneurism and apoplexy, if it leads to valvulitis, and to such changes as seriously affect the muscular walls in consequence, and, more remotely, to all the fearful consequences of muscular failure, no apology is necessary for bringing the subject of mechanical strain in relation to the circulatory organs before your notice.

We are all clinically well aware of the association betwixt valvular disease and atheroma, and dyscrasial conditions, as gout, syphilis, and habitual drunkenness. But though we have been conscious of the fact, little light has ever been thrown upon the relationship, and it is extremely doubtful if these conditions in themselves do more than render the subjects of them more liable to changes which are less readily induced in healthy persons. It would appear that these conditions, tending as they do to induce prematurely those tissue-changes now known as senile

degeneration, favour valvulitis from its usual provoking cause, and not from any special action belonging to themselves. In gout we have seen that the exciting cause, strain, is aggravated; and in habitual drunkenness renal disease is so common as to leave no room for surprise that aortic valvulitis is also frequent, without any favouring conditions due to the dyscrasia.

The occurrence of atheroma and aortic valvulitis in syphilis is not so apparent, though the connection betwixt syphilis and the vocal chords—parts also exposed to tension—is not without importance, and throws some light, at least, on the present subject.

The effect of mechanical strain is also interesting, in regard to the forms of heart-disease in the two sexes. Not possessing any statistics, it is necessary to fall back on general impressions—distinct general impressions, however. From my experience, the conclusion has been forced upon me, that the greater portion of heart-disease, actual organic heart-disease, in women, is rather a yielding of the heart-walls, a form of weak heart, than valvular disease, especially disease of the aortic valves. Where the latter occurs, it is usually in elderly women, with chronic renal disease, and then we cannot expect sex to afford much protection. In man there is a decided tendency to aortic disease, with its accompanying changes.

It is difficult to divest oneself of a strong suspicion that this is not so much due to mere sex, but rather to the pursuits of each sex. The occupations of man render him more liable to strain on the circulatory organs, and its consequences, valvulitis and atheroma. Probably these changes in the subjects of syphilis are much more common in the male than the female, due to their different pursuits. Females are, however, subject to aortic valvulitis, when exposed to mechanical strain. In Vienna, where much of the coarser work is done by women, Bamberger, in fifty cases of aortic regurgitation, found no fewer than twelve cases in women. This also throws some light on the effects of mechanical strain.

What determines valvulitis in the mitral valve, commonly the subject of such change, we cannot yet say. We know that the mitral valve is very liable to be affected in acute rheumatism, and, according to the Germans, in scarlatina, though to a less extent; but as yet these are ultimate facts of which no satisfactory explanation has been forthcoming. Virchow's view, that the frequency of mitral valvulitis is due to violent closure of this valve by the muscular left ventricle, seems highly probable.

Finally, we may sum up the foregoing in several propositions.

1. Changes in the right heart are induced by increased strain when the mitral valve is diseased.
2. Mitral valvulitis often results from aortic disease, in consequence of the mitral valve being forcibly closed by an hypertrophied ventricle.
3. Aortic valvulitis, as well as atheroma, is intimately associated with mechanical strain.
4. Certain dyscrasial conditions, in which these affections are common, merely favour the occurrence of such changes.
5. Women are much less subject to aortic valvulitis than men are, and this is due to their pursuits rather than to their sex.
6. The importance of mechanical strain in the production of disease in the circulatory organs is scarcely yet sufficiently appreciated.

In conclusion, no attempt is being made here to give mechanical strain any undue prominence in the causation of disease in the organs of the circulation, but merely to point out such indications of its importance as the present state of our knowledge will warrant. Nor can it be supposed that it is possible, in a brief summary like this, to bring forward evidence to substantiate each conclusion. The conclusions are only what appear to me to be indicated by my investigations and reflections. Such as they are, they are given to the profession in the hope that they may attract such an amount of attention as may substantiate them, or explain them away. Whichever happens, we may hope that the truth will be ultimately elicited. Should they be substantiated, a direct impetus will be given to the treatment, both preventive and palliative, of a large class of most important diseases.

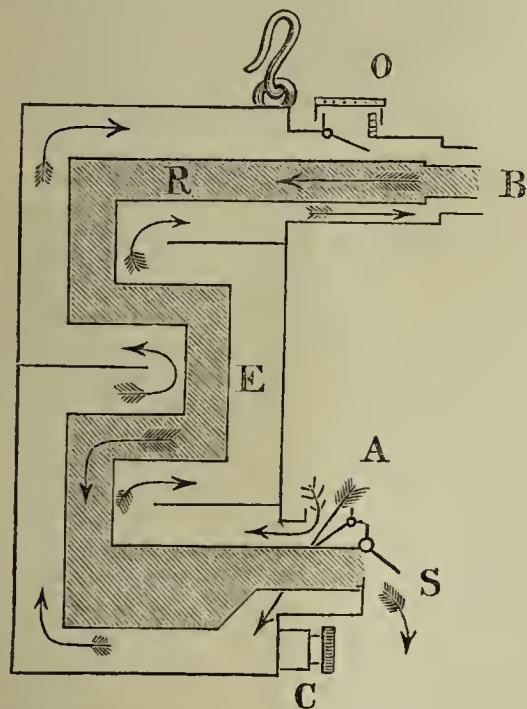
DESCRIPTION OF A NEW DOUBLE CURRENT INHALER FOR ADMINISTERING ETHER.

By J. T. CLOVER, F.R.C.S. Eng.

THE opinions of medical men on the merits of ether and chloroform are so various, that I think I need not apologise for attempting to reconcile them. There are some surgeons who do not hesitate to express their opinion that chloroform is an uncertain agent; that it is dangerous in some cases, and in others not; and that we cannot always discover beforehand whether it will prove so. To such men, ether, which very

rarely destroys life by its immediate effect, must be welcome ; and they will speak lightly of the choking sensations and headache, and even of the vomiting, which ether excites. Others, who have found chloroform safe, and believe they can account for the fatal cases by circumstances which may be avoided, must object to an agent which is less readily applied, and more complained of by the patient and bystanders than chloroform is ; but this will not account for such differing reports on the occurrence of vomiting. One surgeon reports eleven cases of vomiting out of twelve ether cases, and another says that only one patient vomited out of a much larger number to whom he gave it. I think that the amount of the anæsthetic which entered the blood, the way it was given, and the time it was kept up, must have differed widely, and would go far to account for the different results. I believe chloroform is safe if due precautions are taken, and that ether is unsafe without them ; but inasmuch as ether destroys animal life less quickly, it does not need so much care in using it.

To insure safety in producing the complete quietude of a patient by chloroform, we ought, besides watching the effects produced, to use an apparatus which will render it impossible for a patient to have within his chest as much as four per cent. of the vapour of chloroform ; and this can only be effected by measuring both the air and the chloroform by a special apparatus. The inhalation of ether is made less irritating by the same apparatus ; but I do not now use it for ether, except in operations about the mouth, as I have succeeded in supplying the ether-vapour with sufficiently uniform dilution by the inhaler which I am about to describe. It consists of a face-piece without any valves ; a metal box measuring six inches by four, and five deep ; and an elastic tube, five-eighths of an inch in diameter, to connect them. The box is either suspended by a ribbon from the administrator's neck, or placed upon the patient's bed. Inside the box is a tube of very thin copper, which conveys the expired air through it, and is then provided with a valve which opens only during expiration. This tube is broad enough to extend across the box, and undulating, in order to present a large surface, which is covered with cloth to absorb the ether. Plates of metal are so disposed as to direct the current of air, which enters through a valve during inspiration, over the surface of the tube. The following diagram represents a perpendicular section of the inhaler.



The flexible tube leading to the face-piece joins it at B. The part of the vessel containing ether-vapour is marked E. When the patient inhales, air enters at A and follows the course marked by the arrows ; when he exhales, the current in the flexible tube is reversed, and enters the metallic tube marked R, and escapes at the valve S. The opening for supplying and removing the ether is at C.

It will be observed that the part where the greatest cold is produced, by the current of fresh air passing over the ether, corresponds with the termination of the exhaling tube, and will condense much of the ether-vapour breathed back by the patient ; also, that the current of air towards the patient goes over a surface which has been warmed by the patient's breath as it passes outwards through the tube. A sliding shutter at O regulates the admission of air, without passing through the ether-chamber ; but the egress of the patient's breath at the same opening, in expiration, is prevented by a valve. A similar valve and shutter are placed at the end of the flexible tube, near the

face-piece. Both should be open at first and closed gradually, that coughing and struggling against the pungency of the ether may be avoided.

After supplying about six or eight ounces of ether, the inhaler should be shaken, to diffuse the liquid over the cloth which covers the exhaling tube. At the conclusion of the operation, a considerable quantity of ether and some water will be found condensed inside this tube, and may be poured out at S by inclining the inhaler. The ether thus saved can be rectified and used again. As, under ordinary circumstances, it would have been diffused through the room, it is a measure of the extent to which the odour of ether about the house is prevented.

The chief advantage of this apparatus is, however, in the comparative uniformity of mixture with air which it effects, and which, whilst securing complete quietude of the patient, prevents the unpleasant results of an over-strong dose. Although this double current-inhaler could be modified so as to make it useful for other anæsthetics, it is for ether that I have now introduced it. I still recommend chloroform to be given by means of a bag containing a known proportion in every cubic inch of air.

The apparatus can be obtained of Messrs. Mayer and Meltzer, of Great Portland Street, or of Messrs. Coxeter.

ON THE ADMINISTRATION OF CHLOROFORM.*

By HENRY MARSHALL, M.D., F.R.S.Ed., F.R.C.S.Ed.,
Consulting-Surgeon to the Bristol General Hospital.

It is now nearly a quarter of a century since the late Sir James Simpson discovered the anæsthetic properties of chloroform ; and since then, up till a very recent period, it has in this country, and indeed throughout Europe, been considered so superior to any other anæsthetic, as to be practically the only one used. There has, however, of late, been an uneasy feeling current that its dangers have been underestimated, and a re-action against its use has in many quarters set in.

Believing the present panic to be quite uncalled for, I venture to bring the subject of chloroform administration once more before you. My contention is, that in careful and competent hands the danger to life is so slight as hardly more requiring to be taken into account than the risk run in the performance of some minor surgical operation, which, though usually perfectly safe, may, under unusual and untoward circumstances, at times prove fatal. It is a fact full of significance, that those who have had the largest experience in giving chloroform have had the greatest immunity from fatal results, a strong *prima facie* argument against unavoidable death being at all common. Mr. Syme's practice gives 7,500 cases of chloroform administration without a single fatal result ; and Mr. Clover, with an equally large experience, has been alike uniformly successful. Dr. Snow computed he had given it in upwards of 4000 cases, with one death while under the influence of chloroform, but very doubtful if in any way due to it. Dr. Jones has given it in upwards of 6000 cases, with one death ; Mr. Lister in some 4000 cases, with no death. So also the experience of particular hospitals goes far to show that, where it is most extensively used, "accidents" are least frequently met with. This is notably the case in the Edinburgh Infirmary, where chloroform was first publicly administered, and since then has been given with a frequency unknown in other hospitals ; and I am glad to add the Bristol General Hospital bears similar testimony.

My own experience of chloroform dates almost from the time of its introduction, having administered it early in the year 1848. A few years subsequently, I gave it with extreme frequency for the late Mr. Syme, in his private and public practice, and then learned that perfect confidence in its safety as an anæsthetic which subsequent experience has only tended to confirm. At that period, it was no uncommon occurrence for patients to come to Edinburgh for the express purpose of having operations performed under the influence of chloroform, after being refused it in London and other parts of England, on the score of heart-disease and other disorders, which were deemed incompatible with its safe administration. Acting under Mr. Syme's direction, I gave it in these cases with the same confidence as if no disease were present ; his maxim being, that a case suitable for surgical operation was suitable for chloroform, an empty stomach being the only condition insisted on. The same principles as were then enunciated by Mr. Syme continue to be taught by his distinguished successor, Mr. Lister, and are successfully practised by innumerable pupils in all parts of the world.

The mode of administration which we adopt is extremely simple. The

* Read before the Bath and Bristol Branch.

patient being placed in the recumbent position on his back, from one to two drachms of chloroform are poured on a towel, folded six or eight times, distributing it over a surface of about the size of the palm of the hand. The towel is then held a few inches from the face, and gradually approached nearer the mouth, as the patient becomes accustomed to the vapour, another drachm or two being from time to time added, as the previous supply evaporates. The administrator should give his undivided attention to his responsible duties, and pay special and unremitting regard to the respiration, and, in case of that function being interfered with, take prompt measures to restore it.

As regards the use of the towel or handkerchief as the vehicle for administration, no form of apparatus is capable of more effectually insuring a free admixture of air with the chloroform vapour, or of so easily regulating the amount, while it has the unspeakable advantage of being always ready at hand, is free from complication and cumbersome, and, what is also no slight recommendation, it in no way alarms the patient. Mr. Lister's experiments show that, when the towel is used, the amount of chloroform vapour does not exceed four-and-a-half per cent. of the air inspired, even immediately after fresh chloroform has been added; but the average percentage must be less than four per cent.

The necessity for the chloroformist giving his whole and undivided attention to his responsible duties seems at first sight so obvious as hardly to require to be insisted upon, yet its neglect I believe to be one of the most common causes of danger. In looking over the recorded cases of death from chloroform, it is worthy of notice how large a proportion of them have occurred where it was administered for some trifling operation. The presumption is, that in very many of these cases the chloroformist rendered assistance to the operator (no one else being present), and thus had his attention distracted from his primary duties, while in too many cases the operator has himself been the administrator of the chloroform. A suspension of respiration may, under such circumstances, easily occur without being noticed, and the subsequent cessation of the heart's action may be believed to have been the first symptom, and to have "suddenly" occurred.

The absolute amount of chloroform used in any given case is of little importance. I have on some occasions given as much as six ounces at one time without any bad result. The administrator has to watch the results, the same quantity which in one case hardly confuses the intellects, will in another cause profound stupor. Mr. Prichard, in his paper on "Chloroform accidents," strongly condemned the practice of not measuring the amount of chloroform, but he failed to support his condemnation by argument. If the administrator act as a mere machine, incapable of using judgment and discretion, I can understand the importance of measuring the amount; but, as he ought intelligently to watch the effect of the agent, and judge when enough has been given, it is of no practical importance whether this result be brought about by a drachm or an ounce, any more than if it be in two minutes or in ten minutes. In the records of fatal cases, the amount is generally carefully notified; but, though of some scientific interest, this is of little practical importance; and it is well that the administrator should have no unnecessary duties to distract his attention from carefully watching the effects of the anæsthetic, noticing more particularly the respiration. I do not consider it necessary to pay any very special attention to the pulse, believing that almost invariably the breathing is first affected. I must admit, however, that the reports of competent observers on this point are very conflicting; but death beginning at the heart can hardly in the nature of things be common, or fatal results would be more frequent in those hospitals where disease of the heart is considered no barrier to the administration of chloroform, and the observation of the state of the pulse held of little or no importance. In the reports of fatal cases, it is frequently stated that "the heart suddenly ceased to beat;" but, in the words of Mr. Lister, "the evidence of bystanders is apt to be conflicting with regard to the precise succession of highly important events that are crowded together in the brief period of excitement immediately preceding death, and there is also the strong tendency that exists in the mind of any one in whose hands such a case has occurred, to twist the evidence, unconsciously to himself, in favour of inevitable syncope rather than preventable asphyxia."

The usual phenomena attendant on the administration of chloroform are—first, a period of excitement which gives place to a state of complete repose, which, by a careful regulation of the amount inhaled may be prolonged for an indefinite period; but should the system get yet more under the influence of the agent—where, in fact, an overdose is given—the respiration becomes affected, as usually indicated by stertorous breathing (not to be confounded with mere snoring), followed by a complete suspension of respiration. At the commencement of stertor, the inhalation should be discontinued; and if the respiration cease, prompt measures must be taken to restore it, the most important

being pulling forward the tongue. This procedure restores respiration under two very different conditions. First, there are cases where, from relaxation of the lingual muscles, the tongue falls back and causes a mechanical impediment to respiration. To remedy this, it is not necessary to pull forward the tongue with forceps, but simply to raise the chin, or pull forward the beard, while it is well at the same time to turn the head on one side. There are, however, other cases, happily not so frequent, in which this is not sufficient; and any one who has had occasion to use chloroform frequently must have observed cases in which a moderate projection of the tongue, amply sufficient to remedy any physical obstruction, fails to give relief; but, if the tongue be pulled forcibly forward with forceps, this act is immediately succeeded by a long inspiration, the firm traction evidently acting not mechanically, but in a reflex manner, through the nervous system. The rationale of this procedure has been very clearly demonstrated by Mr. Lister, who has shown that the deep stertorous breathing is caused by vibrations of portions of mucous membrane surmounting the apices of the arytenoid cartilages, and that although stertor, pushed even to complete obstruction, may exist when the tongue is protruded beyond the teeth, it becomes impossible if the protrusion be carried so far as to somewhat painfully stretch the *frænum linguæ*. Any one can, with a little practice, test the accuracy of this statement in his own person. If firm traction of the tongue be not at once followed by a free respiration, it should be supplemented by dashing cold water on the face, and slapping the face and chest with a wet towel, and, if necessary, by artificial respiration.

There would appear to be a rare form of death, where chloroform kills almost instantaneously by shock, from its paralyzing influence on the heart through the cardiac ganglia; but it would be unfair to blame chloroform for every death which occurs while under its influence. Sudden death from shock, during or immediately after an operation, was a well-known occurrence before the days of anæsthetics. In the very first operation in the Edinburgh Infirmary in which it was intended to try the power of chloroform, accidental circumstances prevented the experiment from being made, and the operation (for hernia) was begun without the use of any anæsthetic: and most happy that it was so, for after the first incision was made through the skin, the patient suddenly expired. Had the sudden and unexpected failure in the heart's action that occurred shortly before the death of the late Emperor Napoleon been delayed so as to have permitted the intended operation, fixed for that morning, to take place, it is but too probable that chloroform would have been blamed for the fatal result, to the great augmentation of the panic regarding its use.

That deaths do occur not unfrequently from chloroform must be admitted; but is it not better to face the difficulty and question the accuracy of the stereotyped verdict of coroners' juries, "Death from chloroform, but no blame is attached to the medical men", and consider, without prejudice or bias, whether a large proportion of these deaths are not preventable rather than inevitable? By all means let the giver of chloroform feel he has a serious and responsible duty to discharge, but one which, with due care and under ordinary conditions, is practically safe. Yet I marvel how often those who are most persuaded of the dangers of chloroform, are the least careful as to the qualifications of the administrator. Mr. Prichard considers that the use of anæsthetics "adds 100 per cent. to the anxieties and responsibilities of the surgeon"; but the responsibility of the chloroform should rest with the administrator, and if he be a competent man and attend to his duties, there need be little anxiety on the part of the operator. But if its administration be entrusted to ignorant or careless hands, there is, without doubt, very direct danger—the more so, if the proper remedies be not employed in case of untoward symptoms arising. The reader of a paper (Mr. T. Green) at a recent meeting of our Branch, characterised pulling forward the tongue as a frivolous proceeding. I can only rejoice that under these circumstances he has expressed his intention of not voluntarily giving it again; and I trust his teaching on the subject will find no followers.

It is not my intention on this occasion to enter at any length into the comparative advantages of chloroform and ether, my experience of the latter being very limited: judging, however, from the reports that have recently appeared in the *BRITISH MEDICAL JOURNAL*, which has strongly espoused the cause of ether, I think there is little inducement to use it in preference to chloroform. Its claim to greater safety has not been satisfactorily made out, and in all other respects it seems greatly its inferior. It takes a longer time and a larger quantity to produce its anæsthetic effects; it is much more distasteful to the patient, as well as disagreeable to the bystanders; excites the system at the time of administration more than chloroform, and has the still graver disadvantage of causing excitement at a subsequent period. Sickness after its use is as frequent as after chloroform, or even more so;

and, altogether, unless it be shown to be unquestionably less liable to induce dangerous symptoms, I see not a single point in its favour.

Finally, I would beg those who are waning in their faith in chloroform, to place against the deaths that may truly be attributed to its use the many cases in which there is good reason to believe it has saved life, both by removing the dread of the tortures of the operating-table in anticipation, and by preventing shock and mental strain during the operation; also to remember what it has done for the alleviation of suffering during the last twenty-five years; how much surgery is indebted to it in making operations practicable which formerly could scarcely have been thought of, on account of the amount of suffering entailed; and, lastly, how every surgeon owes it a deep debt of gratitude, in enabling him calmly and deliberately to perform delicate operations on a perfectly quiet and unresisting subject, instead of rapidly and hurriedly on a struggling frame writhing with pain. Mr. Prichard has described this as a mere sentimental argument; but surely most men, however prepared to steel their feelings, when necessary, to cries of anguish in others, must be thankful to be spared the inflicting pain on a fellow-creature. Habit may, with some, so far change their natural sympathy with the sufferings of others as to make them callous to the cries of a patient enduring the agonies of a surgical operation; but it is narrated of no less a surgeon than Cheselden, that "he always before an operation felt sick at the thoughts of the pain he was about to inflict"; and other surgeons may be excused for sharing his feelings, even at the risk of being accused of indulging in "mere sentiment".

OBSTETRIC MEMORANDA.

THE FORCEPS.

AT the meeting of the Dublin Obstetrical Society (published in the JOURNAL of March 1st), the President is reported to have said that "the use of the forceps before the complete dilatation of the os was novel and suggestive." That this practice, now apparently for the first time having received the sanction of the Dublin School of Obstetrics, is no novelty in English practice, can be seen on reference to a paper "On the Use of the Forceps," which I published in the JOURNAL in 1867. At page 532 of the first volume for that year, is this passage: "I altogether discard the rule that, before the forceps are applied, the ear should be felt, *neither is it always necessary to wait until the os uteri is fully dilated*; for with ordinary care the blades may be passed beyond the os uteri without inflicting the least injury, and with properly constructed forceps the os uteri is not stretched until the head itself is brought down to assist the dilatation in the natural way." In the course of a long and large experience as obstetric physician to the Maternity Charity in this town, I have on several occasions—the necessity for it is not frequent—amply verified the safety and advantage of this practice, especially in primiparous labour where uterine energy is exhausted before dilatation is completed.

I congratulate our Dublin *confrères* on their somewhat tardy recognition of the superiority of the double-curved forceps, which, in accordance with the teaching of Ramsbotham, Simpson, Barnes, Robertson, and others, I hold to be the instrument best adapted in all cases. When the Association visited Dublin, a few years since, the straight forceps appeared to have the preference in that city.

A. B. STEELE, L.K.Q.C.P.,
Physician to the Lying-in Hospital, Liverpool.

CLINICAL MEMORANDA.

SEQUELÆ OF PNEUMONIA AND PLEURISY.

MY attention has been recently directed to a class of cases in which failure of health occurs, and for which the patient is unable to assign any particular cause. Such patients thus describe their illness. For some weeks previously to seeking medical advice, there has been a gradual loss of appetite, accompanied by dyspeptic symptoms; a feeling also of being "ill all over," shortness of breath upon exertion, and sometimes considerable loss of flesh ensuing. Upon inquiry, cough is admitted to have occurred, and pleurodynia to have been present, at times in an acute form. I have made careful stethoscopic examination of the chest in some thirty adults associated with such an indefinite history as above-mentioned. In every case I have found one or other of the following conditions to account for the state of ill-health; either pneumonic consolidation at the base of one of the lungs, or pleuritic effusion to such an extent as to distend one-third or one-half of the right or left side with fluid.

The application of a moderate sized blister (three by four inches), followed by small doses of the tincture of the sesquichloride of iron and an occasional aperient, generally afford the requisite relief. The compound ipecacuanha and squill pill removes an irritative cough which usually follows the application of the blister, and which is due probably to the lung taking on increased action after having been abnormally inactive. If the consolidation or effusion be tardy of resolution, the reapplication of a blister, after an interval of a fortnight or ten days, or the friction of the side each night and morning with the linimentum terebinthinæ aceticum will expedite the convalescence.

H. CRIPPS LAWRENCE, L.R.C.P.Lond., etc.,
Surgeon to the Westbourne Dispensary.

ETIOLOGY OF HEART-DISEASE.

ON February 22nd, 1873, at 1.15 P.M., B., aged 18, while undergoing active exertion, suddenly fainted. I was summoned at once; and he was carried to bed, and revived in a few minutes, and asked for water. He then dozed a short time, and he vomited twice. At 2 P.M., I examined the heart. At the base, the heart-sounds were healthy. At the apex, there was a *very loud systolic murmur*, disappearing towards the base, but still loud in the axilla. On February 23rd, at 9 A.M., no *bruit* was to be heard. The heart's action was quite normal in development and rhythm. He was quite well in every respect.

This observation may interest many who are concerned in studying the etiology of heart-disease.—CLEMENT DUKES, M.B., B.S.Lond.
Rugby, February 25th, 1873.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GUY'S HOSPITAL.

OPERATIONS, TUESDAY, FEBRUARY 18TH.

Medullary Tumour of the Wrist.—Mr. Bryant removed a tumour from the front of the wrist of a boy, aged 14. It had been growing for four years, and had infiltrated all the flexor tendons. It first appeared as a wart, which was accidentally torn off by a butcher's hook, but from its apparent root a tumour began to grow. This had been treated by the actual cautery, by lotions of all kinds, and by various caustics, but still increased. Mr. Bryant had it bound upon a splint for some months to ensure perfect rest to the joint, but no improvement took place. On examining the main portion of the tumour after removal, it was an inch and a half in diameter, and medullary. There was no history of cancer in the boy's family.

Excision of the Ankle-joint.—The patient was a boy, aged 9, who four months ago while running sprained his ankle. This was followed by swelling, with great pain on both sides of the joint. Suppuration took place on the inner side, where a free incision was made and a large quantity of pus evacuated. This relieved the pain, but the disease still made progress in the joint, the bones being clearly enlarged. There was still some movement in the joint, and no grating; but Mr. Bryant was satisfied that there was necrosed bone, probably covered with granulations. He accordingly made two free incisions, one on each side down to the bones, and excised the ends of the tibia and fibula, and the greater part of the astragalus. These were quite diseased, and as soft as putty. Mr. Bryant remarked after the operation that the case was not a very favourable one, although the child was only nine years of age and in fair health. There might be good repair in the ankle-joint, but there must necessarily be great shortening of the limb in consequence of the epiphysal ends of the tibia and fibula having been taken away. The bones of this boy's limbs were bent in consequence of having early suffered from rachitis; but Mr. Bryant's experience led him to think that such bones united as readily and progressed as favourably as those that had never been diseased. The inner wound was stitched up carefully in the hope of union taking place by the first intention, and covered with compound tincture of benzoin; the outer wound was left partly open to allow a free discharge.

Excision of the Shoulder-joint.—The patient was a man under the care of Mr. Durham. Five years ago, after an attack of cholera, he had inflammation about the left shoulder-joint. Matter formed; and the abscess had been discharging ever since from a wound made behind the joint. The joint was now perfectly fixed, and from want of

use the deltoid muscle had completely wasted away—all the bony processes usually covered by it being prominent and distinct. On passing a probe to the bottom of the abscess, necrosed bone was clearly perceptible. Mr. Durham first made an enlarged opening at the site of the abscess to see if he could through it remove the source of the discharge; failing in this, he extended the excision forward and upward to the usual line and excised the head of the humerus in the ordinary way. This was found completely necrosed and firmly fixed in the glenoid cavity. He found the raspatory of essential service in freeing the head of the humerus from the glenoid cavity; but a great amount of blood was lost, and several arteries had to be twisted.

OPERATIONS, TUESDAY, MARCH 4TH.

Cystic Bronchocele.—Mr. Durham removed a cystic bronchocele from the neck of a woman, aged 36, who looked very much older. The tumour had first appeared five years previously, after a blow; it had grown until it had reached the size of a nut, and had then remained about that size for a considerable period. About a year ago it had begun to increase very rapidly, and latterly, having become as big as a large orange, it had very seriously impeded her breathing. Various methods of treatment had been tried, but without good effect, and the health and strength of the patient were very much deteriorated. Under these circumstances she came into the hospital, and Mr. Durham determined to attempt the removal of the tumour. A vertical incision having been made through the skin, just on the left of the median line, from over the hyoid bone to over the upper border of the sternum, two catgut ligatures were placed, one round the upper, and the other round the lower part of the anterior jugular vein, which ran down in the middle line over the tumour, and which was very much enlarged and distended. The fasciæ and connective tissue were then divided layer by layer, until the tumour was reached. Then, by aid of the finger and a blunt instrument, with a few occasional touches of the knife, the tumour was very readily turned out and removed. It was only loosely connected with the larynx and trachea, but had some firm fibrous connections on each side, especially on the left, with the left lobe of the thyroid body. Its lower border rested on the right side, in the bifurcation of the innominate artery. There was very little blood lost during the operation. The wound was closed by sutures, etc. When removed, the tumour measured ten inches and a half in circumference. It was found to consist of a large irregular cystic cavity, almost entirely surrounded by hypertrophied thyroid body structure, containing numerous minute cystic dilatations. The fluid contained in the large cyst measured about five ounces. It was serous in character, deeply coloured by blood, and containing an immense quantity of cholesterine. The tumour appeared to be the whole isthmus of the thyroid body in a diseased condition. The right and left lobes of that body were seen, but appeared healthy.

Excision of the Head of the Femur.—Mr. Cooper Forster excised the head of the femur in the case of a boy, the subject of advanced hip-joint disease. The head of the bone was denuded of cartilage and carious, as was also the acetabulum. The femur was cut through just below the trochanters, and diseased portions of the acetabulum were removed by the gouge.

KING'S COLLEGE HOSPITAL.

OPERATIONS, SATURDAY, FEBRUARY 22ND.

Compound Fracture of the Leg: Amputation below the Knee.—The patient was fitting up the mortuary chamber of the Emperor Napoleon five weeks ago and fell from the top of a ladder, his leg being entangled in one of its rungs. He suffered compound fracture of the leg, the lower fragment protruding through the skin. The anterior tibial artery was wounded, and he bled profusely until he was brought to the hospital, when the house-surgeon stopped the hæmorrhage. At night symptoms of delirium came on, and it was with the greatest difficulty that he could be restrained. He tossed his limb about, and hæmorrhage again took place, but was again restrained. In the morning the pulse was very quick and feeble; and, rather than risk a primary amputation, Mr. Wood determined to wait and give the man a chance of his life and his limb, afterwards resorting if necessary to the secondary operation. He had rigors on several occasions; the pulse was sometimes high, sometimes low. Delirium came on occasionally in spite of large doses of opium. Considerable separation of the bones took place, and it was evident that they were necrosing. Ten days ago all his shivering ceased, and the presence of granulations showed that there was good local reparative power. The wound did not show any signs of dryness or pyæmia, but the man failed to rally, and all the symptoms pointed to general exhaustion. Mr. Wood accordingly determined

to amputate the limb. He took a large skin-flap from the front below the knee, a smaller flap from behind, and left just enough of the bones to fit an apparatus. He sloped the cut downwards when sawing the bones, and then snipped off the sharp edge behind. This was done to avoid cutting the posterior tibial artery, where it gave off the peroneal. He was particularly anxious that the patient should not lose another ounce of blood, and the femoral artery was so well compressed by Mr. Bell during the operation and the tying of the vessels, that the patient only lost a few drops. The wound was then dressed with a mixture of a solution of chloride of zinc (thirty grains to an ounce) and solution of carbolic acid, and closed in the usual way.

Deficient Bladder, with wide Separation of the Pubic Bones.—Mr. Wood had already operated on this patient, compensating for want of the abdominal wall and the anterior portion of the bladder by flaps from the groin and from below the sternum. An opening was still left at the lower part of the bladder, at which the posterior wall still protruded. Mr. Wood now covered this opening by flaps taken from the scrotum. He remarked that he had just sent a case out of the hospital in which he had got perfect results from this operation, the patient being as able to keep his urine and use his bladder as any ordinary person. He had now operated in fifteen cases, and he had every reason to be satisfied with the last four or five. His greatest difficulty had been the destruction of the hair-bulbs before turning down the flaps. It was absolutely essential to pick them out one by one and destroy them with nitric acid. Even the constant bathing with urine to which the skin is subjected in its new function is not enough to prevent the hair from growing into the bladder.

OPERATIONS, SATURDAY, MARCH 8TH.

Ligature of the External Iliac Artery: Unusual Course of the Vessel.—On Saturday last, Sir William Fergusson tied the external artery for aneurism, in a case which presented features of peculiar interest, both in its history and in the operation. Within the last few days an aneurism in the left groin of the patient, a man, had very rapidly increased and caused a large pulsating tumour in the pelvis. He came to the hospital only a week previously with all the indications of aneurism of the left common femoral artery; but he had only noticed a swelling there during the last two months. It was now as large as a fist, and the pulsation was very palpable. Sir William Fergusson at first thought of keeping him in the house for some weeks, and trying what could be done without operation. The tumour was frequently manipulated, with the result, apparently, of causing some giving way of the sac. The first incision through the skin showed that there was more vascularity in the parts than one would expect. The superficial veins were much enlarged and gorged, indicating the existence of pressure within or below preventing the flow of blood towards the heart; and there was great venous hæmorrhage. On going deeper, it was evident that a quantity of blood was effused into the tissues. On reaching the peritoneum, Sir W. Fergusson turned it up towards the mesial line, and here a novel feature presented itself: instead of the iliacus muscle lying as a whole before him, there was a prominence as conspicuous as a wrist when the hand is flexed, and very darkly coloured. It seemed as if the aneurism had burst at the back, and a great infiltration of blood had taken place in the substance of the iliacus. No trace of the artery could be seen, nor could it be felt anywhere. On pushing his finger deeply in towards the mesial line close upon the bladder, he came upon the artery, with little pulsation, in consequence of having nothing hard to rest upon, and quite at the inner side of the swollen iliacus. He passed the aneurism-needle under it, tied the ligature, and the pulsation in the aneurism immediately ceased. In his clinical remarks on this case, Sir William Fergusson said that he had tied most of the great arteries of the body, and had seen all varieties of their course, but he had never before seen the external iliac so distorted to the middle as here. Generally it was to be found easily enough high up. He first observed the extravasated tumour in the pelvis on the 6th, and then knew that no time was to be lost in operating.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, SATURDAY, MARCH 1ST.

Extensive Disease of the Lower Part of Femur: Tentative Operation.—Mr. Savory made some incisions at the site of ulcers to enable the operator to introduce his finger and ascertain the true condition of the bone. He believed that one half of the bone was necrosed, principally on the inner aspect, and that the patient must lose his limb. He preferred to wait some time, however, before taking so important a step, to see if nature would yet set up any reparative process, or one which would enable him to remove the necrosis alone, rather than the limb.

Amputation at the Thigh, after Unsuccessful Excision of the Knee-joint.—Mr. Callender excised the knee of this child in October last for disease, but the operation never showed a favourable result. The tibia and femur did not unite, and great displacement took place. The child was very young—five or six years of age—and the joint was composed only of cartilage. Under these circumstances it was almost impossible to get osseous union, the processes of repair going on much more slowly in cartilage than in bone. Mr. Callender amputated in the usual way, but used no ligatures. He stated that he had practised torsion even of the femoral artery in every case of amputation with no unfavourable results, except when the vessel gave off branches at the point of the amputation, in which case he used a ligature.

SELECTIONS FROM JOURNALS.

MIDWIFERY.

DECIDUAL HÆMORRHAGIC ENDOMETRITIS IN CHOLERA PATIENTS.—Dr. K. Slavjansky observes (*Archiv für Gynäkologie*, vol. iv, part 2) that the so-called pseudo-menstruation in cholera patients, as well as the pains resembling those of labour, the increased movements of the foetus, its death, and the occurrence of abortion or miscarriage, have been described by previous writers; but the exact condition of the female sexual organs in cholera has not been investigated. During the epidemic of cholera in St. Petersburg in 1870, Dr. Slavjansky made a number of observations, the results of which he has communicated to the Obstetrical Society in Leipzig. In twelve non-pregnant women who died of cholera, the sexual organs were almost without exception diseased. The part of the uterus that had undergone most change was always the mucous membrane; it presented the condition known as acute hæmorrhagic inflammation, attended not unfrequently with partial destruction or even almost entire removal of the membrane. In one case only was there observed a combination of this form of inflammation with the diphtheritic form. This condition explains the hæmorrhages which take place, without any necessity for assuming the existence of pseudo-menstruation; while the pains may in like manner be referred to the changes that have been described as occurring in the uterine membrane. Dr. Slavjansky examined the bodies of two women who died a day after abortion, while the subjects of cholera. One woman was in the fourth month of pregnancy, the other in the sixth. The morbid changes were similar to those observed in the non-pregnant cases. That part of the mucous membrane which formed the decidua was most affected, and the disease extended also to the foetal membranes. Purulent infiltration was most marked in the uterine decidua, and gradually diminished in intensity in the membranes of the foetus. In the case of six months' pregnancy, the alteration was greater and more extensive than in the other; and extravasations of the size of hazel-nuts were observed in the decidua serotina. Dr. Slavjansky recognises the disease of the mother as the exciting cause of the abortion, and explains the death of the foetus by the diseased condition of the placenta which he found in both cases. The epithelium covering the villi was greatly altered, so that only some finely granular masses could be found here and there in its place. The important physiological bearing of this epithelium on the process of foetal respiration readily explains how its destruction should lead to the death of the foetus.—*Wiener Medizin. Wochenschr.*, February 22nd.

SUBPERITONEAL EMPHYSEMA OF THE UTERUS DURING PREGNANCY.—Dr. Dohrn of Marburg relates in the *Archiv für Gynäkologie* (vol. iii, part 3) the case of a woman, aged 36, pregnant for the third time, who was received into the lying-in institution in July 1872. In both her previous labours, the forceps had to be used; the children were still-born. The pelvis was found, on examination, to be narrow. At the end of August, she having arrived at the thirty-fifth week of pregnancy, an attempt was made to induce premature labour by the ascending douche and by the introduction of bougies; but, although these means were persevered in for five days, only feeble uterine contractions were excited. On September 2nd, the waters escaped, the os uteri being a centimeter wide, and the cervix thick. The foetus lay high in the pelvis; its pulsations were distinct, but ceased the next day. No progress was made with the labour. The foetus began to undergo decomposition; and the woman had rigors and diarrhoea in the night. On September 4th, strong labour-pains set in, and in five hours a foetus was expelled in an advanced stage of decomposition. After this, the uterus remained distended with gas; it reached an inch above the umbilicus, and gave a clear sound on percussion. Friction and compression had no effect in causing the expulsion of the placenta

or of gas; nor did the latter escape when a catheter was introduced into the uterus. On examination, emphysematous crackling could be perceived over the whole anterior surface of the uterus. The placenta was removed by the hand; very little gas escaped, and the condition already described remained unchanged. On the morning of September 7th, the patient died. An examination of the body was made twelve hours after death. On opening the abdominal cavity, a moderate amount of very foetid gas escaped. The peritoneum showed signs of incipient inflammation, especially at its lower part. The uterus extended nearly as high as the umbilicus; its anterior surface had a dark green appearance, and the peritoneum was raised from it over its whole extent by gas. The peritoneum had burst in two places in the anterior wall. There were some cavities filled with putrid gas in the muscular structure of the uterus, and some gas was also present in the cavity of the organ. Dr. Dohrn explains the occurrence of the emphysema by supposing that a partial laceration of the uterus took place, and that the gases developed from the putrefaction of the foetus were forced through the rent between the uterus and its peritoneal covering. Death was the result of the subsequent laceration of the peritoneum and the escape of the gas into the abdominal cavity. Dr. Dohrn has been able to find a notice of only one similar case, which was recorded by Dr. McClintock in the *Dublin Quarterly Journal* in 1858.—*Allgemeine Medizin. Central-Zeitung*, February 26th, 1873.

HYPERTROPHY OF THE CERVIX UTERI DURING PREGNANCY: SPONTANEOUS INVOLUTION.—In connexion with a case described by Matecky, in which the anterior lip of the os uteri was elongated during pregnancy to the extent of five inches, Scharlau describes an analogous instance (*Beiträge zur Geburtsh. und Gynäkol.*, vol. ii, part 1). A healthy woman, with a normal pelvis, who had already had several easy labours, while walking in the street one day towards the end of her last pregnancy, suddenly felt that something was protruding from the vagina. Dr. Scharlau found a bluish red tumour, about as large as an apple, hanging outside the vagina by a pedicle a little more than an inch long. This pedicle could be traced up to the anterior lip of the os uteri. There were weak labour-pains, the os uteri was dilated, the membranes were entire, and the head presented. During delivery, which was rapid, the tumour was pushed quite on the mons Veneris by the child's head. The placenta was expelled spontaneously. The tumour was replaced within the vagina, and decoction of linseed with liquor plumbi was injected several times daily. On the tenth day, no appreciable difference between the lips of the os uteri could be detected; and in six weeks the vaginal portion was not only in no way enlarged, but even rather small and atrophied.—*Wiener Med. Wochenschr.*, February 22nd.

SURGERY.

AMPUTATION THROUGH THE METATARSUS.—Dr. G. W. Topping records (*Michigan Univ. Med. Journ.*, July, 1872) a case in which this operation was performed. F. J. P., aged 18, on the 4th of January, 1870, by a single blow from an axe, severed the first four toes in a slanting direction, partly through the heads of the metatarsal bones, and partly through the metatarso-phalangeal articulation. The detached portion hung only by a piece of skin an inch in width, and the bones protruded so as to render amputation higher up necessary. An oval flap was dissected from the dorsum of the foot, the metatarsal bones sawn through the middle, and a large flap taken from the plantar surface by cutting from within outward. Two arteries only required ligatures. The wound healed very quickly, leaving a sound and useful stump.

HYDROCELE OF THE SEMINAL VESICLE.—Dr. N. R. Smith records, in the *Baltimore Lancet*, a case in which he was called in consultation to a gentleman represented to have retention of the urine. A large pyriform tumour occupied the cavity of the pelvis, and also that of the abdomen, higher than the umbilicus. There was no gaseous resonance over any part of it, but when percussed it sounded and vibrated like a fluid in a tensely distended sac. The patient was passing, every hour, half an ounce of perfectly normal urine. The attending physician had repeatedly introduced the catheter into the bladder, and had not drawn more than an ounce of urine; not in the least reducing the volume of the tumour. Dr. Smith introduced a long catheter fairly into the bladder, but only an ounce of urine escaped. The tumour was not in the least reduced, and as he moved the catheter, he distinctly felt the instrument in close contact with the walls of the abdomen. After another careful exploration externally, Dr. Smith introduced his finger into the rectum, and found the prostate normal, but on carrying the finger deeply and to the left of it, he encountered an

elastic tumour communicating the sensation of a sac tensely distended with fluid. On palpating with the other hand on the abdomen, the vibratory motion of a fluid was manifest. The matter was now clear. There was a hydrocele of the left seminal vesicle. Tapping through the rectum was effected with an ordinary straight trocar. On withdrawing the stylet, the fluid issued with force, and in a few minutes ten pints of a brown serous fluid were drawn off. No unpleasant symptoms followed, but in four weeks the tumour refilled and was again tapped. After this, there was no recurrence.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ROBUR.

THE introduction to public favour of a new alcoholic beverage, recommended on excellent authority for general use, is a matter of some importance. Robur was announced as a new tea-spirit. We have been asked to form a judgment of it; and, as dietetic qualities of an unique character have been claimed for it, and it is rising into popularity, we have thought it right to subject it to critical examination. Full opportunities have been afforded for investigating analytically its properties at its place of manufacture; and to these we have, of course, added the examination of samples purchased of retail agents who supply the public. Medical men are likely to be questioned as to the character of this new form of alcohol; and the materials for an opinion are of two kinds, theoretical and practical. Theoretically, the combination of theine and tannin with alcohol has much to recommend it. Theine and alcohol both belong to the class happily defined by M. Angel Marvaud in his recent treatise as *economisers of force*—"aliments d'épargne"; and otherwise as *aliments preventive of waste*—"aliments deperditeurs". In the discriminative use of alcohol, and in the right use of tea as a beverage, this function must always be considered as of prime importance. It is to this, even more, perhaps, than to its stimulating properties, that a large part of the value of alcohol in fevers and in exhaustive diseases must be held to be due. The universal instinct of mankind has selected the plants which furnish theine or its analogues, caffeine and theobromine—tea, coffee, and maté—in virtue of similar properties. That alcohol gives wings to tea, every one who has added a *chasse* to a cup of black coffee as a digestive after dinner, or has "laced" a cup of tea with a liqueur of brandy after exhaustive fatigue, will readily testify. The same principle is involved in the composition of robur. It is a pure spirit, singularly free from fusel-oil, with which most brandy and whiskey are largely contaminated. It is extremely palatable—most so when mixed, like toddy, with hot water, and sweetened. It contains a considerable percentage of theine, with tannin and sugar. It leaves on the palate the pure flavour of tea, and no more wholesome spirit can be found. As a spirit intended for popular use, it has many great merits. It does not tempt to intemperance, for it rather helps than muddles the intelligence; and, if robur were substituted for gin, brandy, or whiskey, it would, we think, be a clear gain to the cause of temperance. The digestive properties which Dr. Lankester asserts it to possess are such as have long been attributed to the *chasse café*, which it resembles in character. Medically, it is, we think, likely to be more useful than any of the forms of spirit which are in daily use. On the whole, we consider that no more has been claimed for it than is fairly its due, and that it is a valuable addition to the dietetic list.

GRIMAULT'S GUARANA.

SPECIMENS have been forwarded to us by Messrs. Newbery and Sons, Newgate Street, of guarana prepared by Messrs. Grimault in two forms, as a pulp, and in the form of powder of the seeds. The experience of a large number of eminent practitioners has confirmed the first recommendation by Dr. Wilks in these pages of these seeds (seeds of the *Paullinia sorbilis*) as of very great value in many forms of that most uncertain, unmanageable, and tormenting disorder, sick-headache. It is not infallible, or universally useful; but, if it fail altogether in one case, it will often be found to achieve as signal a success in the next. It is sold in *flacons*, of which a twelfth part is a dose; or in boxes of powders, separated into packets. It is most simply administered stirred into sugar-water, and is by no means unpleasant in flavour.

EFFERVESCING LOZENGES.

A PHARMACEUTICAL novelty introduced by Mr. W. T. Cooper, of 26, Oxford Street, has really something of the character of a surprise. A dry effervescing medicated lozenge is a form of preparation which has obviously much to recommend it; but, until lately, no means had been found of overcoming the difficulties which stood in the way of producing it. It is very convenient to be able to carry an effervescing draught in one's waistcoat-pocket, and to have in this portable solid form all the advantages of a mode of administering medicines which heretofore required an apparatus of tumblers and a water-bottle. Among the preparations submitted to us are effervescing morphia lozenges, effervescing ipecacuanha lozenges, effervescing protocarbonate of iron lozenges, and chlorate of potash lozenges. The iron and chlorate of potash lozenges are particularly agreeable and useful inventions; and so also is an effervescing saline lozenge, which is quaintly but well described as a "thirst-quencher".

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 15TH, 1873.

DEBATES AT THE PATHOLOGICAL SOCIETY.

THERE is, we believe, some probability that the view may prevail, which we last week expressed, of the inconvenience likely to arise from the limitation of time which it was proposed to impose upon the speakers in the debate about to open at the Pathological Society on the thesis of Dr. Wilson Fox on Tubercle. The more that view is considered, the more sound it will, we think, be found, and the greater the favour it will conciliate. It must indeed be apparent, that half an hour will barely suffice for the statement of Dr. Wilson Fox's views, not to speak of their orderly and adequate development, and their illustration by reference to drawings and specimens, which will, of course, need description and expository argument. To discuss views such as these, ordinarily requires greater space of time and amount of matter than to state them. The original speaker may be content, if necessary, with a bare statement: those who follow him and any who differ from him may easily require to show at length how far they agree with or differ from him, and their reasons.

So far as has yet been observed, there is very little tendency to diffuseness on the part of speakers at the English medical societies: this is greatly to their credit, and it has tended very much to edification that the rule in our societies has been to cultivate a studious brevity and conciseness which might have satisfied Lacon. It may, however, reasonably be doubted whether harm has not resulted from the excessive prudery of diction and speculation to which the prevalence of this rule has led. The cultivation of the study of facts is a grand pursuit; but a fact is not necessarily the more valuable from a systematic abstinence from the attempt to interpret it or to draw from it legitimate deductions. Nor is it an offence against science, to attempt from time to time to group facts and to trace by their aid the operation of law. It would be immensely refreshing to some minds to watch the growth of doctrines in the place in which their foundations are laid, and to rise sometimes from the particular to the general. How many hundred, how many thousands of specimens of tubercle have been brought before the Pathological Society of London we know not, and shall not attempt to count. Is it not recorded in fourteen volumes of *Transactions*? The number of hours passed in their description and the amount of muscular and nervous

fatigue involved in handing them about and examining have, beyond doubt, been on the whole well spent; but a good many hours spent in the debate of these interpretations need not be grudged. We have pathologists—but what are the views of the English pathological school on the anatomy of tubercle? Where and when have they been debated? Thanks to the initiative of Dr. Fox, or of whoever prompted him to the step which he has taken, we have now an opportunity of a full and what would doubtless be, if left to pursue its course unchecked, a very instructive and profitable debate. But it will only be worthy of the Society and of an English school of pathologists, if it be really unchecked. Let us hear what those have to say who have most studied the question. Let Dr. Fox have whatever time he thinks necessary for the fullest exposition of his thesis—an hour, or, if necessary, two or three hours; and let those follow him with similar privilege who have a right to be heard. The most advisable course is, that intending speakers should inscribe their names, and should speak in the order in which they have inscribed them. They need not and ought not to be called upon to speak upon the spur of the moment, for this is indeed incompatible with the soundness and completeness of debate which is desirable; but after proper time has been afforded to prepare and marshal their views, to arrange their drawings and specimens. Dr. Fox will exhibit a large collection of preparations under the microscope, and of drawings. Those who desire to enter, therefore, the discussion seriously, should have leave and opportunity to do the same. If no one be prepared immediately to follow Dr. Fox, the discussion may be adjourned. But its adjournment need not in any way imply the closure of the debate. It should be adjourned to be reopened on successive nights, until, in the opinion of the President, the Council, and the Society, enough has been said, and the time should arrive for concluding the debate, when the President would probably deliver a summary of what appears to be the outcome of the discussion. Such a debate, carried on for as many nights as should be necessary for its development, need not monopolise the whole time of the Society while it lasted; for it might be provided that in any case the discussion should be adjourned when nine o'clock arrived, so as to allow time for showing some recent or other specimens of interest at the time; and if the speaker of the night on tubercle had not concluded his argument when the clock struck, he could reserve the continuation of his address till the next meeting. In this way, a really worthy debate might be carried on; and a contribution might be made to science which would serve to establish some definite principles. It is true that we are at present in a state of transition as to all our opinions on the pathological history of tubercle and other morbid growths; but it would be at least satisfactory to ascertain, as nearly as we can, where we are to-day, and on what round of the ladder our feet are planted. It would probably be necessary to provide that, in the event of such a debate taking place as we have sketched, abstracts of the statements should be published in the *Transactions*: that would be an innovation, but not an objectionable one.

THE RECENT ARMY MEDICAL WARRANT.

FOR many months past, the Army Medical Department has been on the tiptoe of anxious expectation about the new warrant. It is, we believe, no secret that financial reasons alone have prevented its seeing the light long ere now, and the same potent influences have doubtless been

instrumental in depriving it of its only important clause. The labour of the mountain has been rewarded by a trifling result; the much hoped for retirement on £1 a day after twenty years' service has not been conceded, and the whole document is virtually little more than a reprint of its predecessors. It is true that the option of claiming half pay after twenty years has been made absolute, instead of depending on the decision of a medical board; but the rate allowed is much too small to tempt many to sacrifice the great additional pecuniary advantages secured by an additional service of five years. It is therefore evident that no real impression will thus be made on the languid flow of promotion; and as this is the only section bearing in any way on this important point, we can hardly accept Mr. Cardwell's confident assertions respecting the future limitation of junior service to fifteen years. Considering that the period of promotion has gradually risen from ten to twelve, and finally to fifteen years; that vacancies occur at very rare intervals; and that several hundred assistant-surgeons are waiting their turn, we see nothing for the Department but that utter stagnation which existed before the Crimean War, and which compelled a former Director General to act as assistant for twenty-two years. It is well known that the Indian Medical Service now absorbs all the best men; that the standard of candidates for our own army is deteriorating year by year; and the time cannot be far distant, when something far more effectual must be done to encourage competition and remove discontent. But as a sop in the meantime, the medical officer is no longer to be called assistant; and this, no doubt, is a boon, although the alteration implied will cut far deeper than the mere change of nomenclature. This is beyond all question the first step towards the general staff system which has been long under consideration, and which is known to be received with much favour by some of the leading medical advisers of the Government.

The "surgeons", as they are now styled, are to be removed in great measure from regiments, and placed on the staff; and at all our large camps or stations, central hospitals will be formed, where the sick can be tended with much greater economy both of labour, stores, and *personnel*. Instead of each regiment having its own separate building, with special doctors, sergeants, orderlies, medicines, etc., many will be massed under one roof; and not only will the opportunities of professional observation be increased, but the road will thus be paved for a future very considerable reduction of establishment. At Aldershot, for example, the labours of the Department have been considerably lightened by the appointment of a specially qualified officer to perform the duties of pathologist; and the system of centralisation will no doubt be carried out fully in other directions. But this is the bright side of the picture; already we hear of very grave dissatisfaction among regimental surgeons at being reduced, by removal of their assistants, to do many small, trifling, yet tedious duties, which cannot fail to distract their attention from more important sanitary and medical work. They will henceforth be dependent for aid on favour, not on right; they will be much tied down, and more frequently even than formerly compelled to pay for professional substitutes during their absence on leave; and to the assistant the change is one of no benefit. No regimental appointment is to be held for more than five years; and at the end of a period when he has become thoroughly liked and trusted by officers and men, and fully conversant with his duties, the surgeon is removed to the staff, and exposed to the constant variations of service which render this branch usually distasteful. At the end of another five years, he may be appointed to another regiment, where he must form new friends and ties, and all his former valuable knowledge of men's constitutions and characters, and all his special medical relations with the women and children as their family doctor, are completely wasted. By this new regulation, more work will probably be got out of the Department, but much of its amenity will be gone, and individual cases of much hardship will arise, where men who have paid considerable sums for exchange into particular regiments, and have invested largely in uniforms, with mess and band subscriptions, will be suddenly removed for general duty. If this really turn out to be the case, let us hope that the question of compensation will be more than "taken into consideration." Mr.

Cardwell also proposes to make every surgeon on promotion at once a surgeon-major; so that this title, once the exclusive property of the senior medical officers of the Guards, and afterwards bestowed on surgeons over twenty years' service, now sinks to a lower level. Inspectors and deputy inspectors-general are now to be termed surgeons and deputy surgeons-general. If this adoption of transatlantic nomenclature have any real significance beyond our usual feverish desire to conciliate the great American nation, it may possibly be looked upon as a recommendation that the seniors of the Department should occasionally descend from their office-stools, and mix themselves with the real practical work going on around them.

One word on the increased rate of soldiers' pay. Mr. Cardwell promises him a clear shilling a day. Now it has been shown by a correspondent in the *United Service Gazette* for March 1st, that this, if meant to be taken literally, is fallacious; that the actual increase will not average more than a halfpenny; and that the soldier, after deduction of all necessary expenses, will not have more than sixpence a day to spend. Of course, those accustomed to military calculation understand this; but it is a pity the statement was put forth so roundly as to cause certain dissatisfaction in the minds of less instructed persons joining the service. The great problem of the present day is, how to get and keep good recruits; for although sufficient in numbers, their *physique* is wretchedly poor; and the attractions of service seem to them so slight that desertion has alarmingly increased of late, and has even attained the alarming proportion of one-third of the entire number. We have shown how objectionable are the new regulations concerning the occasional total stoppage of pay while in hospital; and we can imagine what an effectual check will be given to recruiting, when the country is overrun with broken-down victims from syphilis and other "self-imposed" disease, ventilating their by no means imaginary grievances for the benefit of the rustic mind. Thus the "clear shilling a day" may be liable to misinterpretation; but we are convinced that anything like such a sum placed absolutely in the soldier's power would be truly ruinous in its effects. To the thoughtless and dissolute, it would mean drink, debauchery, and speedy destruction of health; for it is well known that the present soldier's ration is quite insufficient for his support, and that he finds it necessary to supplement its deficiencies out of his own resources. But the money which the steady soldier spends on food, the *mauvais sujet* squanders on beer; and we cannot but regret that advantage has not been taken of the present rearrangement of detail, to concede the additional quarter pound of meat which has been strongly recommended by medical officers for years past.

Mr. Cardwell, we know, has had the interest of our army sincerely at heart; we have to thank him for great reforms; and we have no doubt that the force of public opinion will be acknowledged by the modification of some of the more indefensible points of the new scheme.

COUNTER-PRACTICE AND COUNTER-CONFERENCES.

THE opinions of one of the most representative pharmaceutical chemists on the subject of counter-practice, publicly and officially expressed, are not altogether matters of indifference. Mr. Sandford having held for several years the position of President of the Pharmaceutical Society, and being still a very active and leading member of the Council, speaks with some authority on the subject; and it is to be regretted for his own sake, and for the sake of others of less position, on whom his example can hardly fail to have an influence, that his utterances are not more satisfactory. The discussion has arisen incidentally upon another subject of less general interest; and in the form which it now assumes, it deserves altogether separate consideration. The only practical objection which Mr. Sandford urged lately against the admission of ladies to the Pharmaceutical Society—from which it is proposed, contrary to the spirit of the law, to exclude them—was stated by him thus: "I think there may be more fitting occupations for them than listening to the description of bodily ailments over our shop-counters." He observed that "in the privacy of the household" they heard a good deal of our

ailments; but he somehow considered that to listen to them "over the shop-counter" was "upsetting the natural and Scriptural arrangement of the sexes". With the validity of the argument we are not here particularly concerned, but we pointed out the unpleasant peculiarities of its character. It involves nothing less than the assumption, that listening to the ailments of the sick is the proper occupation of chemists and their assistants; and that women are unfitted for the pharmaceutical business, because their sex unfits them for counter-practice. It is perfectly obvious that this amounts to a direct declaration of the propriety of counter-practice, and a denunciation of disability against women as being unsuited to engage in it. Mr. Sandford addresses a letter to us to-day, which will be found in another column, in which he seeks to maintain his position by slightly shifting it. Denouncing counter-practice as the consequence of listening to his customer's ailments, he explains what he holds to be a true picture of his duties.

He must first listen to those ailments in order to advise the patient whom to consult; and then the patient, "after consulting that physician, details to you the particulars of the interview, and expects you to aid him with more definite instructions as to the mode of using the prescribed remedies". Most prescribing physicians will, we think, be interested in receiving these revelations of the mysteries of a Piccadilly chemist's shop. It had never been made so widely known before, we think, that a distinguished pharmacist attached so much importance to the function of acting as a medical directory and recommending physicians. If this be so important a part of the business, it might be well that it should be done a little more in the daylight, or that chemists in the habit of listening to their customers' ailments and advising them as to their best medical resort, and subsequently as to the details of the interview, should allow physicians the opportunity of occasionally inspecting their list. If a number of A's patients are in the habit of procuring medicine at the shop of B, who systematically listens to the details of the interview, and has, perhaps, a much higher opinion of another physician C, the consequences might be inconvenient to A. But the fact that the chemist considers it to be part of his bounden duty to listen to the details of the interview with the physician, and to give the patient more definite instructions, is altogether a new and striking view. We had no idea that these interesting preliminary and subsequent conferences went on and formed part of the chemist's business; and we must confess that the information is more novel than agreeable. We cannot help thinking that, with the view of strengthening his case against the employment of the unhappy sex which is debarred from taking part in these counter-conferences, Mr. Sandford is not only overlooking their inherently objectionable character, but is overrating their frequency and importance.

Counter-conferences seem to us not much less objectionable than counter-practice. To identify him with the one—as his words seemed to us to suggest—would be, Mr. Sandford emphatically declares, "a gross libel". It seemed likely, however, that others would put upon them the interpretation which to our uninitiated and unpharmaceutical apprehension they plainly bore; and, although his present explanation varies, it does not, we think, much improve their meaning. Even, however, from his own point of view, it may occur to him that, since in the unregenerate chemists shops to which he refers "prescribing is not discouraged as it ought to be," it will rather help the view of which he announces himself a partisan, and discourage counter-practice, if the sex which is "unfit" for it—are admitted not only to stand behind counters, but to a share in the councils of those who regulate pharmacy, as all those who honourably and skilfully practise it have a clear right to be. Moreover, it must be assumed that the counter-conferences which he describes can only take place, as a rule, either on neutral ailments, or between male customers and male dispensers. Perhaps he may not have reflected how much may have been lost of the advantages of this practice to those who like himself approve of it or tolerate, owing to the absence from the counters of lady-pharmacists, by whom lady-customers might be admitted to the like privilege of recounting their ailments.

If, then, we cannot admit Mr. Sandford's letter to be very sound in theory, or agreeable in its disclosure of practice, neither can we admit it to be cogent as a piece of argument. But in this he only pays the penalty of defending with zeal an inherently weak cause.

THE TRAIL OF THE MILKMAN.

SINCE the attention of medical officers of health was drawn to the possibility of enteric or typhoid fever being spread by the supply of infected milk from dairies, there have been several remarkable instances recorded where the causation of severe localised outbreaks of fever has been detected by following the trail of the milkman along his walk. We very recently recorded two such instances in Manchester and Leeds; and we have to-day to refer to another, which has been sagaciously investigated by Dr. J. B. Russell, the newly appointed Medical Officer of Health for Glasgow. In an extremely interesting report which he submitted recently to the Health Committee of Glasgow, on an outbreak of enteric fever at Parkhead, he has demonstrated that this outbreak was traceable to the distribution of infected milk from the house of a dairyman in which enteric fever prevailed. Without entering into all the details of the investigation, which are furnished with all the required exactitude, we may say that, out of seventy-three families supplied by this dairyman in five streets where a "milk-census" was taken, twenty-two had fever. Enteric fever is more or less endemic in Glasgow; and, out of families supplied elsewhere, only two had fever. Thirty-two families supplied by this dairyman yielded thirty-six cases of fever; the fever was of a fatal type. Out of these forty-six families, there were six deaths; while there were no deaths from it elsewhere. In two families so supplied, the two individuals seized were the only members of the family who used that milk. The dates of sickening corresponded with the other indications pointing to this dairy as the source of infection. The conclusion of Dr. Russell's report deals with the practical subject of the prevention of this fatal form of poisoning, and we commend it to the attention of our sanitary authorities and medical officers of health, as of very considerable importance. He says:

I regard this as an extreme illustration of what must frequently happen where the sale of articles of food is conducted in close connexion with families, with all their attendant ailments. Milk is, from its composition, a peculiarly favourable medium for the propagation of the germs of disease, and particularly of enteric fever. It is seldom that this fever is diffused by milk in circumstances which permit us to trace the disease home to the milk so clearly as in the Parkhead case; and it is very likely that many apparently inexplicable outbreaks of enteric fever in families are caused by milk, or even solid food, contaminated in the retail shops, especially among the poor.* It is a very common practice in all parts of the city for parties to live and rear families in rooms behind shops, through which often the sole access lies, and in which groceries, milk, provisions of all kinds, sweetmeats, fruit, etc., are sold. These shops are "served" by one or both parents, or some grown-up child; and, when infectious disease enters such a family, it cannot fail to be the source of quite peculiar risk to the public. I have been so much impressed with this, by a series of cases in point, that I submitted the following three illustrations to Mr. Lang, Procurator-Fiscal, to ascertain what legal powers existed to deal with them.

"1st. Provision shop, served by mother of family, consisting of eight individuals, living in back room. A lodger slept on a shake-down in the shop. Two of the children had enteric fever in the beginning of January, and the death of one of them drew our attention to the case. I put the alternative before the parties, either to shut the shop or allow me to remove the family to the Reception House and Hospital; and, after much hesitation, the latter course was adopted.

"2nd. Shop for sale of groceries, including bread, butter, ham, potted-head, etc.; similar construction to previous case, only back room much smaller, and no back door; occupied by man, wife, and three children. The man had been ill of enteric fever for twenty-five days before we discovered the case. During all that time, the excreta must have been carried through the shop in order to reach the midden by the close; and the shop was served by the man's only nurse and

attendant, his wife. I put the same alternative before this woman, instantly to shut the shop, or to send her husband to hospital; and she adopted the former course.

"3rd. I am aware of a baker's shop doing a flourishing business. The proprietors live in a house of four apartments in direct communication with the shop. Two members of this family had small-pox—one dying after an illness of fifteen days."

Mr. Lang writes his opinion, "that persons situated as described in the various instances given in your letter have not 'proper lodging or accommodation.'" It will therefore be possible, by this and other provisions of the Public Health Act, to deal with such cases so as to save the poorer classes from the obvious dangers of contagious sickness in such circumstances. I have therefore issued, through Mr. Macleod, to the sanitary inspectors an instruction, "that systematic attention be paid to the health of all families living in the circumstances described, by a more routine visitation than from the character of the people and the locality might be thought necessary. Any case of infectious disease discovered must be specially and immediately reported to the medical officer. He wishes the greatest care to be taken not to injure the interests of the parties referred to by unnecessary publicity in the discharge of this duty; but at the same time there is a very obvious danger to the public from their private sickness, arising from their mode of living, which quite warrants the interference of the Department."

VITAL STATISTICS IN INDIA.

WE are glad to see that the new forms for vital statistics in India, ordered by the supreme government of that country, are now coming into general use. It will be long, however, before they attain to any thing approaching to the accuracy of the returns of the Registrar-General in this country. Until the authorities are able to obtain an accurate census of the towns and "rural circles" in the various provinces, anything like certainty in such documents cannot be expected. This has never yet been obtained. The people of India, particularly in the rural districts, regard with a suspicious eye all who are engaged in "numbering the people". Some, perhaps many, years must elapse before they can be sufficiently educated to appreciate either the good intentions of their rulers in this particular, or the advantages to themselves of a thorough system of vital statistics. Still, a good beginning has been made, and returns are now no longer confined to the European official classes (civil and military), or to the great presidency cities of Calcutta, Madras, and Bombay, but are being rapidly extended to the towns, cantonments, and "rural circles" of British India.

We have before us some copies of the Weekly Returns of Births and Deaths in the Punjab, issued under the superintendence of the indefatigable sanitary commissioner of that province, Mr. De Renzy. A glance at the returns, confessedly imperfect as they are, must satisfy any one that such documents for the first time place an amount of information in the hands of the authorities, such as they never possessed before, on the health of the population committed to their rule, the movement of epidemics, and the effect of the sanitary improvements which the active health-officers of India are incessantly labouring to introduce. The difference in the death-rate of the different towns, under the supervision of the sanitary commissioner of the Punjab, is very considerable, showing marked differences in their sanitary condition. Thus, while the death of Dehli was, in the week ending on the 11th January, thirty-one *per mille*, it was eighty in Peshawur. That city was suffering from two fatal epidemics—viz., small-pox and pleuropneumonia. We are familiar enough in this country with the highly contagious nature of pleuropneumonia among cattle, but not as a contagious epidemic among men. From the evidence before him, Mr. De Renzy considers this disease, as it raged in Peshawur, to be communicable, "and only to be prevented by the strictest measures of segregation and disinfection". The disease was most fatal among adults, a large number of whom it destroyed; while small-pox, on the other hand, almost entirely confined its ravages to children. While on this subject, we cannot refrain from noticing a remark made by the Lieutenant-Governor of the Punjab in his discriminating review of the Annual Sanitary Administration Report of the Punjab for the

* I have a strong suspicion that an outbreak of enteric fever in Drygate, last autumn, was promoted by the milk-supply. At any rate, it prevailed chiefly among the customers of a dairyman who had that fever in his own family.

year 1871, now before us. "The Lieutenant-Governor is of opinion that every effort should be made to increase the working power of the vaccination department, and not to diminish it, while the enormous mortality in the Punjab from small-pox shows how very much there remains to be done in this direction." And he adds: "The ravages of cholera engage the unceasing attention of medical and sanitary officers, yet the mortality from cholera is absolutely insignificant compared with that from small-pox; and no exertions can be too earnest or too unremitting to eradicate the disease, or mitigate its severity." This is true, more or less, all over India; and we commend this pregnant passage to the consideration of the ignorant fanatics who in this country are doing their utmost to subject the people of England to a similar "enormous mortality", by throwing obstacles to the spread of vaccination among the people.

It is announced that Mr. Le Gros Clark is about to resign the senior surgeons'hip of St. Thomas's Hospital.

THE new Jewish hospital in Vienna was opened on Sunday last.

LORD NORTHBROOK laid the foundation stone of the new Calcutta Native Hospital on the 3rd instant.

MR. GODLER has been appointed Surgical Registrar at University College Hospital, in the room of Mr. Marcus Beck, resigned.

By a Parliamentary paper just issued, it appears that in England and Wales 1,065 persons died in 1870 from cholera, and 25,113 from diarrhoea.

THE *Berliner Klinische Wochenschrift* of March 3rd says that eighteen cases of exanthematous typhus have occurred in the Charité Hospital of Berlin. There have been five deaths.

DR. SALAMON STRICKER, Extraordinary Professor of Experimental Pathology in the University of Vienna, has been appointed Ordinary Professor of General and Experimental Pathology in the same University.

THE Swiney Lectureship in Geology has been given to Dr. Carpenter. The chair is tenable for five years, and is restricted to Doctors of Medicine of the University of Edinburgh. Dr. Carpenter was Swiney Lecturer a few years ago.

THE Guardians of the Union of St. George, Hanover Square, have decided to place the lunatics in a temporary ward in the Mount Street Workhouse, believing that this will cure many mild forms of insanity. The medical officer is to have an additional £50 *per annum*, and there are to be two medical certificates in each case of lunacy.

PATHOLOGICAL SOCIETY OF LONDON.

AT the meeting on Tuesday, March 18th, Dr. Wilson Fox will open a discussion on the Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lungs. Specimens and drawings of tubercle will also be exhibited by Dr. Andrew Clark, Dr. Burdon Sanderson, Dr. Lionel Beale, Dr. Moxon, Dr. Bastian, Dr. Powell, Dr. Cayley, Dr. Henry Green, etc. Dr. Fox's specimens will be open to inspection for one hour before the commencement of the meeting.

THE DENTAL HOSPITAL.

WE understand that some difficulties have presented themselves in securing the premises in Leicester Square for the purposes of the Dental Hospital and School. The governors of the hospital recently resolved, in General Court, to move their quarters; but the proprietor of the coveted buildings fails to show any enthusiasm in the matter, and hesitates to meet their proposal. The moral atmosphere of the locality sought after by the authorities of the Dental Hospital, is hardly of a character which should specially commend itself for the site of the Dental School of London. Still, if the premises be particularly desirable, it seems a pity that any difficulties should now obstruct the

attainment of the object in view. The Dental Hospital School has made very rapid progress during the past two or three years, the number of students has largely increased, and the school is being most successfully developed. Increased accommodation is necessary, and hence the anxiety of the authorities to obtain more commodious quarters. It is probable that the Medical Council will soon be supplied with a more suitable home than its present abode in the Dental Hospital; and thus, should the Leicester Square scheme fall through, increased accommodation, sufficiently extensive at least for some years, would, under these circumstances, be placed at the disposal of the Dental School, if they elect to remain where they are.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

DR. LUSH, M.P. for Salisbury, has accepted the presidency of the Association in the following letter.

March 3rd, 1873.

Dear Mr. Barnes,—I am deeply sensible of the honour conferred on me by the Poor-law Medical Officers' Association in electing me their President. I feel also how much ought to be done by me in that capacity, and how very far I shall fall short in the fulfilment of its duties. Relying, however, upon the cordial aid and counsel of the Committee and the forbearance of the Association, I cannot for a moment hesitate in accepting the post. Trusting shortly to see you, I have the honour to be,

Yours very faithfully.

J. Wickham Barnes, Esq.

J. A. LUSH.

LES HOSPICES DE LONDRES.

THE examination and investigations made by Mr. Greatorex, solicitor to "les hospices de Londres" under the will of the late Lord Henry Seymour, into the French "liquidation" in respect to the *hospices* in Paris, and his visits to the French authorities, have resulted in a gain to the English charities of £14,700 beyond the sum originally contributed. By that sum, each of the eighty-five charities on the list would receive an additional payment. Each had already been paid £582; and it has been arranged at once to pay £83, making £56,252 to the English charities.

LADY CHARLES KER.

LADY CHARLES KER, we are happy to learn, has made a singularly happy and complete recovery from her most serious injuries. Sight, hearing, memory, are all restored. She is now able to walk; and, with the exception of occasional head-pains, there is no complaint. There is absolutely no disfigurement; and it is to be hoped that shortly Lady Charles may be restored to the enjoyment of the society of her friends, and be able to resume her usual habits of life.

SMALL-POX IN VIENNA.

IN the week from February 16th to 22nd, 273 new cases of small-pox occurred in Vienna; these, added to the cases already under treatment, made altogether 1,295, of which 268 recovered and 66 died. From the beginning of the present year to February 22nd, there were altogether 2,564 cases of the disease in the hospitals and in private practice; of these, 1,499 recovered and 537 died. These figures denote some diminution in the severity of the disease.

THE HEALTH OF M. THIERS.

AN occasional correspondent in Paris writes to us as follows, under date March 12th. "It is very difficult for the public to learn the truth concerning that which has during the last week most deeply interested them. I gather, however, that the first derangement in M. Thiers' health was about ten days ago—a rather severe loss of blood by hæmorrhage from the nose, soon followed by another. He did not seem much affected by it, and was able to make a long speech in the Assembly two days afterwards. The very day he made that speech, he was seized with some pain and difficulty of breathing, ascribed to a rheumatic attack in the respiratory muscles and diaphragm. It scarcely interrupted his habits. On Sunday morning he looked very low; but people who saw him yesterday morning tell me that he has resumed his usual appearance of health." Another correspondent writes: "I have it on

the best authority that the illustrious chief of the State is now as well as ever he was ; but he has been advised, as a precautionary measure, by his medical attendants, to keep within doors and put aside all work. To carry out these injunctions to the letter would be death to a man of M. Thiers' temperament, and he is, consequently, up and at work as usual—that is, from five in the morning till twelve at night."

MEDICAL FEES IN ITALY.

THE subjoined are the terms of an agreement entered into by the medical practitioners of Dogliani, in the province of Cuneo in Italy. It is published in *L'Indipendente* of February 25th.

1. The undersigned promise and engage to preserve among themselves true and sincere friendship, reciprocal brotherhood, and mutual union of interest. 2. They promise and engage to afford gratuitous help and assistance to any one of their number who may be prevented from practice by illness, temporary absence, or other impediment. 3. None of them will visit each other's patients except with the permission or in the presence of the medical man under whose care the patient is. 4. In cases of dispute, and when it is necessary to have recourse to the tribunals, they will adhere to the tariff of fees published some time ago in the *Indipendente*. 5. In ordinary cases, the minimum charge for a visit within town limits to persons not paupers shall be one *lira* (tenpence). 6. For visits beyond these limits, the minimum fee shall be a *lira* and a half (fifteen pence) for every kilometer of distance (about three-fifths of a mile). 7. A night-visit shall be considered equivalent to six ordinary visits ; and remaining all night with a patient shall be regarded as equal to ten visits. 8. The minimum fee in a case of consultation shall be ten *lire* (8s. 4d.) for the more wealthy, and seven *lire* (6s. 8d.) for the less wealthy but not poor.

FLOODS AND AGUE.

IN a letter to Mr. Secretary Bruce, Mr. Neville-Grenville, one of the members for East Somerset, has stated "that for weeks past a hundred and fifty square miles in the county of Somerset have been under water ; the streets, cellars, and living-rooms in Langport are flooded ; and many villages are literally isolated. This is likely to be the case for some time to come ; the existing means are utterly inadequate to afford a remedy or prevent a recurrence. At Sedgemoor, ague is prevalent ; and fever is expected to follow the subsidence of the flood." Mr. Neville-Grenville further adds : "It is idle to appoint medical inspectors at salaries of £600 a year, if such a vast fever-bed as Sedgemoor is to remain untouched ; and yet I see no possibility of doing anything effectually, if the dissent of a majority of the landowners is allowed to veto any scheme involving expense." Through the energy and public spiritedness of this gentleman and of Mr. Deedes Warry, the Inclosure Commissioners consented to send an engineer down to report on the floods, on condition that these gentlemen would guarantee £200, which they instantly did. Mr. Grantham, the engineer, will have to report on three points—first, the extent of the floods ; secondly, the cause of the floods ; and thirdly, why the five or six different jurisdictions now in force, endeavouring to control the flood, are "in a state of jar".

ALLEGED ABUSES OF CHARITIES IN MANCHESTER.

OUR Manchester correspondent writes :

The medical charities of Manchester are just now on their trial, there being an impression abroad that, as charities, they are generally abused. Several charges have been brought against them in the public press, the chief of which are—the system of recommendations ; the great number of patients who, being perfectly able to pay for professional aid, get their advice and physic for nothing ; and the enormous and unnecessary cost involved in the various hospitals and dispensaries which results from their being entirely independent of each other. An elaborate paper was lately read before the Manchester Statistical Society, by a Mr. O'Hanlon, in which, following the lead of Mr. Fairlie Clarke's London investigations, he arrived at the conclusion that the medical charities of Manchester give relief to the majority of the entire population of the city, which of course involves the corollary that the charities are openly and shamelessly abused. Another writer, supported by the editor of the *Guardian*, uses strong terms against the employment of recommendations, quotes Scotland as a land where such barbarous im-

pedimenta have been swept away with the greatest advantage, and looks upon the Manchester public as a purblind race of miserable men for putting up with such anachronisms. Dr. J. Watts (the politician, not the physician) affirms that the united cost of the various institutions is extravagant and unnecessary, and argues that it would be materially decreased by amalgamating the charities. Other plans are advocated by other writers—each man, indeed, appears to have a plan of his own ; but the majority seem to think that a medical El Dorado would be attained if the provident system were applied to the medical institutions generally, and that the sooner the Manchester Royal Infirmary ceases to cumber the ground the better.

There is no reasonable doubt that medical charities are, like everything else, abused to a greater or less extent ; but the belief is, that it is to an infinitely less extent than is stated by Mr. O'Hanlon and his followers. No one who has any practical acquaintance with the outpatient rooms of our hospitals and dispensaries, or with the social status of the in-patients, can for a moment doubt that the conclusions based upon such statistics as those of Mr. O'Hanlon are absolutely misleading. The stories of patients coming to the hospital in private conveyances, presumably their own ; of the gorgeous apparel of many of the gentler sex of patients, are perhaps amusing, but not very reliable. An occasional patient may apply for, and receive, gratuitous hospital advice who is able to pay ; but the opinion of the medical men generally is, I believe, that these are very rare exceptional cases, and that when they occur it is due to the patient having previously been treated without advantage by his club or family doctor ; for it is a fact which should not be lost sight of in the controversy, that the poor suppose that they are obtaining the best possible professional aid in applying to a hospital ; that they are, indeed, appealing to Cæsar ; and, although they might be able to pay an occasional halfcrown for "a bottle", it is altogether beyond their means to put down a guinea for every consultation with a consulting-physician or consulting-surgeon. It is believed, moreover, that if the present system is to a certain extent abused, it would be to a much greater degree abused by abandoning the system of recommendations. The givers of these, indeed, do not in all, or perhaps the majority of instances, inquire strictly into the condition of the applicant ; but the system, nevertheless, exercises a certain deterrent influence over the minds of improper applicants, and serves the further purpose of giving the subscribers a personal interest in their special charity, and of enabling the staff of any hospital to form some estimate of the probable number of patients, and, consequently, of the number of officers required to do the work. Nor is the proposition of Dr. John Watts looked upon with much favour, for it is felt that to unite all the medical charities might be economical, but would, in depriving the charities of their individuality, rob them of the very breath of their nostrils ; that in such a huge co-operative society, a dead level of medical mediocrity would prevail ; and that it would, consequently, be the worst training school for students in the first place, and the most indifferent establishment for patients in the second. The same objections do not apply to pulling down the Royal Infirmary and building a larger and better suburban hospital. Many medical men think, indeed, that this should be done—a central establishment being kept for the reception of accidents, and a great pavilion-hospital erected near the future school of medicine in Oxford Road. It is calculated that the land on which the present Infirmary stands would realise more than a million sterling, which would probably be sufficient to erect another and more suitable building. In regard to the introduction of the provident system into our hospitals and dispensaries, grave doubts are felt as to the wisdom of such a proceeding, for it is thought that the great body of general practitioners would probably be seriously injured by such institutions, inasmuch as plenty of really well-to-do people would consider it neither degrading nor dishonest to enrol themselves as members, so that at last it would come to pass that the entire artisan and a great number of the shopkeeping classes would be drawn into these establishments, with what loss or even ruin to many medical men may readily be conjectured. In brief summary of the different points which have been touched in this letter, it may be stated that the feeling of the profession in Manchester is, that the controversy is a mistaken and a mischievous one, in so far as it leads the subscribers to our various charities unreasonably to doubt that they are wisely conducted, and even leads some of the weaker among them to withdraw their subscriptions altogether. It is felt that the charities are not abused to anything like the extent stated, or, indeed, to an appreciable extent at all—in other words, that the recipients of hospital relief are, as a rule, the class for whom hospital aid is meant to be provided ; i.e., that they are drawn neither from the pauper nor from the affluent classes, and that, even when one of the better classes does apply, he does so in order to obtain the best professional assistance, which he could not procure if he had to pay for it. These

cases are, moreover, as a rule, of interest beyond the common, and so may be utilised for clinical purposes to the students. It is believed that recommendations are of use in giving subscribers a direct interest in the charity, and also in affording a gauge of the probable number of applicants for assistance. The principle of concentration and amalgamation is looked upon with disfavour, because the opposite condition of separation is believed to be instrumental in producing a very marked vitality and vigour. Lastly, the provident system is contemplated with something of fear, as it seems probable that such a system would press very unfairly and very heavily upon the shoulders of the general practitioner.

It is perhaps not unfitting, that I should mention that one of the more immediate benefits accruing from the recent appointment of seven additional honorary officers to the medical staff of the Infirmary, is the better attention given to the out-patients, who for the future will only be seen by members of the honorary staff, one or more of whom is in attendance every day in the week.

THE ADULTERATION ACT.

WE learn with pleasure that Dr. Redwood, the Professor of Chemistry in the Pharmaceutical Society, has been appointed to the office of Analyst, to discharge the duties required by the Adulteration of Food Act, 1872, for the parish of Clerkenwell and the districts of St. Giles and Holborn.

THE VOLUNTEER MEDICAL EXAMINATION.

THE *Volunteer Service Gazette* says the first examination for a certificate of proficiency under the new regulations for volunteer medical officers, has been held at the Army Medical Department, Whitehall Yard. The Board consisted of Inspector-General Muir, Deputy Inspector-General Rutherford, and Dr. Snell. The examination was comprehensive, extending over almost the entire duties of medical officers in the field, and including hospital and ambulance *matériel*. Military hygiene was fully gone into, and military surgery was not omitted. Dr. John Murray, the Assistant-Surgeon of the London Scottish, and the Honorary Secretary of the Volunteer Medical Association, was the only candidate. He succeeded in passing the examination, and is, therefore, the first volunteer medical officer who has earned the proficiency grant under the new regulations.

MEDICAL SOCIETY OF LONDON.

THIS Society held its centenary festival at Willis's Rooms on Saturday, March 8th; Mr. Thomas Bryant, the retiring President, occupied the chair. There was a large attendance of Fellows and friends of the Society. After the usual loyal toasts, the Chairman proposed "Prosperity to the Medical Society of London." He narrated the history of the foundation of the Society, and the good work it had done in the different departments of the profession. In it all departments were represented. The President pleaded for the earnest co-operation of the Fellows for the future advancement of the Society. By its removal to spacious and convenient premises increased accommodation and comfort were afforded. Dr. Habershon, the President-elect, responded, and prognosticated a brilliant future for the Society. Mr. Hancock, in responding to the toast of "the Examining Bodies," proposed by Dr. Hare, pointed out the great exertions that had been made, and were being made, to bring examinations to a high pitch of excellence, and hoped to be able at no distant date to congratulate the profession upon the establishment of one portal of admission to the practice of our calling. Dr. Routh proposed "the Army, Navy, and Volunteers," and Mr. Henry Smith "the Visitors." Dr. Fayrer and Dr. Tilt replied. Mr. J. F. Clarke proposed the health of the past Presidents. Of these, he saw many at the table; but many whom he had known most intimately and had highly esteemed had passed away. He well remembered the day when the father of the President took the chair of the Society, and congratulated the son in worthily filling the same post during an important session. Dr. Richardson responded to the toast. Dr. Risdon Bennett proposed Mr. Bryant's health, and stated that he had known and esteemed him for many years, and had admitted him to the Fellowship of the Society during his year of office. Mr. Bryant

having responded, Mr. Erasmus Wilson proposed the health of the Lettsomian Professor and of the Orator. Mr. H. Lee and Mr. Gant briefly replied. The health of the Council and Officers of the Society were then proposed, and responded to by Dr. Cholmeley. The silver medals for services rendered to the Society were awarded—one to Dr. Day-Goss, the Librarian, and another to Mr. Royes Bell, the outgoing Secretary. Mr. Bell thanked the Council on behalf of Dr. Day-Goss and himself for their kind appreciation of their services. He regretted that a severe attack of illness prevented Dr. Day-Goss from being present. During the evening, the members of the English Glee Union sang many excellent songs, and the evening passed off very pleasantly and successfully. Dr. Habershon has been elected President of the Society for the next year; and Mr. F. Woodhouse Braine succeeds Mr. Royes Bell as Secretary.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE new President of this Society, Dr. C. J. B. Williams, took the chair for the first time at the meeting on Tuesday evening. In doing so, he said that he regarded his election to the presidency of the Society as one of the highest honours that could be conferred by the medical profession. The Society stood paramount of all others, whether in regard to the character of its past and present members, to the utility of its library, or to its volumes of *Transactions*, which contained some of the most important contributions that had been made by members of the medical profession. He would explain briefly the small share which he had taken in the work of the Society. About the time when he first became a member, he was appointed Professor of Medicine in University College, and Physician to University College Hospital; and the duties of these offices, with a large private practice, had not only kept him from societies, but interfered with his work as an author. His health had also broken down, so that for twenty years he was able to do very little. It had, however, pleased a merciful Providence to restore a large amount of vigour to him in his green old age; and he hoped in his position as President, with the support of the members of the Society, to be able to do some work. He trusted that papers would be contributed in good time in the session, so that there might be an opportunity of recording and discussing them. At present, he was happy to say that there was a good supply of papers in hand. He had never any fear of the Society being interfered with by the others which had sprung up in late years; there was enough of practical work for it to accomplish. He concluded by expressing a hope that he would have the support of the members. Two papers were then read: one by Dr. John Murray, on three interesting and apparently unique cases of Multiple Fibromatous Growths in Children; and the other by Mr. Pollock, on a remarkable case of Mollusum Fibrosum.

THE "TWO-HEADED NIGHTINGALE."

PROFESSOR VIRCHOW gave an address at a meeting of the Berlin Medical Society last month, on the case of the conjoined twins Millie and Christine, properly known as the "two-headed nightingale," who were seen by many of the profession in this country in 1871. As far as he had been able to ascertain, there was a gradual approximation of the spinal columns to each other, beginning at about the second lumbar vertebra, until, in the sacral and coccygeal regions, there was complete fusion. This blending, however, was limited to the posterior part; two distinct pelves being traceable laterally and in front. The condition of the nervous system he regarded as interesting. While the independence of motion in the lower extremities indicated that the spinal cords were separate though lying in one canal, there was also an indication of fusion of nerve-substance, in the presence of a zone a few centimeters in diameter, equally sensitive to both. Beyond this, there was a certain community of feeling in the lower limbs; each of the sisters feeling stimulants of sensation applied to the other, though not in a clear and distinctly localised manner. The case, Dr. Virchow said, was a most remarkable and unusual one; at least, he had not been able to find record of any precisely similar one in literature; it most

closely resembled that of the Hungarian twins, Helena and Judith. It was at one end of a series of irregular formations known as *pygopages*, of which the other extreme was represented by an individual seen in Berlin some years ago, who had an automatic tumour on the back—evidently representing a second individual. Between these extremes, numerous gradations had been met with.

SALE OF POISONS.

AN attempted suicide at Hoxton has led the police magistrates at Worship Street to the discovery that there is no legal restriction on the sale of "red precipitate." The druggist stated that his sales averaged above a hundred packets per week.

ADULTERATION OF BREAD.

A DEPUTATION from the Master Bakers' Trade Protection Society has had a conference with Dr. Tidy about the working of the Adulteration Act. It was acknowledged that alum was used by bakers of cheap bread to whiten their inferior flour, that rice was used in the same class of bread for the sake of increased moisture and weight, but that the potato decoction was more or less necessary to all bakers for promoting fermentation. Dr. Tidy condoned the potato mixture, but objected strongly to the rice, and thought that from fifteen to twenty grains of alum in a quartern loaf would be clear proof of adulteration.

THE HEALTH OF LONDON.

THE Registrar-General reports rather more favourably of the public health during the past week. The average death-rate for London and the twenty large cities included in his return is 28 per 1,000. The lowest local rate is 18 at Portsmouth, the next 20 at Norwich, then 22 at Leicester. London is on a par with Hull and Sunderland at 25. The maximum rates are 31 at Newcastle, Oldham, and Liverpool; 36 at Manchester, and 37 at Salford. The gross number of deaths in the metropolis was 67 under the average of the corresponding week of the last ten years.

TYPHOID FEVER AND WATER-SUPPLY.

THE medical officer of health for St. George's, Hanover Square (Dr. Corfield), has called the attention of the Committee of Works to the fact, that in a house where he found a case of typhoid fever, the waste-pipe of the drinking-water cistern went into the drain. He had traced several cases of typhoid fever and one or two deaths to this cause. He asked if he should give notice in such a case to make the waste-pipe drain elsewhere, and, in case of non-compliance, summon the offender? The Committee of Works, on the motion of General Sir William Codrington, decided to instruct Dr. Corfield to serve a notice in the case he had brought before them.

DRAINAGE OF SOUTHPORT.

A RECENT meeting of the governors of the Southport Convalescent Hospital was turned into a debate on the question of the Southport sewerage. The chairman and others present expressed strongly their disapproval of the delay and negligence of the Corporation in carrying out an effective system of sewerage for Southport. Four years ago, the Corporation obtained powers to borrow £32,000 for sewerage objects, but they had been since then, as the mayor said, "resting on their oars", and thus allowing the sewage filth to be still deposited on the shore in front of the hospital, and two hundred yards above the low-water mark of ordinary tides. There were three thousand cesspools in the town; and the drains were stated by the chairman to be in a most filthy condition. Dr. Lang said that whenever the temperature rose to 60 deg., and the wind blew from a certain quarter, they had diarrhoea in the hospital; and that from North Meols, an adjacent parish, zymotic diseases were never absent. Mr. Morgan, from the Local Government Board, is reported to have "commented in very strong terms on the foul and filthy state of the Duke Street outlet from Southport"; and we agree with Mr. Gaskell, that the time has come for "the Corporation of Southport to put their oars in motion, and, by a long pull

and strong pull, remove an offensive and defective condition which is one of the relics of a barbarous and uncivilised community", and which must be most injurious to Southport as a bathing and invalid station, and the site of a large convalescent hospital.

MILITARY HOSPITALS.

AN army circular, dated the 6th instant, lays down, in regard to the new medical system, that military hospitals will in future be organised and administered either as (a) general hospitals, or (b) station or field hospitals. Subject to the supreme authority of the governor or commandant of the hospital, or of the general or other officer in command of the troops, the internal administration of all military hospitals will be under the control of the officers of the Army Medical Department. In general hospitals, the governor or commandant will continue to perform the duties assigned to him by the medical regulations. The Army Hospital Corps will be organised to form a service for the performance of all subordinate hospital duties, under the orders of the officers of the Medical Department and under the control of the Director-General of the Army Medical Department. The hospital services hitherto provided for in the Medical and Purveyors' Regulations will be distributed according to the following general principles: (a) The Medical Department will be responsible for the proper direction and use of all the stores and supplies delivered for hospital service, and also for foreseeing and making timely requisitions for the wants of the hospital. (b) The Control Department will be responsible for obtaining and delivering at each hospital the necessary stores and supplies upon receiving a demand from the medical officer in charge. (c) The Royal Engineer Department will be responsible for the general supervision and maintenance of the buildings and fixtures of hospital buildings.

ANATOMICAL MODELS.

THREE men connected with the place called "Dr. Kahn's Museum"—John Davidson, John Dennison, and Henry Romilly—were summoned at Marlborough Street on Saturday for exhibiting certain indecent and demoralising representations for the purpose of gain. There was a second summons calling on them to show cause why the models seized by the police should not be destroyed. Mr. Besley (instructed by Mr. Collette, on behalf of the Society for the Suppression of Vice) appeared for the prosecution. Mr. George Lewis, jun., who appeared for the defendants, said it was their wish that the magistrate should not pass judgment on this case, but that facilities should be at once given for sending it before a higher tribunal, and getting the question finally decided whether models which had been publicly exhibited for twenty-five years really formed the subject of a criminal offence. Mr. Knox said he should commit the defendants to the Central Criminal Court, and send the models to Newgate for the inspection of the judges. Bail was accepted.

SCOTLAND.

MUNIFICENT BEQUESTS OF THE LATE MR. G. A. CLARK OF PAISLEY.

By the will of the late George A. Clark, Esq., thread manufacturer, Paisley, £20,000 has been left for the establishment of four bursaries in Glasgow University, to be called the George A. Clark Bursaries, to be held by the successful competitors four years, and to be so arranged that one bursary will be competed for each year. The deceased gentleman has also bequeathed £1,000 to the Paisley Infirmary.

EDINBURGH ROYAL MATERNITY HOSPITAL.

THE annual meeting of the subscribers was held on Monday, the Lord Provost presiding. The secretary and treasurer read the annual report of the directors, which stated that 210 patients had been admitted to the institution during the year, and that 320 out-door patients had been treated during the same period. In October last the managers of the Royal Infirmary granted the temporary use of the east wing of George Watson's Hospital, where the Maternity Hospital is now temporarily

located. The directors had resolved to dispose of the old hospital building as unsuited for the purposes of the institution, and they hoped to be able in the course of a month or two to ask the public to assist them in procuring satisfactory accommodation of a permanent character.

MEDICAL EDUCATION OF WOMEN.

MR. WALTER THOMSON, of Shahabad, has just forwarded the second moiety of his gift of £1,000 to the committee for securing a complete medical education to women in Edinburgh.

IRELAND.

HIS Excellency the Lord Lieutenant has appointed Dr. Patrick O'Keeffe, for some years medical officer to the Canaway Dispensary district, to be medical officer of the convict prison at Spike Island.

A VENDOR of diseased meat in Dublin last week was fined by the presiding magistrate the sum of £10 and costs, which example, it is to be hoped, will have the effect of putting a stop for the future to such nefarious practices.

THE UTILISATION OF PEAT.

THE utilisation of the turf bogs of Ireland for manufacturing and domestic purposes is a subject which has attracted for a considerable time the attention of scientific observers, more especially of late, owing to the enormous increase in the price of coal. The Irish Peat Fuel Committee was formed some months since to examine the subject, and more particularly to inquire into the manner in which peat is used on the continent. The report of this committee recommend as the most advisable plan that peat should be converted into a dense substance, first by a tearing operation, and afterwards drying the material and subjecting it to pressure. A company has been started to work in this way with Mr. Box's patent, and there is little doubt that it will prove a profitable investment; for it has been ascertained that two tons of turf are equivalent in heating power to one ton of good coal. In some parts of Germany, ordinary turf is used as fuel for locomotive engines; and in Guinness' Brewery, in Dublin, it has been found that two tons of ordinary turf are more useful and economical in the furnace than one ton of coal, when sold at sixteen shillings the ton. The matter is one of considerable importance, when we consider the extent of the bogs in Ireland and the imperfect manner in which the peat is removed and sent to the market for consumption.

LECTURES ON SANITARY SCIENCE.

THE second of a series of lectures on sanitary matters, under the auspices of the Royal Dublin Society and the Dublin Sanitary Association, was delivered last week by Dr. Emerson Reynolds; the subject being on the "Discrimination of Good Water and Wholesome Food." The lecturer stated that the impurities often present in water used for drinking purposes, and the numerous adulterations to which articles of food are liable, had frequently been brought before the public. Most of these impurities could only be identified by the chemist and the microscopist; but it was often possible by very simple means to ascertain whether or not a particular article was impure or adulterated. Good water should be free from colour, unpleasant odour and taste, and should speedily afford a good lather with a small proportion of soap. If half a pint of the water be placed in a perfectly clean glass-stoppered bottle, a small portion of white sugar added, and the bottle freely exposed to the daylight in the window of a warm room, the liquid should not become turbid, even after exposure for a week or ten days. If the water become turbid, it is open to grave suspicion of sewage contamination; but, if it remain clear, it is almost certainly safe. Dr. Reynolds then mentioned the various articles with which tea is adulterated, including plum, ash, sloe, elm, elder, horse-chestnut, and oak leaves. These leaves were dried and prepared by roasting and other

preparations so as to resemble genuine tea very closely. The product was sometimes called "Maloo mixture." "Facing" was used for the purpose of colouring the leaves and increasing the weight; the articles employed were China clay, chalk, gypsum, French chalk, blacklead, Prussian blue, indigo, chromate of lead, carbonate and arseniate of copper, Venetian red, and white sand. The powders were attached to the leaves by adhesive materials. The lecturer then referred to the adulteration of coffee, cocoa, sugar, butter, milk, bread, flour, etc., and illustrated his subject by drawings magnified with the aid of the microscope.

HOSPITAL OUT-PATIENTS' REFORM ASSOCIATION.

THE first meeting of this association was held on March 6th, at the rooms of the Medical Society of London, in George Street, Hanover Square, Dr. A. MEADOWS in the chair.

Mr. H. NELSON HARDY, one of the honorary secretaries, read letters from medical and other gentlemen, expressing concurrence in the objects aimed at, and indicating views as to the best mode of obtaining a reform of the grave evils complained of.

The report of the committee was presented. It stated that the committee recommended the adoption of the following resolutions:—

"1. That each out-patient, at every visit to a hospital, shall be seen personally by one of the medical or surgical staff, and that no unqualified student be permitted to prescribe for out-patients."

"2. That a lay officer, attached to each hospital, be instructed to see the charity is not abused by persons being admitted as out-patients who are well able to pay the usual fees of practitioners, or to obtain medical attendance by provident dispensaries, or otherwise."

"3. That patients shall no longer be tempted to crowd to hospitals by the offer of medicine gratuitously. We are therefore of opinion that no medicines should be supplied to out-patients at hospitals, but that advice and prescriptions be alone given."

The CHAIRMAN said, that for fifteen years he had been practically acquainted with the working of the out-patients' departments of hospitals and dispensaries, and he took part in a movement which was commenced two years ago, for the same objects now aimed at. Some people were a little disappointed at what they considered the abortive character of that attempt, but this association should not be discouraged. He was aware that there had been no direct mitigation of the existing evils, but public attention was engaged for a considerable time. The profession had its notice called to the subject, and a general array of useful facts was collected. Before the investigations, there was only a floating idea in the minds of the profession and the public, that there were abuses, but since then attempts to get reform had been made at St. George's, the Middlesex, and, he understood, other hospitals as well. He had heard it argued that the matter was not one for the medical profession, but for the public. But this abuse of the out-patient department was a great injury to the medical profession, and especially to the general practitioners. The point to which the attention of the public should be called particularly was, the degrading influence exercised upon the recipients by this mode of relief, for the public *morale* was lowered by it. There could be no doubt that the number of unworthy recipients of hospital relief, *i.e.*, persons who could afford to pay, was fast increasing, and the moral influence of this was of very great public importance. This applied to the whole country, as well as to London. In Nottingham, the manufacturers themselves obtained hospital relief, and the *Manchester Guardian* had lately published statistics, showing that, of the population of Manchester and Salford, one in four-and-a-half received medical relief from charities. An examination of the position of the persons applying for relief at the hospitals had been made by a medical gentleman, and he stated, that of one hundred, two only could be called paupers; twenty might be classed as struggling poor, fifty were able to pay by a little effort, while twenty were decidedly able to pay. It was hard to say how these abuses had grown up, but at first there were no out-door departments to hospitals. The system grew up out of the defective Poor-law medical arrangements. The Poor-law medical arrangements were better now. A move had, at all events, been made to amend the Poor-law. As there was to be a Hospital Sunday for the metropolis, the evils already existing were likely to increase instead of diminishing, and the large sums subscribed by the public would be worse than thrown away. Moreover, there was the danger, that should

the general public get the idea that a very large proportion of the patients for whom the money was subscribed were persons who were able to pay, there would be a reaction, and a withdrawal of subscriptions. [*Cheers.*]

Mr. T. HOLMES moved the first resolution. He had thought that little or nothing would be required to recommend it, but Dr. Mackenzie had said, in a letter, that a very large number of the cases which came into the out-patients' department were so trivial that they did not require much attention. Well, then, the services of the hospitals should be limited to cases which had some gravity and importance in professional teaching. He was of opinion that it would not be well to make the out-patient department a paying part; but it should be a consultative part of the hospital system. A good many well-to-do persons who could afford to pay came—not as an abuse, or because they were unwilling to pay, but because they had not received benefit from their own advisers, and desired to obtain an opinion. The hospitals now throw open their doors indiscriminately; and so numerous were their patients that the institutions had to avail themselves of the services of unqualified persons. There was no defence for such a system, and it was really an imposition on the applicants. If the motion were carried out, the practice in the out-patient department would be reduced to a fourth or fifth.

Dr. FORD ANDERSON seconded the motion. When an unqualified student, he had prescribed for thousands, without knowing the people or the cases; and he looked back upon this with the greatest and most sincere regret. In one instance within his knowledge, a person for whom the physician had prescribed mercurial powders for a day or two was ordered to go on ("*rep.*" being written by some one, a student or the hall-porter); and the effect was, that he was profusely salivated. This was one of the consequences of indiscriminate medical relief, which brought such crowds as overtasked all the strength of the staff.

Dr. HEYWOOD SMITH had come intending to oppose the resolution; but the explanation of Mr. Holmes had shown him the necessity of what was proposed.

Dr. JOSEPH ROGERS said that no unqualified person could attend a pauper; and the same should apply to other persons.

Dr. GLOVER suggested that the remedy would be in increasing the staff, and not in the rejection of patients. He moved an amendment to this effect, and Dr. CHAPMAN seconded it.

Mr. BENSON BAKER opposed the amendment. The out-patients of hospitals could be divided into three classes—those who could afford to pay for medical men, those who could afford to pay to a dispensary, and those who could not pay at all, and should, therefore, come under the Poor-law. Such being the facts, the out-patients, without wrong to any, might be greatly limited.

The amendment was lost, and the original motion was carried.

Dr. A. P. STEWART said, in proposing the second resolution, it was a hopeful sign of the present day that all institutions were exposed to a scrutiny; and, though for many years it was a favourite idea that a medical charity could not be imposed upon, experience proved that they were to a very great extent. He wrote a pamphlet on the subject several years ago; and he was glad when the Charity Organisation Society took the matter up. Neither medical charities nor individuals should do their alms blindfold, as they were thereby doing an immense harm and no good. He entered at length into what he had seen in his own experience; and he declared that the dispensary-letter was often the first step down the ladder to the workhouse. He declared that many rich people subscribed to charities merely as a means of giving their servants medicines and gratuitous attendance in case of illness, and this should not be allowed to continue.

Dr. DRYSDALE seconded the motion, which was spoken to by Dr. Rogers, Mr. Holmes, and was carried.

Mr. BENSON BAKER proposed the third resolution, which was seconded by Dr. STAINES. After a few words from Mr. Holmes, Dr. Connor, and Dr. Heywood Smith, it was amended by having words put in to give persons who had been in-patients, and who continued as out-patients, the right to receive medicines, and it was then carried.

Mr. STREATFEILD proposed the following names as members of Committee:—*President*: Dr. Meadows. *Vice-President*: Dr. J. F. Staines. *Treasurer*: Mr. Walter Smith. *Honorary Secretaries*: Dr. J. Ford Anderson and Mr. H. Nelson Hardy. *Other Members of Committee*: Dr. Leslie, Dr. A. Grant, Mr. H. Hanks, Mr. R. H. S. Carpenter, Dr. Davison, Mr. J. E. Richards, Mr. Benson Baker, Dr. Thomas, Dr. Anstie, Dr. Drysdale, Dr. Tilbury Fox.

The meeting closed with cordial thanks to the chairman.

THE ADMINISTRATION OF ETHER IN AMERICA.

WE have the following interesting communication from Mr. C. S. Tomes, who is now in America, having recently received an invitation, as we lately mentioned, to deliver the graduation address to the dental students of the Harvard University. Mr. Tomes writes from Boston under date February 24th, 1873.

As the substitution of ether for chloroform, as an anæsthetic, is now attracting much attention in England, a few words from an eye-witness of its use in America may not be out of place. During a somewhat brief sojourn, I have sought every opportunity of watching its administration, and the unanimous testimony of the leaders of the profession here, has made me, though previously a little prejudiced against it, an entire convert to its use. Not many days ago, I was told by a surgeon, that he would not dare to use chloroform in Boston, for, in the event of a fatal result ensuing, he would not receive the moral support of the profession: and, indeed, in face of the experience here collected, this is not to be wondered at.

It was at the Massachusetts General Hospital, Boston, that ether was first administered for surgical operations, and I cannot do better than describe the course of procedure at this institution, which, from the eminence of its staff, no less than the higher standard in medical education which it has assumed, unquestionably takes the first place among the hospitals of this country.

The patients are etherised in small anterooms adjoining the operating theatre, the ether being administered by one of the junior house officers, who is, in nine cases out of ten, not yet qualified. Two or three ounces of pure anhydrous ether are poured upon a conical sponge, which has been previously moistened with water; this is at once placed over the patient's mouth and nose. If he struggles, which he generally does, as he experiences the suffocating sensation produced by the pungent vapour, he is held down by main force till he succumbs to its influence. Ether is lavishly poured upon the sponge, so that it often runs down upon the patient's face and neck, and half a pound is not rarely used for a single administration.

Not uncommonly there is a good deal of spasm of the expiratory muscles, stridulous breathing, and laryngeal spasm, and I have several times seen a degree of asphyxial lividity far transcending that which I have ever observed during the administration of nitrous oxide. Though these asphyxial symptoms are strongly pronounced, not the smallest anxiety is felt; the sponge is merely removed for half-a-minute, or a minute, the blood at once recovers its colour, and the administration is proceeded with. Long experience has taught that there is no danger to be apprehended, and I do not remember to have ever seen the administrator feel the patient's pulse. When anæsthesia is complete, the patient is picked up, and carried in the arms of a stout attendant into the theatre, and when there, no special attention is given to his position. Should it happen to be more convenient, he is placed upright, in a sitting posture, in Dr. H. J. Bigelow's admirable operating chair, and kept thus throughout protracted operations upon the mouth or neck.

To one familiar with the dangers of chloroform, and the care needful in handling those under its influence, the whole procedure, from first to last, looks perfectly reckless, and yet it is fully justified by experience, for at this hospital, which almost monopolises the operative surgery of New England, and presents a very large weekly list of operations, there has never been any misadventure attendant on the use of ether.

But, safe though it be, it is not a pleasant anæsthetic, although the sense of suffocation and the violence of the patient may be partly obviated by more gradual administration, or, better still, by Mr. Clover's plan of dulling the sensibilities of the patient by a few whiffs of nitrous oxide. They are apt to be noisy on recovery, so that they are, at this hospital, temporarily placed in a small ward, whence, after complete recovery, they are transferred to their own wards. Vomiting, during and after recovery, is common. The impression left on my mind is, that they almost all vomit, though I am informed that this is not the case.

Nevertheless, unpleasant as it is to the patient, and alarming as the appearances sometimes are to one not accustomed to its use, I do not think that anyone could long visit the American hospitals without becoming imbued with that confidence in its safety which is universal amongst the profession here; a confidence which is borne out by the fact that the Massachusetts Medical Improvement Society, having appointed a committee to investigate the fatal cases alleged to have been due to its use, not a single well-authenticated case could be found by them. I am well-aware that the matters related in this letter are

tolerably familiar to your readers already, but the freedom and entire fearlessness with which it is given here, is, so far as I know, not all realised by the profession in England, it seemed worth while to relate what I have seen of its use; and, I may add, were chloroform given in the same way, and with the same absence of all precautions, the deaths would count by hundreds.

THE NEW EDITION OF THE PHARMACOPŒIA OF THE UNITED STATES.

II.

THE remarks made in a former number were directed chiefly to the weights and measures used in the present work, which, on account of the complex way in which they are used, and from their differing in value from those used in our own *Pharmacopœia*, render a comparison with our own standard a matter of some difficulty.

The United States *Pharmacopœia* is divided, as usual, into two parts *Materia Medica* and the *Preparations*. The *materia medica* portion is again divided into a primary and a secondary list, consisting apparently of what are considered to be but little used and unimportant drugs, which, oddly enough, are almost exclusively of American growth and introduction into medicine.

Among the additions to the primary list of former editions, are oxalate of cerium; hypophosphites of calcium, iron, potassium, and sodium; iodoform; both American and Indian hemp; conium-seed; bark of cotton-root; Calabar bean; origanum; and three others promoted from the secondary list—viz., galverium, hydrastis, and rue.

The *Preparations* embrace directions for the pharmaceutical compounds, and also elaborate manufacturing processes for producing a few ounces of these commercial chemical products, which are usually made by the ton. It is difficult to understand what it is that induces compilers of pharmacopœias to make their books cumbrous by expending type and paper upon processes which it is perfectly certain nobody will ever attempt to carry out. The only possible pretext for the introduction of such processes is, that the *Pharmacopœia* may in certain cases be used as an educational book. If this were so, it would be at least worth while to ascertain what are the processes practically in use, and describe them properly; but this is not done. Indeed, the majority of almost all the processes here described are those of an amateur who has never been inside a chemical factory, and knows absolutely nothing of the practice. These remarks are applicable to the British and Continental Pharmacopœias, as well as to that of the United States.

Among the preparations are the aceta, which continue the same as before. The acids next claim attention. Hydriodic acid is omitted. Hydrochloric acid is still called "muriatic". Phosphoric acid is directed to be prepared by a process which, although not exactly that by which pure phosphoric acid is prepared by manufacturing chemists, yields an acid of excellent quality; but an alternative process is given—viz., to dissolve the commercial product called glacial phosphoric acid in water. The result attained is quite another thing. Pure phosphoric acid cannot be attained in the hard glacial form, for, when evaporated in platinum, it yields a soft sticky substance. The glacial phosphoric acid of commerce is an acid salt of some alkali. Formerly it consisted of acid phosphate of ammonium; now it consists chiefly of acid phosphate of sodium, obtained by fusing syrupy phosphoric acid and crystallised phosphate of sodium together, about equal weights of each. By the one process, a pure acid is obtained; by the other, only a diluted solution of the acid salt of an alkali; and yet the two results are considered by the United States *Pharmacopœia* to be exactly the same.

The ammonium group, which before had only one preparation—viz., the valerianate—has now added to it benzoate, bromide, purified chloride, and the iodide. Bromide of ammonium is directed to be made by an old-fashioned process. That of adding bromine to caustic ammonia is far better, as a pure solution of bromide of ammonium is obtained without filtration or precipitation. The product is described as white, becoming brown on exposure; but the pure bromide is not at all changed by exposure: any change indicates the presence either of iodine or of iron. Aluminum sulphate is a preparation, the utility of which is not apparent. What advantage is to be gained by getting an alum free from the small quantity of sulphate of potassium or ammonium contained in ordinary alum, is not evident. The process given will attain the object, supposing the object to be worth attaining. Two waters are added to the group aqua—the carbolic acid water, made from the glycerite, and aniseed water. Confections and cerates remain unaltered.

[To be concluded.]

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

THE next meeting will be held at Queen's College, Birmingham, on Tuesday, March 18th, at 7.30 P.M.

Members are requested to bring their microscopes, if possible.

WILLIAM HINDS, } *Honorary Secretaries.*
LAWSON TAIT, }

Birmingham, March 3rd, 1873.

YORKSHIRE BRANCH.

THE spring meeting of this Branch will be held at the Infirmary, Huddersfield, on Wednesday, March 19th, at 2.15 P.M.

The members will dine together at the George Hotel, at 5 P.M. Tickets (exclusive of wine), 6s. each.

Gentlemen intending to bring forward communications, or to be present at the dinner, are requested at once to communicate with the Secretary.

W. PROCTER, M.D., *Honorary Secretary.*

York, March 8th, 1873.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held at the Wynnstay Arms Hotel, Ruabon, on Thursday, March 20th, at 1 P.M.; R. CHAMBRES ROBERTS, Esq., President, in the Chair.

Gentlemen having papers or cases to communicate, will please to forward the titles of the same a few days before the meeting.

The dinner, to which members may invite friends, will be at 3 P.M. Tickets 6s. 6d. each, exclusive of wine.

D. KENT JONES, *Honorary Secretary.*

Beaumaris, February 12th, 1873.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE first meeting for the present year of the above Branch will be held on Friday, March 21st, at 2.30 P.M., at the Castle Hotel, Hastings; F. TICEHURST, Esq., in the Chair.

Dinner will be provided as usual at 4.30 P.M. Charge 5s., exclusive of wine.

Papers are promised by Dr. Bagshawe, of St. Leonard's, "On the Sequelæ of Measles"; Dr. Barry, of Tunbridge Wells, "A Note on Purpura Hæmorrhagica"; and the Secretary will exhibit some morbid specimens.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, March 4th, 1873.

WEST SOMERSET BRANCH.

THE spring meeting is appointed to be held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 3rd, at 5.15 P.M.

The following question will be discussed after dinner:—"What is the best plan of preventing the spread of infectious and contagious diseases, having special reference to Dr. Budd's mode of treatment by camphorated oil and baths?"

Gentlemen who intend to be present at dinner, or who may have communications for the meeting, are requested to send notice thereof to the Secretary.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, March 11th, 1873.

METROPOLITAN COUNTIES BRANCH: ORDINARY MEETING.

AN ordinary meeting of this Branch was held at 32A, George Street, Hanover Square, on January 31st; Sir WILLIAM FERGUSSON, Bart., F.R.S., President, in the chair.

Strain in its Relation to the Circulatory Organs.—Dr. J. MILNER FOTHERGILL read a paper on this subject. [It is published at p. 281.]—The PRESIDENT expressed the thanks of the meeting to Dr. Fothergill for his paper.—A MEMBER asked Dr. Fothergill whether he had investigated the cases of young men who had led very active lives as cricketers, etc. In agricultural districts, men exposed to hard work often reached long lives without suffering inconvenience. It was some-

times said by men that they worked better after severe exertion. Persons who took little exercise were often more liable to degenerative changes than those who led active lives.—Dr. SHRIMPTON regarded sudden transition from rest to exertion as most likely to produce disease. Training seemed to produce an equilibrium. During laborious work, he thought, the tonicity of the whole system was increased; but, when a weak person was suddenly called on to undergo exertion, then a special strain was put on the heart.—The PRESIDENT believed that the influence of moral emotion on the heart was often as great as that of physical action.—Mr. LORD referred to the action of the mind on the circulation. It had been said that, among the disorders of the first French revolution, there was a great frequency of heart-disease.—Dr. GEORGE HARLEY said that the influence of strain on the heart and arteries could not be doubted. But was the result owing to sudden strain on prepared or on unprepared organs? In Vienna, runners were very subject to heart-disease; and these were men who often had to start suddenly. He had noticed the same thing in patients under his care in London. He could scarcely admit that strain was a cause of atheromatous deposit; for this was as common among the upper classes as among those subjected to much exertion. It probably arose from constitutional causes. Scrofula was a very common cause of atheroma. He had no doubt that a great deal of heart-disease was excited, if not produced, by mental emotion. The so-called anæmic murmurs in women were doubtless often thus produced in weak hearts.—Dr. BEGLEY said that heart-disease traceable to mental emotion was very common among the insane.—Dr. AVELING had noticed that more disease was caused by inactivity than by strain. He would like to know the effect of posture. It was doubtful whether the modern position of sitting was so good as the ancient one of reclining.—Mr. STREETER referred to the importance of studying the nervous and vascular supply of the heart, and the conditions in which changes were produced in them. The perfection of health consisted in the maintenance of a proper balance between the functions.—Dr. STEWART said that suddenness of exertion had often much to do with the production of disease. But the standing position, maintained for a long period, caused great strain and fatigue. In runners, liable to undergo sudden and violent exercise, he had met with varicose veins as well as heart-disease. There were only general impressions as to the prevalence of heart-disease among various classes; but experience had shown that its frequency was great among shoemakers, and that this was lessened among them by the upright position. In various trades, posture seemed to tend to heart-disease; but, perhaps, the habits of the individuals also had much to do with it. He would like to know whether heart-disease was relatively more frequent among hammermen than among others, and whether it might not be in part attributed to drink.—Dr. FOTHERGILL having replied, the meeting adjourned.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 28TH, 1873.

P. HEWETT, Esq., President in the Chair.

Partial absence of Pectoral Muscles.—Dr. BURNEY YEO presented a boy, aged 14, in whom there was an absence of the sternal and costal portion of the pectoralis major and the whole of the pectoralis minor on the left side. The case had come under his notice as an out-patient at the Brompton Hospital, the great apparent depression and flattening of the right side of the chest having induced the boy's friends to believe that he was suffering from serious intrathoracic disease. The deformity produced by the absence of these muscles was very considerable, and was increased by depression and imperfect development of the right side of the sternum and the adjacent ribs and cartilages. No ensiform appendage could be felt. The clavicular portion of the pectoralis major was considerably hypertrophied, and the posterior fold of the axilla, containing the fibres of the latissimus dorsi, felt much thicker than that on the opposite side. There was a remarkable difference in the radial pulses on the two sides. That on the right side being exceedingly small and weak; seeming to indicate some irregular distribution of the vessels on the same side as the muscular abnormality. The boy in all other respects was well developed, though small. He had never complained of any weakness of the right arm, and he was not left-handed. Dr. Yeo believed that a similar muscular defect had been rarely observed during life. He had appealed to Professors Flower, Humphry, and John Wood, and they had all assured him that they had heard of no like observations in the living subject. Several anatomists had recorded partial absence of the pectoral muscles observed

on dissection, and; within the last few days, Mr. Taylor of Guildford had informed Dr. Yeo, that he had now under his observation a volunteer in the 2nd Surrey Militia, with complete absence of the left pectoralis major. Cyrtometric tracings, showing the difference in the dimensions of the two sides of the chest, were handed round.—Mr. NUNN showed drawings of a case in which there was absence of the latissimus dorsi and the sternal portion of the pectoralis major. He had brought the case before the notice of the Pathological Society seventeen years before. He had seen the absence of the pectoralis also in a patient who had been treated at a special hospital by means of a back-board, for out-growing shoulder-joint.

Overstrain of the Heart and Aorta.—Dr. CLIFFORD ALLBUTT read a paper on this subject. He said that it was one to be very fitly examined by the Clinical Society. It was impossible for him within the usual limits to bring the whole of his views before the Society. He would, however, try to read enough to draw out some of the experience of his hearers. He referred for farther detail to a pamphlet on the subject which he had recently published. (*On Overwork and Strain of the Heart and Great Vessels*. Macmillan, 1871.) The affections of the heart due to physical strain were by no means rare. They consisted in an obstinate "irritability" of the organ, and in dilatation of both chambers with or without hypertrophy; and these cases were often very difficult to cure. He referred to the case of a professed runner, who had suffered from irritability of the heart and dilatation especially of the right ventricle, and who was now much relieved after three years' treatment and rest. Cases of injury to the mitral valves are rare; the author had notes of two cases only. The mischief resulting from strain was found, as might be anticipated, rather in the aortic region. Here the injury might be sudden or chronic. If sudden, the aortic valves were forced, or the aorta was cracked by a single excessive effort. More commonly, however, the mischief was slowly established; the aorta, long stretched beyond its strength, became the seat of chronic inflammation or of so-called atheroma, and the valves likewise were slowly degenerated. In this condition, regurgitation might occur suddenly, or may supervene more gradually. Dr. Allbutt next considered the kind of physical strain which led most easily to these results. After some remarks upon the mechanism of these strains of the circulation, he went on to say that he was at first disposed to think that athletics were often to blame for their appearance. On examining his own materials and other existing evidence, however, he discovered that this agency, though no doubt effectual in some instances, was not so injurious as the heavier labours of the working classes. Strikers in foundries, bargemen, heavy porters, and others similarly employed, were often injured in this way. The author then inquired into the reason of this difference, and thought that the principal one lay in this, that the labour of an artisan was more continuous, and left less time for repair. It was also carried on in spite of fatigue, of diminished health, and imperfect feeding. It was probable, too, that work done *con amore* was less exhausting than the drearier kinds of toil. Dr. Allbutt concluded by stating two cases in which he had reason to believe that mitral contraction with presystolic murmur and thrill had been the result of blows upon the præcordial region. At the request of the meeting, Dr. Allbutt read condensed notes of seven cases selected for illustration.—Dr. GREENHOW expressed his opinion that injury from athletics was not so uncommon as generally believed. He had seen a dozen cases of harm from athletic sports, and at present had under his care a case of dilated heart from alpine climbing.—Dr. POORE referred to the case of the celebrated hound "Master M'Grath." At the *post mortem* examination made by Dr. Haughton, the heart was found much dilated and greatly hypertrophied. He thought it not improbable that many of the cases of valvular disease met with in athletes might be due to rupture of the aortic valve from exertion, and alluded to a remarkable case in point which he had brought before the notice of the members at a recent meeting, in which a very loud aortic murmur was audible.—Dr. ANSTIE referred to the case of a young Swiss gentleman, in whom severe angina was produced by inordinate walking. There was a loud aortic murmur mainly occurring with the first sound, and perhaps also with part of the second. He remained in a dangerous position for some time, but at length recovered, and is now an officer in the Swiss army.—Dr. DOUGLAS POWELL observed that, although the symptoms in most cases of atheroma came on with some abruptness, yet he thought they were to be regarded, not as marking the commencement of the disease, but as due to some additional lesion supervening upon long preceding disease; and that the unusual effort often regarded as the exciting cause of the disease was so, as a rule, only in so far as it still further damaged the already weakened aorta. A lighterman, aged 24, accustomed to pull barges up the river, six months before coming under Dr. Powell's observation at Brompton, had had a "heavy job," being almost continuously at work for two or three days. From this

time he suffered from increasing dyspnoea. The physical signs present were those of aortic incompetency with hypertrophy of the left ventricle. Later, the signs of much hypertrophy and dilatation of the right ventricle came on; and he died some months later while under the care of Dr. Silver at the Charing Cross Hospital, from the cardiac effects of atheroma and a small aneurism above one of the sinuses of Valsalva. Dr. Powell asked if Dr. Allbutt had observed any signs attributable to such aneurisms in any of his cases. He did not think that overstrain of the heart and aorta was confined to mechanics following laborious occupations. He had traced it to sudden effort following upon a course of school gymnastics in a young gentleman of weak chest.—Mr. MYERS said that Dr. Clifford Allbutt's opinions were much in accordance with his own. He was, however, surprised that Dr. Allbutt should attach little importance to the effect on the heart of severe athletic exercises; and he agreed with Dr. Greenhow in thinking that it would be a great mistake to encourage the youths of our country to undergo violent exertion, by letting it be supposed that athletic exercises did not sometimes injuriously affect the heart. It would be better policy to teach moderation, and thus prevent, or at least check, many cases of incipient heart-disease, such as irritability and slight hypertrophy with or without dilatation. He believed that this, as a result of hard training in our public schools and universities, was far more common than was generally supposed; but that it was not detected, owing to the time of life at which it occurred, and to the fact that after a few years these men led quieter lives, and did not, therefore, continue to overstrain their hearts. In proof of this early development of heart-disease by overstrains, Mr. Myers stated that after he had satisfied himself that the irritable heart of the young soldier was to a great extent induced by overstrain by tight clothing and accoutrements, he examined the pulses of men who had recently undergone hard training in the public schools and universities, with precisely the same result. The sphygmograph might be made of much use in the early diagnosis of this class of incipient heart-disease. He was surprised that Dr. Allbutt had not made more special reference to the dilatation of the first part of the aorta, as well as the thickening, corrugations, and, in the more advanced stages, atheroma of its coats, frequently found in such cases of overstrained hearts as those to which his paper specially referred.—Mr. KESTEVEN related the particulars of a case which had come under his notice in which cardiac disease from rowing existed.—Dr. J. FENWICK alluded to the health of oarsmen who had rowed in the inter-university boat-race, and pointed out that they were almost all still alive.—Dr. FARQUHARSON did not think it was always easy to distinguish the effects of pure strain from those of other influences affecting the heart. The diagnosis was easy when during a violent effort something gave way, and hæmoptysis, palpitation, and cardiac symptoms set in; but, in considering the insidious degenerations described as following long continued slighter exertion, it was also important to bear in mind the usually concurrent influences of drink, tobacco, bad food, and general insanitary conditions. In the labouring classes, and the public services, from whom statistics on a large scale must always be drawn, these latter causes in varying proportion were potent for evil; and in the upper ranks, anxiety of mind, with worry and overwork, could not be overlooked as predisposing to heart-disease. He quite agreed with Dr. Clifford Allbutt that athletic exercises in moderation, and after due preparation, were seldom injurious. Bad consequences were only met with in persons naturally feeble, or temporarily debilitated, who undertook sudden and severe exertion without previous training. In the very few instances in which he had met with cardiac strain, while medical officer to Rugby School, the boys had usually been working hard, and had undergone excessive physical fatigue when worn out by mental labour. In conclusion, he would refer to a paper in the last report of the naval medical service, in which Assistant-Surgeon Nathan analysed a large number of heart cases at Haslar Hospital. Out of 850 in which he was able to determine their cause, 65 were directly due to violent exertion; and he showed further, that cardiac disease was largely on the increase in the navy, in consequence partly of the increased size of the ordnance now in use.—Dr. OGLE said that, at the time of the discussion which some years ago occurred on the effects of continued and violent muscular exercise upon the heart, especially in connection with the observations of the late Mr. Skey, he was much impressed with the idea that the evils consequent on rowing, gymnastics, cricket, and other athletics had been greatly exaggerated by some, and much under-estimated by others. Whilst firmly believing in the advisability and necessity of encouraging athletics at our universities and public schools, he was of opinion that there existed evidence showing that in many cases health was injured and lives damaged and impaired, by undue exercise at the universities, etc.; though, of course, it would be as absurd as unscientific either to condemn or to support any system merely upon the strength of a limited number of

cases. In all probability, severe athletic sports would not do harm in the case of those whose organs were sound and free from disposition to disease, and who were trained wisely and cautiously; but in large collections of boys and young men there must, of necessity, be many who spontaneously undertook, or have been induced to undertake, severe sports, and who were, naturally or from temporary causes, quite unfitted for them. Many undergraduates possessed delicate organs; and he believed that it would be prudent if at the universities and schools those who intended to row, or participate in any violent games, were obliged to obtain a certificate from some competent physician as to their being in a state to undertake such exercises, and under what conditions and restrictions (if any were requisite). Dr. Ogle had seen an oarsman at Oxford taken out of the boat casting up blood profusely. Dr. Church and others had seen hæmoptysis ensuing upon violent rowing. Dr. Ogle had lately seen a gentleman, aged 40, who resided on the banks of the Thames near London, who took pupils preparatory to the universities, and who was in the habit of pulling in a four-oar with them every evening. He had decided hypertrophy and valvular mischief of the heart, traceable solely to regular and severe over-exertion. With respect to the question of insurance, the subject under consideration had great importance. He did not consider that the evils alluded to were limited to the heart, as without doubt the lungs also suffered. In the case of a scholar at one of the most reputed colleges in Oxford, who presented indications of early tubercle in the lung, Dr. Ogle prohibited rowing, cricket, etc.; but he lately fell a victim to his disregard of the caution. In estimating the effects of severe rowing, he did not think a fair result would be obtained by merely considering the longevity of known oarsmen, whose names appeared in the recorded lists. Such men were picked out of the multitude, of whom we had no knowledge as regarded the ultimate effects of rowing. Nor did he think that the full and certain effects of this severe exercise could be appreciated or measured by physicians resident at the universities, inasmuch as the evils often arose in the future, and only by degrees. Possibly, also, the evils from undue exertion were more decidedly marked, the more advanced the age of the person submitted to it. Hence, perhaps, it was not at the universities that the gravest evils of such exertion were manifested. Dr. Ogle thought that, in all non-inflammatory cases at our general hospitals, when the valves and walls of the heart were implicated, nothing was more natural and customary, and nothing more necessary, than to inquire into the habits and employments of patients as respects muscular efforts.—Mr. DALBY said that, so far from all the men who had rowed in the university boats being now alive, two of these whom he had known well had since died. This, however, had not much to do with the subject. There could be no reasonable doubt in the minds of any university man, that instances were not very unusual where young men had suffered from excessive exertion in rowing, as instanced by the occasional immediate effects of extreme exhaustion and spitting blood. Exercise that was followed by this was manifestly injudiciously taken. This, however, was a slight evil compared to the general good that was effected by other sorts of exercises at the universities and public schools—rackets, cricket, and the like.—Dr. R. J. LEE said that all members of the universities would perceive with gratification the tendency now prevailing to consider the subject of exercise with scientific attention; and he regretted that the medical profession had hitherto refrained from doing so. The enumeration of isolated cases in which injurious results had followed excessive exercise was not a scientific method of investigating the principles by which exercise was to be regulated. He had for some years been engaged in considering the subject of exercise and training with a view to correct the mistakes which were made, and to prevent those unfortunate consequences which ignorance produced. The different effects produced upon the heart and vessels by different kinds of muscular exercise might be divided into two classes: those resulting from briefly sustained but very active exertion, as in short quick races either on foot or in a boat; and those in which the exercise was not in the same sense, excessive, but was sustained for some hours, as in Alpine climbing. In the former case, the muscular contractions were so powerful as to force the blood from the veins, arrest its flow through the arteries, and so produce congestion of the heart. Those who were in the habit of rowing much in races were well aware of this fact, generally known as "losing wind," and were particularly careful to avoid it. In the case of Alpine climbing, which resembled to some extent the muscular exertion employed in those cases referred to by Dr. Allbutt, the organs of respiration were chiefly oppressed, and the tension of the vessels was increased considerably. The right side of the heart was more often affected by such exercise. An idea of the effect of powerful muscular contraction on the vascular system might be formed by firmly flexing the arm, or by grasping at arm's length the handle of an oar, and observing the variations produced in the pulse

as the muscles were tightened or relaxed. There could be no doubt that the subject of exercise, and particularly training, should be studied at first as a mechanical problem; and even regarded in this simple view it was one of great difficulty. It was not to be desired that we should return to such a system of gymnasia as existed in classic ages; but it was distinctly the duty of the profession to endeavour to establish some rational system of training, and thus prevent the injurious consequences of excessive exercise by pointing out the causes of them, and the means by which they could be avoided. The universities derived immense benefits from their muscular sports, and it was to be hoped that they might always continue. The Clinical Society was to be congratulated on the important step it had taken in promoting the serious consideration of this subject.—Dr. CLIFFORD ALLBUTT, in reply, pointed out that he had not denied the occasional injurious consequences of athletics, but had stated that they were less injurious than might be supposed, and much less so than the labour of the workman. He believed that Dr. Morgan of Manchester was in position to prove this of university men, and his own knowledge of university men, of Alpine men, and other gymnasts was not inconsiderable. The case of "Master M'Grath" was described to him by Dr. Haughton, and he was endeavouring to procure some evidence as to the state of the heart in racehorses. Trustworthy details of this kind were very hard to obtain. In horses and dogs also the system of training must prevent much of these ill consequences. He would state, in conclusion, on Dr. Hilton Fagge's authority, that in acute rheumatism in men the aortic valves were much oftener attacked than in women, as if the physical work of men rendered these parts most liable.

OBITUARY.

DUNCAN MACNAB, M.D., CAMPBELTOWN.

DR. MACNAB died on January 2nd, at his residence, Campbeltown, Argyshire. Born on February 22nd, 1808, he had nearly completed his sixty-fifth year. After receiving a liberal education in the Grammar School of his native town, he studied medicine in the University of Glasgow. In 1831, he obtained from his University the diplomas of M.D. and C.M. Though the scattered state of the country population rendered the practice difficult and laborious, he determined to enter upon the exercise of his profession in the place of his birth. In 1854, he took charge of an emigrant ship to Australia, where, early in 1855, he was elected a Licentiate of the Medical Board of Victoria, New South Wales, and received the highest commendations of the Commissioners for his attention to the emigrants. With the exception of the ten months spent in connection with this appointment, his whole professional career was confined to Campbeltown and the neighbouring parishes.

WILLIAM COOKE, M.D., M.R.C.S.

DR. COOKE was born at Wem, in Shropshire, August 4, 1785, and died at his house in Upper Clapton, March 2, 1873. His father was a tenant-farmer. At the age of thirteen, he was apprenticed to Mr. Gwynn, of Wem, whose son and successor died about a fortnight ago, in his eightieth year. Before he was sixteen, he was engaged in obstetric practice, and after he had completed his eighty-seventh year he performed successfully paracentesis of the tunica vaginalis.

On coming to London, he entered at St. Bartholomew's hospital, where Abernethy was his favourite teacher, and Lawrence his junior fellow student. In 1806, he "passed the College," and then, after a short assistantship in Tying, settled in practice at Plaistow, in Essex, at that time a suburban village, and retreat of city merchants. Here he married the eldest daughter of Robert Humphrey Marten, a distinguished merchant and philanthropist, and a nonconformist, when nonconformity needed more courage than at the present day. With Mr. Marten he was intimately associated in many religious and benevolent enterprises. A few years later, he moved to the larger sphere of London practice, and, first at Great Prescott Street, afterwards at 39, Trinity Square, Tower, was well-known in a large circle of patients and friends.

In 1819, with a few colleagues, who have all long passed away, he established the Hunterian Society, which lately celebrated its fifty-fourth anniversary. Only once before had this festival missed his genial presence. This society he served, either as secretary or treasurer, for half a century. How kindly his services were appreciated he had memorials on his sideboard and his walls to show. In 1839 he delivered the annual oration before the society. "Mind and the Emotions," was the subject he chose, and the oration, which was at first printed in a pamphlet, was afterwards expanded into a small volume.

His other works, besides a few pamphlets, were an abridged translation, in two volumes, of Morgagni *De Sedibus et Causis Morborum*, published by subscription in 1822, and a treatise on *Disorders of the Digestive Organs*, 1828.

He was the first medical officer of the Protector Life Insurance Company, and on its amalgamation with the Eagle joined the medical staff of that company. From this he did not withdraw till he left London, in 1870. He leaves only two sons, both in his own profession.

Many can testify to his life: those who were with him in his months of retirement and days of death can say that the close was worthy of the course. His mind was clear, his heart warm, and his faith firm, until the near approach of death precluded the power of expression.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 6th, 1873.

Collins, Henry Beale, Bessborough Street, S.W.

Fenn, Charles Draper, Newmarket

Jelley, Richard, Elton, Peterborough

Manser, Robert, Chatham

Spurgin, William Henry, Thrapston

The following gentlemen also on the same day passed their primary professional examination.

Davies, James Harris, St. Bartholomew's Hospital

Newton, William Thomas, St. Bartholomew's Hospital

Stericker, William, Guy's Hospital

Wilding, Leonard James, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Adams, Frank, Bodiacre, Hawkhurst

Baldock, James Thomas, London

Marin, Ferdinand Baptist, London

INDIAN MEDICAL SERVICE.—List of successful candidates at the competitive examination held at Burlington House, on February 17th, for sixteen appointments as Assistant-Surgeons. [Maximum number of marks, 3700.]

	Marks.		Marks.
Wilkie, D.	2812	MacDonald, D. P.	2117
Battersby, W. E.	2660	Baker, O.	1968
Wall, A. J.	2523	Mallins, H.	1950
Moodie, R.	2411	Wright, F. W.	1899
Goldsmith, S. J.	2354	Robinson, M.	1895
Moynan, W. B. E.	2319	Browne, W. R.	1752
Twohy, F. J.	2330	Leapingwell, A.	1710
Thomas, A. A.	2216	Dill, J. S.	1690

MEDICAL VACANCIES.

THE following vacancies are announced:—

ASTON URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications to Joseph Ansell, Esq., 42, Temple St., Birmingham.

BARNET, Hemel Hempstead, Hendon, Watford, and Welwyn Rural Sanitary Districts, and Barnet Urban Sanitary District, combined—Medical Officer of Health: £700 per annum. Applications to Richard Pugh, Esq., Watford.

BORRISOKANE UNION, co. Tipperary—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cloughjordan Dispensary District: £100 per annum, and fees. Applications to Wm. Hodgins, Esq., Hon. Secretary.

BRACKLEY UNION, Northamptonshire—Medical Officer and Public Vaccinator for District No. 4: £60 per annum, and fees.

BROMSGROVE RURAL SANITARY DISTRICT—Medical Officer of Health: £80 per annum.

CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.

CLITHEROE UNION, Lancashire—Medical Officer for the new Workhouse and Infirmary: £20 per annum.

DUNSHAUGHLIN UNION, co. Meath—Medical Officer for the Workhouse: £95 per annum.

GATESHEAD URBAN SANITARY DISTRICT—Medical Officer of Health: £25 per annum.

GLOUCESTER, Chepstow, Dursley, Chipping Sodbury, Thornbury, Cirencester, Tetbury, and Westbury-on-Severn Rural Sanitary Districts, and Awre, Cirencester, Kingsholm St. Catherine, Newnham, Tetbury, and Westbury-on-Severn Urban Sanitary Districts, combined—Medical Officer of Health: £600 per annum, and £200 per annum for expenses. Applications to L. G. Hubert Mayer, Esq., Gloucester.

HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester—Resident Medical Officer: £100 per annum, residence, and board.

HOWDEN UNION, Yorkshire—Medical Officer and Public Vaccinator for the Holme on Spalding Moor District: £30 per annum, and fees.

ISLE OF MAN GENERAL HOSPITAL and DISPENSARY, Douglas—Resident Medical Officer: £85 per annum, rooms, attendance, cooking, coal, and gas. Applications to E. J. Watts, Esq., Honorary Secretary.

KIDDERMINSTER URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

KILBURN DISPENSARY—Resident Medical Officer: £100 per annum, apartments, attendance, coal, etc.

LEEDS—Public Analyst: £100 per annum. Applications to C. A. Curwood Esq., Town Clerk.

LEEDS URBAN SANITARY DISTRICT—Medical Officer of Health: £500 per annum.

LETTERKENNY UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Letterkenney Dispensary District: £100 per annum, and fees. Applications to Robt. Ramsay, Esq., Lisnenan, Letterkenney.

LOUDOUN, Ayrshire—Parochial Medical Officer: £50 per annum.

LOUGHREA UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bullaun Dispensary District: £100 per annum, and fees. Applications to James Wallace, Esq., Cahcitinny, Loughrea.

LOUTH RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £375 and £125 per annum. Applications to J. W. Wilson, or T. F. Allison.

MALE LOCK HOSPITAL—Dispenser.

MALTON UNION, Yorkshire—Medical Officer for the Rillington District, and Public Vaccinator for the Rillington and Heslerton Districts: £28 per annum, and fees.

NEWPORT UNION, Salop—Medical Officer for District No. 3: £35 per annum.

NEW ROSS UNION, co. Wexford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Arthurstown Division of the Fethard Dispensary District: £80 per annum, and fees. Applications to James Haughton, Esq., Chelsea Lodge, Duncannon.

PERSHORE UNION, Worcestershire—Medical Officer for the Fladbury District: £50 per annum, and fees.

PRESTWICH URBAN SANITARY DISTRICT—Medical Officer of Health. Applications to Michael Potter, Esq., 88, Mosley Street, Manchester.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, St. Marylebone Road—Medical Officer.

SEAMEN'S HOSPITAL, Greenwich—House-Surgeon.—House-Physician. Applications to Kemball Cook, Esq., House-Governor and Secretary.

SHEFFIELD URBAN SANITARY DISTRICT—Medical Officer of Health: £600 per annum.—Public Analyst: £100 per annum. Applications to John Yeomans, Town Clerk.

ST. MARYLEBONE—Medical Officer for St. Mary District: £100 per annum.

ST. MARY'S HOSPITAL, Quay Street, Manchester—Honorary Surgeon.

STOCKTON RURAL SANITARY DISTRICT—Medical Officer of Health: £400 per annum. Applications to Wm. Best.

SUNDERLAND URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

TENDRING RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum. Applications to David Mustard, Esq., Manningtree.

THOMASTOWN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Inistioge Dispensary District: £95 per annum, and fees. Applications to Alex. Hamilton, Esq., Hon. Secretary.

WESTMINSTER HOSPITAL MEDICAL SCHOOL—Lecturer on Botany. Applications to George Cowell, Esq., the Acting Dean.

WESTON-SUPER MARE URBAN SANITARY DISTRICT—Medical Officer of Health: £35 per annum. Applications to Wm. Smith, Esq.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

GLASCOTT, C. G., M.D., appointed Surgeon to the Manchester Royal Eye Hospital, *vice* R. H. McKeand, Esq., resigned.

STEELE, Frank, Esq., appointed Assistant House-Surgeon to the Liverpool Dispensaries.

WILLIAMS, W. H., Esq., appointed Resident Surgeon to Rossall School, Fleetwood, *vice* J. T. Williams, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

LONG, Richard, M.D., at Arthurstown, County Wexford, aged 78, on Feb. 12th.

TURNER, Thomas H., Esq., Surgeon, at Sowerby Bridge, aged 39, lately.

WALSH, Arthur D., M.D., of Cloughjordan, Tipperary, aged 60, on March 1st.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Liveing, London; Dr. J. Matthews Duncan, Edinburgh; Dr. C. Handfield Jones, London; Mr. J. W. Langmore, London; Mr. P. H. Holland, London; The Secretary of the Harveian Society; Dr. C. Parsons, Dover; Our Manchester Correspondent; Dr. Southey, London; Dr. Procter, York; Mr. Partridge, London; Mr. H. Cripps Lawrence, London; Mr. Cross, Stoke, Devonport; Our Liverpool Correspondent; Dr. Harrington Tuke, London; Mr. Teevan, London; Mr. R. L. Bayley, Stourbridge; Mr. T. Spencer Wells, London; Our Dublin Correspondent; Dr. Farquharson, London; Dr. Cumming, Edinburgh; The Secretary of the Pathological Society; Dr. Hollis, London; Mr. R. H. Cooke, Stoke Newington; Dr. J. W. Moore, Dublin; Mr. Haviland, London; Dr. George Johnson, London; Dr. Leared, London; Mr. Gaskoin, London; The Secretary of the Clinical Society; Dr. Steele, Liverpool; Mr. C. S. Tomes, Boston; Our Paris Correspondent; Inspector-General Parratt, Old Charlton; M.R.C.S. Eng.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Surgeon-Major Atchison, London; Dr. Crichton Browne, Wakefield; Mr. Clover, London; Dr. H. Marshall, Clifton; Dr. John Ogle, London; Dr. Gowers, London; Mr. Royes Bell, London; Mr. Richard Davy, London; Dr. John Ford Anderson, London; Dr. Lauchlan Aitken, Rome; Dr. Trollope, St. Leonard's-on-Sea; Dr. J. Milner Fothergill, London; Mr. S. E. Simpson, Bingham; Mr. Speer, Seaforth; Mr. Sydney Jones, London; Dr. Foster, Birmingham; Dr. Kelly, Taunton; Mr. Vincent Jackson, Wolverhampton; Dr. Strange, Worcester; Mr. Sandford, London; Mr. Sutton Baker, Wragby; Mr. F. W. Braine, London; Dr. Warwick, Southend; Mr. Grove, London; Dr. Day-Goss, London; Dr. A. Duncan, Dundee; Mr. Frank Cooper, Leytonstone; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. A Clinical Evening, including a very interesting case of Glosso-pharyngeal Paralysis (patient shown) by Mr. T. J. Dowse; and contributions by Mr. Thomas Bryant and others.

TUESDAY.—Pathological Society of London, 8 P.M. Dr. Wilson Fox will open a discussion on the Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lungs. Specimens and Drawings of Tubercle will also be exhibited by Dr. Andrew Clark, Dr. Burdon Sanderson, Dr. Lionel Beale, Dr. Moxon, Dr. Bastian, Dr. Powell, Dr. Cayley, Dr. Henry Green, etc. Dr. Fox's specimen will be open to inspection for one hour before the commencement of the meeting.

THURSDAY.—Harveian Society of London, 8 P.M. Mr. G. Everitt Norton, "On Anaesthetics."

FRIDAY.—Medical Microscopical Society, 8 P.M. Mr. E. A. Schäfer, "On the Structure of Voluntary Muscle"; Dr. F. Payne, "On some points in the Structure of the Omentum."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

A DISPENSARY MEDICAL OFFICER.—It is not right that a medical man should apply for a public appointment held by another, and in which there is no apparent reason for expecting a vacancy.

DR. WARWICK.—We have forwarded Dr. Warwick's letter to Dr. Humphry at Cambridge.

MR. SPEER (Seaforth).—We are unable to afford the required information. It might be obtained by writing to the editor of the *Chemical News*.

DR. CHARLES KIDD (Sackville Street) forwards to us a post-card couched in even more improper and ungentlemanly terms than many of his recent communications have been. Dr. Kidd will please take notice that communications from him will in future be destroyed unopened or unread.

NEW INHALERS.

SIR,—My Inhaler is not meant to be closed with the sponge. What I aim at is, a short wide tube through which to breathe, crossed by a porous easily fitting diaphragm of sponge to carry the anæsthetic. The directions particularly specify that specks of light shall be visible through it. The waste of vapour, of which so much is said, is in actual practice very limited, and may be made *nil* by lifting the edge of the inhaler from the face at every expiration. With other modes of administration left uncriticised, far greater waste of vapour takes place than with my inhaler, which makes three ounces of ether do the duty of six given with a pervious material, and in like manner make one drachm of chloroform go as far as two. The width of the sponge, an essential part of my contrivance, is no guide to the amount of chloroform to be used, nor need the inhaler be always closely applied to the face. My inhaler is for the profession, not for unskilled persons; and every medical man knows that the dose of chloroform must be carefully limited; that a little chloroform, scattered on a wide sponge with holes in it, insures ample dilution with air; that an inhaler can be raised to let in air, removed from the face, or reapplied, according to indications; and that these potent drugs require to be used with care and skill with any apparatus, my inhaler being merely a simple and convenient form of the same. I am, etc.,

Brighton, March 1873.

W. E. C. NOURSE, F.R.C.S.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE IV.—CHRONIC BRIGHT'S DISEASE WITH A LARGE WHITE KIDNEY.—(Concluded.)

Symptoms.—*Dropsy.*—*Pulmonary Complications.*—*Inflammation of the Serous Membranes.*—*Endocarditis.*—*Dyspepsia.*—*Vomiting.*—*Diarrhœa.*—*Hypertrophy of the Heart.*—*Cerebral Symptoms.*—*Hæmorrhage, etc.*—*Defect of Vision.*—*Hæmorrhage from Mucous Membrane.*—*Diagnosis.*—*Prognosis.*—SIMPLE FAT KIDNEY, OR GENERAL FATTY INFILTRATION OF THE KIDNEY.—*History.*—*Microscopic Characters of the Kidney.*—*Pathology and Clinical History.*—*Points of Difference between it and the Granular Fat Kidney.*

SYMPTOMS.—Amongst the symptoms of chronic Bright's disease with large white kidneys, *dropsy* is one of the most frequent and prominent. The cases in which dropsy is absent throughout the whole progress of the disease, form a very small minority. Some years since I found, from an analysis of twenty-six fatal cases, that there had been dropsy in twenty-four; the proportion being, in round numbers, 92 per cent. And in the majority of cases the dropsy was great, general, and of long duration. (See my paper on the Forms and Stages of Bright's Disease, *Med.-Chir. Trans.*, vol. xlii.) When chronic disease has supervened upon an acute attack, the dropsy which attended the onset of the malady may continue throughout, or it may pass away and return after a variable interval of months or years; or, if the urine become copious, as it sometimes does in the second and third stages, the dropsy may never return. Acute renal dropsy usually becomes general within a short period; but the dropsy which accompanies this chronic form of disease shows itself first in the face and feet, and gradually extends to other parts, including, in the worst cases, the serous membranes of the chest and abdomen. The pale, pasty, and puffed appearance of the face is very characteristic of this form of renal disease. As a rule, the more scanty is the secretion of urine, and the larger the proportion of albumen which it contains, the greater is the tendency to dropsy.

When dropsical swelling of the legs becomes excessive, so as to cause great tension of the integuments, the circulation through the skin and the subcutaneous tissues is seriously impeded; and this may result in erysipelatous inflammation, sloughing, and gangrene. In one case, I saw gangrene and sloughing of the skin over the back of both legs, excited by the pressure of the heavy dropsical limbs upon the bed.

Congestion and œdema of the lungs are often associated with, and may be said to form a part of, the dropsical symptoms. The lungs are not rarely the seat of inflammatory mischief. *Bronchitis* and *pneumonia* are amongst the more frequent and serious complications. *Submucous œdema of the larynx* occasionally occurs, and renders the voice husky; more rarely it causes stridulous breathing and dyspnoea. *Inflammation of the serous membranes* is one of the less frequent complications. According to my experience, the pleura is more frequently inflamed than the pericardium; the peritoneum less frequently than either. *Endocarditis* is sometimes set up, and may result in a chronic valvular disease. *Derangements of the stomach and bowels* are of common occurrence in all stages of the disease, but more especially in the advanced stages, and when, from any cause, the secretion of urine becomes scanty. There are loss of appetite; dyspepsia, with flatulent distension after food; nausea; water-brash; and vomiting, especially in the morning, when it is often excited by the attempt to clean the teeth. When the urine is scanty, the vomited matters often have a foetid ammoniacal odour. In the advanced stages, the vomiting may be almost incessant and quite irrepressible. *Diarrhœa*, too, is not an unfrequent symptom. It may be excited by ill-digested food, or by the vicarious excretion of urinary products; not unfrequently, perhaps, by both these influences combined. In the advanced stages, the skin is usually unperspiring, dry, and harsh. *Hypertrophy of the heart* is less frequently associated with this form of disease than with the chronic

desquamative disease. The more advanced the stage of disease, the more frequent is the occurrence of hypertrophy. Dr. Grainger Stewart found this condition in only 12 per cent. of the cases fatal in the first stage, in 38 per cent. of those fatal in the second stage, and in 100 per cent. of those fatal in the third stage—that is, the stage of contraction (*A Practical Treatise on Bright's Diseases*, 2nd edition, p. 90). The probable explanation of the comparative infrequency of hypertrophy of the heart in the earlier stages is, that the watery condition of blood which results from a defective secretion of urine excites less resistance in the minute systemic arteries than the more concentrated blood-poison which results from the retention of urinary solids, while the water freely filters off through the small red kidney. For the same reason, too, *cerebral symptoms of uræmic origin* and *cerebral hæmorrhage* are less frequently associated with the large white kidney than with the contracted granular kidney. It appears that, while dropsy results from hydræmia, arterial resistance, hypertrophy of the heart, toxæmic nervous symptoms, and cerebral hæmorrhage, are more direct results of uræmia.

The two forms of *defect of vision* which I described as of frequent occurrence in connexion with the small red kidney, are less frequently associated with the disease which we are now discussing. The difference is one of degree. I have seen several cases of uræmic amaurosis and albuminuric retinitis with an unquestionable history, though not with *post mortem* evidence, of an enlarged, white, and fatty kidney.

Although cerebral hæmorrhage is a less frequent result of this form of disease than of the chronic desquamative disease, *hæmorrhage from mucous membranes*, and especially from that of the nose, is, in the advanced stages, a frequent and often a formidable symptom. These hæmorrhages are probably in part explained by the blood-deterioration, more especially the deficiency of albumen and hæmoglobin, and in part by the malnutrition and consequent brittleness of the walls of the vessels in the advanced stages of the disease.

Diagnosis.—On the subject of diagnosis, I need not add much to what I have already said. A careful consideration of the general history and the symptoms, together with the characters of the urine, will rarely leave you in doubt as to the form and stage of the disease. Renal disease dating from an attack of acute general dropsy, followed by persistent albuminuria, can rarely be other than the particular form of disease which we are now discussing. The stage of the disease is to be determined chiefly by the character of the urine. In the first stage, the urine is usually normal in quantity, in colour, transparency, and specific gravity. There is either no deposit, or a cloudy sediment containing some small hyaline casts. As the disease advances, the urine gradually loses its sherry tint, and becomes lighter coloured. The amount secreted and the specific gravity usually bear an inverse relation to each other. In the second stage, the small hyaline and oily casts are found; and in the third stage the oily casts are mingled with or replaced by the large granular and large hyaline casts. (Figs. 25, 26, and 27.)

Prognosis.—Your judgment as to the probable result of the malady will obviously be greatly influenced by the opinion which you may form as to the stage of the disease and the rate at which it is making progress. In my lecture on acute Bright's disease, I told you that I have seen cases of complete recovery after oily casts and cells had appeared in the urine continuously for many weeks, and after albuminuria had existed for one, two, and even three years.

The most favourable condition of urine is that in which it retains its normal colour, deposits no sediment on standing, and contains but little albumen. There can be no question that recovery may take place after the disease has passed into the second stage—namely, that of fatty degeneration. You are not, therefore, to despair of a patient whose urine contains oily casts even in large numbers. As a general rule, the longer the continuance of albuminuria in spite of careful treatment, and the greater the amount of albumen, the more unfavourable is the prognosis. In estimating the amount of albumen, never omit to compare the urine after food and exercise with that passed after rest and fasting. When the urine is very pale, and of low specific gravity, yet highly albuminous, when it deposits a copious and dense sediment composed in great part of large granular and large hyaline casts, it will be evident that the disease is in the third stage, and that the kidney is contracting. The number of the large sized casts may be taken as an index of the rate at which the degenerative and atrophic changes are progressing. The duration of the disease, in cases which ultimately prove fatal, varies extremely. I have notes of the case of a child aged 7, who had acute renal disease with dropsy after scarlet fever; and, the malady having terminated fatally within five weeks from its onset, the kidneys were already in the second stage, the pale and enlarged cortex being scattered over with the characteristic yellow spots of fatty degeneration. In this case, the disease ran

an unusually rapid course. I have seen a considerable number of cases in which the symptoms have continued for from five to ten years. My experience does not accord with the statements of some recent writers, who affirm that this disease is of shorter duration than that which results in the red granular kidney. I have before referred to one case which extended over a period of ten years; but the most prolonged case that I have seen or heard of was that of a medical practitioner whose history is partly given in my book on the *Kidney* (p. 374). He had dropsy after scarlet fever in 1836, when he was about seventeen years of age. He recovered from the dropsy, and thought no more of his malady until five years afterwards, when his urine was accidentally discovered to be albuminous by a fellow medical student. It had probably been so since the attack of dropsy; and it certainly remained albuminous from that time until his death, which resulted from dropsy in May 1866. He was then in his forty-seventh year; and, if we assume, as we safely may, that the urine had not ceased to be albuminous between the attack of dropsy and the accidental discovery of the albumen five years later, this gentleman had albuminuria for thirty years before his death; yet the greater part of that time he was a hard-working general practitioner, and, to all outward appearance, in good health. During the last year or two of his life, his urine was saccharine as well as albuminous. When I first saw him in 1851, his urine was of normal colour and specific gravity, but albuminous; it deposited no sediment, and contained no tube-casts. I believe that for many years it retained the same characters, but I have no note of any subsequent microscopical examination. This case teaches two practical lessons. The first is, not to take for granted that a patient who has recovered from acute renal dropsy is well until his urine has lost all trace of albumen; and the second is, not to assume that persistent albuminuria of necessity involves early death or the speedy occurrence of formidable symptoms.

THE SIMPLE FAT KIDNEY OR GENERAL FATTY INFILTRATION OF THE KIDNEY.—Before passing on to the subject of lardaceous degeneration of the kidney, I wish to direct your attention for a moment to a condition of the kidney which may be designated “the simple fat kidney” or “general fatty infiltration of the kidney”.

There is a form of fat kidney very different from that which I have described as the granular fat kidney. It consists in an uniform infiltration of the epithelium of the convoluted tubes with oil. This state of kidney is analogous to the fatty infiltration of the cells of the liver which occurs often in cases of phthisis and other wasting diseases. This form of fat kidney I first discovered and described in the year 1846 (*Med.-Chir. Trans.*, vol. xxix). The fatty infiltration of the renal epithelium may be found in various grades. When the fat is very abundant, the kidney is increased in size and weight. The colour of the cortex is either uniformly pale, or more frequently mottled by a blending of pale anæmic with red vascular patches. Occasionally, hæmorrhagic spots are scattered through the cortical substance. The medullary cones retain their normal colour and vascularity. The consistence of the kidney is usually softer than natural, and frequently the gland has an oedematous feel and appearance. On a microscopic examination, the convoluted tubes are found to be universally distended with oil which has accumulated in their epithelial cells. There is an uniform oily infiltration of the renal gland-cells. (See Fig. 29.) This



Fig. 29.—A portion of a Convoluted Tube distended with Oil, from a “simple fat Kidney.” Three detached Epithelial Cells: two are filled and distended with oil, the third contains oil in less quantity, and the Cell-nucleus is visible.— $\times 200$.

condition of the kidney is found not unfrequently associated with a similar condition of liver in persons who have an excess of adipose tissue beneath the skin, in the abdomen and about the heart. It is commonly found after death from diabetes and from some other chronic diseases which are attended with great emaciation, such as cancer, phthisis, and dysentery. It is probable that the immediate cause of this fatty infiltration of the gland-cells is an excess of fatty matter in the blood. In the case of very fat persons, who are usually

large consumers of fat-making adipose and amyloid food, the materials whence the fat is derived are introduced directly into the blood through the stomach. On the other hand, in cases of wasting disease, it is probable that the fat absorbed from the adipose tissues enters the circulation and infiltrates the gland-cells, more commonly those of the liver, less frequently those of the kidney.

Fat kidneys are common in the domestic dog and cat, probably because these animals lead indolent lives, and consume large quantities of food rich in hydrocarbon. These animals are the counterparts of the human animal when, from eating and drinking to excess, he grows fat and gets fat liver, heart, and kidney. The unhappy Strasbourgeese afford an illustration of fatty infiltration of the liver resulting from a wasting disease. In order to obtain fat livers for patties, the animals are well fed and fattened; then they are confined in heated cages without food and water. They become feverish, and rapidly waste, while their livers grow large. It seems probable, as Baron Larrey long ago suggested, that the oil absorbed from the adipose tissue enters the circulation and infiltrates the cells of the liver, and probably in a less degree those of the kidney also.

It is a remarkable fact, that the liver and kidneys have been found in a state of extreme fatty infiltration in cases of poisoning by phosphorus, death occurring within a week after the poison was taken. Two cases of this kind are recorded in the fiftieth volume of the *Medico-Chirurgical Transactions*—one by Dr. Habershon, the other by the late Dr. Hillier. Fatty infiltration of the liver and kidney appears, as a rule, to have but little influence on the functions of these glands. We sometimes, however, find jaundice and ascites associated with fatty liver, and with no other structural change to explain the symptoms; and I have notes of several cases in which albuminuria and the usual symptoms of chronic Bright’s disease have occurred in connexion with simple fatty infiltration of the convoluted tubes of the kidney. One such case I published in my book on *Diseases of the Kidney* (case of Ann White, p. 414). In that case, the disease followed a second attack of scarlet fever with anasarca. There was dropsy, and the urine contained much albumen and oily cells. She died with uræmic convulsions and coma. The convoluted tubes were greatly and almost uniformly gorged with oil; and Dr. Beale, analysing the cortex of the kidney, found that more than one-fourth of the solid matter was fat. It is reasonable to suppose that so large an accumulation of oil within the gland-cells must impair their secreting power, and also impede the circulation through the intertubular capillaries, which are compressed by the distended and swollen tubes.

I will now briefly recapitulate the chief points of distinction between the “granular fat kidney” and what I have here called the “simple fat kidney”, which is perhaps a better term than “the mottled fat kidney”, which I formerly employed, but which, I am told, has often been misunderstood. In the granular fat kidney, there are disseminated spots of fatty degeneration in the cortex; and these are secondary results of previous structural changes in the gland. In the simple fat kidney, on the contrary, there is a general fatty infiltration of the gland-cells in the convoluted tubes of the cortex; and this is a primary change. The granular fat kidney is always associated with albuminuria, and often with other signs of serious disturbance of function. The fatty infiltration, although it is sometimes associated with albuminuria and other symptoms of renal disease, is, in the majority of cases, unattended by obvious signs of functional derangement. This condition of kidney, therefore, while it has great interest for the pathologist, has much less clinical importance than the “granular fat kidney”; but I cannot assent to the statement that, because overfed animals leading unnaturally indolent lives have an excess of oil in their kidneys, this condition is normal or innocuous. By parity of reasoning, it might be maintained that an excessive growth of fat about the heart is a harmless addition of hydrocarbon to the weight of the body, because that state of heart often coexists for a time with apparently good health and great bodily activity.

PUNCTURE OF THE BLADDER ABOVE THE PUBES.—Dr. J. I. Little records in the *New York Medical Journal* for November 1872 a case of retention of urine from enlarged prostate, in which he punctured the bladder fourteen times with a capillary aspirator. Subsequently, a catheter could be introduced by the urethra. No disturbance, local or constitutional, followed the operation. Dr. Little recommends that, in performing the operation, the patient be placed on his back, with the hips slightly elevated by pillows if the bladder be not much distended; and that the punctures be made on or near the median line, about an inch or an inch and a half above the pubes, and each time in a separate place. The bladder, he says, may be washed out by filling the cylinder with water, and reversing the action of the instrument, without removing the trocar.

ABSTRACT OF THE GOULSTONIAN LECTURES ON ELEPHANTIASIS GRÆCORUM.

Delivered at the Royal College of Physicians, 1873.

BY ROBERT LIVEING, M.D.,
Physician to the Middlesex Hospital; etc.

LECTURE II.

THE lecturer first gave a very full account of the geographical distribution of leprosy in the present day—especially with reference to the habits and customs of those races who suffer from its ravages; and noticed also any peculiarities of climate, soil, and food, which would be likely to affect the progress of the disease. He then proceeded to the consideration of the *Etiology of Leprosy*.

In discussing the etiology of diseases, we usually divide the causes which produce them into two classes—(1) primary, and (2) secondary. Thus, for example, in scurvy (a disease somewhat allied to leprosy), we know the *primary* cause to be a deficient supply of fresh food and vegetables; and the *secondary*, exposure to wet, cold, and other hardships. In the case of leprosy, however, we are quite ignorant of its primary source; and, therefore, in dealing with the subject, I can only discuss its secondary and predisposing causes, of which the seven following are the chief: (1) Climate, (2) Soil, (3) Race, (4) Defective Hygiene, (5) Diet, (6) Hereditary Tendency, (7) Contagion. These seven factors differ much in their relative importance; some exercise but little influence in the propagation and perpetuation of the disease, while others are of great moment.

1. *Climate*. It will be gathered from what I have said in the geographical sketch of leprosy, that I do not attach much value to climate as a cause of the malady. I have already proved that the disease exists in all latitudes, from the Poles to the Equator: nevertheless, I believe that the importance of climate has been rather under than over estimated, especially by the modern German writers, who attempt to determine its effect by comparing one country or district with another; and they argue that, as the disease is equally common, say in Norway, South Africa, and the West Indies, therefore atmospheric influences are inoperative. I need scarcely point out that there is a possible fallacy in this argument, inasmuch as, by thus comparing one country with another, they really include several factors—viz., soil, race, food, etc., any of which may exert an influence over the disease. To separate these, and assign to each its proper value, is the difficulty. In order to judge of the effects of climate, much larger tracts of country—such as include many different soils and races—must be compared, though even then the sources of error are only partially eliminated. A glance at the map which I have marked shows us that leprosy is vastly more common between the tropics than in the temperate zones. Here is a broad fact which cannot be denied; and the most probable explanation of it is, that tropical climates exercise an unfavourable influence by promoting the development of the disease.

2. *The Conditions of Soil* have always been regarded as exercising an important bearing on leprosy. By the earliest observers, the moist banks of the Nile were considered to stand in a causal relation to it. Both mediæval and modern observers have recognised that, although leprosy is diffused over a large part of the earth's surface, it prevails most along the marshy banks of rivers and on flat sea-boards. This fact is in the main borne out in the geographical sketch I have given of its distribution. In Europe, for example, it is met with almost exclusively in islands, along the coast, or in the neighbourhood of large rivers or inland seas. In Africa it is notoriously prevalent in similar districts. In China, which may be considered as a hot-bed of leprosy, it is along the coast line and low marshy plains of the south that the disease is especially rife. India forms an apparent exception to the general rule, as leprosy is distributed throughout the length and breadth of the land; but even here it is more common near the sea-coast. It cannot, however, be denied, that many regions in the western hemisphere which do not possess a moist or marshy soil are visited by the disease, nor is it confined to a low-lying coast district. The highlands of Mexico and Costa Rica, and the mountainous regions of Brazil, afford us striking examples in point. Writing of Leprosy in Madagascar, Dr. Davison says it exists equally "in town and country, at an elevation of 7,000 feet above the sea level, along the coast-line, and

through all intermediate elevations." It is not, in fact, the elevation above the sea, or the distance from its shores, which is in any way antagonistic to the disease, but the development of agriculture and the artificial drainage of the soil which is generally to be found in inland districts. In support of this view I may cite the following examples: Sweden, Iceland, the Faroe Islands, the Canaries, the Mauritius, and many parts of India, in all of which leprosy has diminished or disappeared coincidentally with improved drainage and cultivation. It may be objected that, when the disease was prevalent in Europe, it was independent of any conditions of soil. This may or may not be true; it is, however, certain that, when the disease was at its height during the Middle Ages, its virulence was so great that telluric influences were entirely subordinated; but on the subsidence of the plague, from unexplained causes, its continuance in certain localities was ensured by such agencies as peculiarities of soil and other minor causes. Secondary or subordinate causes may convert an epidemic into an endemic disease, and are most apparent when the chief or specific cause has become inoperative.

3. By many it is denied that *Race, per se*, has any influence whatever on leprosy. At first sight there appears good foundation for this conclusion, inasmuch as all races are amenable to its attacks; but the question is, are they all equally so? Many examples may be cited which lead us to pause before arriving at a positive conclusion. In India, for instance, all agree that the Jews and Europeans are less frequently attacked than the natives; but obviously this may be due to other causes than that of race. At the Cape, the Hottentots suffer more than the Negroes, and the latter far more than the native tribes. Here the comparison is less open to objection, the external circumstances of the Hottentots and Negroes being identical. The Arab races have a special immunity from the disease in Algeria, Egypt, and the Malay Archipelago. This is the most remarkable fact of the kind with which I am acquainted. It would, however, be unwise to draw any conclusions from it; for special occupations, mode of life, and diet, are so intimately connected with particular races, that it is impossible to separate the one factor from the other, or to determine whether race alone has any effect whatever on the propagation of the disease.

4. *Hygiene*.—It would be unreasonable to suppose that offences against public and private hygiene are entirely without influence on such a disease as leprosy. Want of personal cleanliness, a filthy and defective condition of clothing, and wretched damp dwellings, are under no circumstances conducive to health; but whether they exert any special action on this disease more than on many others, may be fairly doubted. In the Middle Ages, we know that princes, prelates, and crowned heads were subject to it; and in modern times, though it is undoubtedly more common amongst the poor and dirty in all countries where it is endemic, yet it is by no means confined to these classes. Sometimes it capriciously spares certain portions of a country where the condition of the population is identical with that of those attacked. In Spain, it is common in Galicia, which is the least prosperous part of the country; but it prevails also in Catalonia, the richest province. In the reports returned by medical observers in different parts of the world, we find an almost unanimous opinion expressed, that exposure to hardships, residence in foul dwellings, and neglect of personal cleanliness, serve to aggravate the disease and accelerate its progress, and that the opposite conditions have the reverse effect. No one, however, supposes that these circumstances alone would ever originate the malady.

5. *Diet*.—It is remarkable that at a very early period in the history of elephantiasis, the effect of food in promoting the disease was noticed. Galen says that it was common in Alexandria among those who fed on pulse, lentils, shell-fish, and many kinds of salted foods; and Arab testimony is not wanting to the same effect. That excellent observer, White of Selborne, writing just a century ago, attributes the disappearance of the disease from England mainly to improved agriculture, and an abundant supply of fresh food and vegetables. In the present day, Danielssen and Boeck, together with several other Norwegian observers, have strongly insisted on the importance of diet as an agent in the production of leprosy. Speaking of the maritime population in the western district, Dr. Danielssen remarks on the prevalence of fish, especially herrings, in a partially decomposed state, as an article of food. He says: "Herrings are generally used in a salted state; rarely, if ever, are they eaten fresh. The peasant of the western coast is so little delicate about this article of food, which forms so large a proportion of his daily sustenance, that he often devours it in a putrid state. When the herring fishery happens to be in places where assistance is not at hand, as is often the case in North Bergen, a large number of herrings are thrown on shore and left for many days waiting for purchasers. Should these not appear, the peasant appropriates the fish to his own use, and, adding a small quantity of salt to the half-rotten herrings, he conveys them home. After the lapse of some weeks, these herrings are in a

manner pickled—that is to say, they are in a state of decomposition, and then they become the daily food of the whole family. Each week, until they are consumed, they become more and more decayed; but, nevertheless, the nauseous food is eaten till not a herring is left: nay, so constant is this hateful custom among the peasantry, that they will not touch fresh fish, but prefer to leave it for some days till incipient decay gives a zest to their coarse palates.” The truth of the latter part of this statement I can fully bear out from my own observations. If disgusting and half-rotten animal food has any influence whatever on the development of leprosy, the west coast of Norway is of all countries the most favourably circumstanced for its production. On the coast of Catalonia, where leprosy is not uncommon, the chief food of the inhabitants is salted fish. Again, with regard to the Lafões in Portugal, Baptiste remarks that the inhabitants live on dried fish, sardines, bad bread, and fat pork, and that the fish, especially the sardines, are eaten in a half-rotten condition; and he attributes the presence of the disease to this peculiarity in the diet of the inhabitants. In my account of the geographical distribution of leprosy, it will be remembered that I have frequently referred to the above-mentioned kind of diet as very generally prevailing in leprosy countries—not only in Europe, but in all quarters of the globe; but I have also drawn attention to the fact that there are many districts where a fish diet is quite unknown—such, for example, as in some inland parts of Northern India and of Persia, as well as in the highlands of Costa Rica, where the disease prevails, though fish is seldom or never eaten.

On the subject of diet, Mr. Jonathan Hutchinson remarks, that “all localities which either are now, or ever were, noted as the homes of leprosy, have this in common, that they are either on the sea-shore, or on the banks of marine estuaries. The most probable conjecture is that it is caused by some peculiar diet common to marine localities. That it is due to fish eaten in some peculiar state, may be plausibly suspected. The fact that it is met with in such widely distant parts, renders it improbable that it is due to any particular variety of fish.....The sum of our conjectures, then, appears to amount to this: that leprosy is far too specific and peculiar in its symptoms to allow of our supposing it due to the influence of general poverty; that the cases in which Europeans are attacked, all indicate the power of endemic influences; that of endemic influences, food is the one which has most of probability as to its being the true cause; and, lastly, as the disease is only met with near the sea, we may plausibly guess that it is in some way connected with the fish diet.” Vinkhuysen, who has written a work of great interest and importance on this subject, expresses a very decided opinion that it does not depend upon any specific poison; but that it develops under the combined influence of a series of external causes, amongst which bad food, a want of fresh food, the imperfect care of the skin, and filth in general, occupy the chief place.

In the accounts received from upwards of two hundred medical men scattered over forty-five different countries, where leprosy is more or less common, we find that in thirty-five out of the forty-five countries the disease is reported, on medical evidence, to be much influenced and promoted by the semiputrid, or otherwise unwholesome, food on which the poor class of the inhabitants subsist. In seven countries, no mention is made of the effects of diet; and, with regard to three countries only, is an opinion expressed that food has no influence, either for good or evil, on the progress of the disease.

Again, in twenty-six out of the forty-five countries to which I have referred, fish, either salt or fresh, and generally in a state of partial decomposition, is mentioned as the chief or only animal food of the classes amongst which leprosy is common. In some instances salt pork is also used. Besides stinking fish and pork, musty, or otherwise bad, grain and pulses are often mentioned as the staple farinaceous food.

The question, however, is not whether the eating fish, especially bad fish, has any significance as an etiological factor, but whether there is any special diet that produces a *specific* effect—standing, in short, in the same relation to leprosy that lathyrus sativus does to a certain form of paraplegia, or spurred-rye to ergotism. It must be admitted that the *fish theory* is much weakened by the fact already mentioned, that the disease exists where this diet is unknown. Fish is the staple, and often the only animal food of the whole tropical world; what wonder, then, that we should find it largely used in leprosy countries? I believe that it would be quite possible to show that people who suffer, say, from tropical remittent fevers, are great consumers of fish.

While, therefore, I do not believe that fish, as such, has any especial influence in promoting this disease, I fully admit that decomposing and unwholesome food of all kinds has a marked effect on the progress of the malady, and further, that as fish is a kind of food very largely used, and at the same time very ready to undergo decomposition, it has acquired an exaggerated reputation as a cause of leprosy.

6. *Hereditariness*.—The existence of hereditary tendency to leprosy

has been admitted in all ages and all countries from the time of Avicenna to the present day, and is now one of the factors very generally recognised.

Virchow mentions an early instance of hereditary transmission, in the case of a citizen of Frankfort-on-the-Main and his two daughters, who were received into an order of lepers in 1283.

Sir J. Simpson records a case that occurred in Glasgow in 1581, where one Patrick Bogle was ordered to be inspected for leprosy, and eight years afterwards Robert “Bogill, sone to Patrick Bogle,” is reported as an inmate of the leper-house belonging to the city.

In our own time, Danielssen and Boeck have stoutly maintained that hereditary predisposition is one of the chief causes of the perpetuation of the disease in Western Norway, and in support of this view, they allege that out of 213 cases of leprosy 187 occurred in leprosy families. In this calculation, however, they include collateral as well as direct relationship. In Crete, out of 122 lepers, according to Brunelli, the disease appeared to be hereditary in 76 cases, and spontaneous in 46. The accuracy of Danielssen’s conclusions on this point have been contested by Dr. Hjort, who says:—From time to time the relationship of many hundred lepers to each other has been carefully investigated, and the result has shown that many of them are more or less akin; and from hence the conclusion has been drawn that the disease was hereditary in all those lepers who were related. It will be plain to all, that this conclusion does not rest on a sound basis; and that a malady can only be inherited when the seeds thereof pass in a direct line from parents to children, while those persons who are only collaterally related do not inherit the disease one from another. When both parents and children become leprosy at the same time, we may reasonably conclude that the children have not received the disease from their parents, but that the malady has arisen in both parties from external causes common to both.

In relation to the spread of disease by hereditary transmission, it is worthy of note that in those regions where it prevails endemically within a limited space, it is confined almost exclusively to certain families, among which it is perpetuated through intermarriages. This is the case in Provence, Asturia, Galicia, and also among some Dutch families at the Cape, and the same fact is noticed in Debes’s account of the Faroe Islands. My friend, Dr. Creighton, has suggested to me that this principle may be, to a certain degree, generalised and extended from families to nations. In other words, leprosy exists on the earth’s surface in exact inverse proportion to the amount of commercial exchange, intermixture of races, and other elements of civilisation; that it persists among communities shut in by the sea, or by the social barriers of prejudice, caste, etc., and which have not been able to eliminate the specific element of the disease by natural selection.

A few cases are on record of children who have sprung from infected parents having been attacked by the disease at a very early age, and in some instances after quitting the leprosy country in which they were born; but cases of this kind are very rare; therefore, when we speak of the hereditariness of leprosy, it must be understood in a different sense from that of syphilis; that is, it is not true of the disease itself; and, as Virchow remarks, it can only refer to a predisposition to leprosy disease, in the same way as cancer or phthisis are spoken of as hereditary; the development of which calls for certain external relations, or under favourable circumstances may fail altogether. If it were truly hereditary, it would probably show itself much more frequently in early life, as congenital syphilis invariably does; it is not, however, till the period of puberty is reached that the disease declares itself. While fully assenting to Virchow’s distinction between *true hereditariness* and *hereditary predisposition*, I would remark that the latter quality is far more developed in leprosy than it is in cancer or even phthisis; but the difference is no doubt one of degree rather than of kind. On the other hand, that the seeds of a disease should remain dormant in the system from birth until that time of life is reached which is favourable to the development of the malady, does not seem to me more remarkable than that symptoms of tertiary syphilis should suddenly appear after an interval of many years of perfect health.

7. *Contagion* as a cause of the propagation of leprosy was fully believed in the Middle Ages, and even now in many countries the same opinion obtains; and the exclusion of lepers as a hygienic precaution is still practised in China, Palestine, and many other places. Even where strict seclusion is not insisted on, lepers are very generally shunned through fear of infection. On this point, my friend Mr. Macnamara remarks of the natives of India, that “although lepers move about among their countrymen, they are to a great extent isolated from them. Who ever saw a healthy native touch, much less eat with, one affected with leprosy? In many parts of India, the fact of admitting a leper to a general hospital is sufficient to drive away every other person out of it.” Again, the belief in contagion in Dutch Guiana,

says Dr. Van Holst, is so strong, that the people are afraid of shaking hands with any persons who are suspected of the disease, and even of sitting on the same chair that they have occupied, or of using the same privies. This sort of evidence of contagion is, however, of little or no value; only those who are trained to observe and analyse, and who are perfectly free from any fear of infection, are entitled to give an opinion worthy of our consideration.

The conclusions arrived at by the Leprosy Committee of this College are clear and to the point. Their Report states: "The all but unanimous conviction of the most experienced observers in different parts of the world, is quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the diseased. The evidence derived from the attendants in leper-asylums is especially conclusive upon this point. The few instances that have been reported in a contrary sense either rest on imperfect observation, or they are recorded with so little attention to the necessary details, as not to affect the above conclusion. That leprosy is rarely, if ever, transmissible by sexual intercourse, when one of the parties has no tendency whatever to the disease, is the opinion of the great majority of the respondents who have had the largest opportunities of observation." The existence of contagion is altogether denied by Hjort, Danielssen, and Boeck; but Dr. Hoegh, in his report on Leprosy for 1855, suggests that the disease is communicable through the itch acarus, which in Norway commonly infests the skin of lepers. He mentions a remarkable case in point, which had come under his own observation, of a family living at a farm in the Bergen district, 2,000 feet above the sea-level. The eldest daughter, aged 25, associated with a leprosy girl of the neighbourhood, and became afflicted with the disease; a sister who slept with her, and a brother aged 15, both subsequently became lepers; and lastly, the mother fell a victim to it. In this case, there was no history of hereditary taint, and none of the family had suffered from cold or privations of any kind, but all were severely affected with itch. This is the strongest case in favour of contagion that I have met with in Norway; but after all it only amounts to this—that four members of one family, living together in a country where leprosy is endemic, became lepers. In the reports returned from India and our colonies by about two hundred medical men, I find only ten that express a decided opinion in favour of contagion. I will quote the first as an example. Writing from Granada (West Indies), one of them says: "I have seen a few persons among those affected, where contagion appeared evident. A young girl of twelve or fourteen years of age slept in the same bed with a young woman who had symptoms of leprosy. Within twelve months the girl presented the red patches, and seven or eight years after she was a confirmed leper. The mother of the girl contracted the disease, but the father escaped. I do not think the disease in its incipient stage transmissible by sexual intercourse. I consider that contagion will take place when ulcerations exist with copious discharge, and this can only occur in tuberculous leprosy." It is almost unnecessary to comment on testimony of this kind; I shall therefore pass at once to evidence of a much higher class, and well worthy of the consideration of all who are interested in the subject. In South America and in several other countries, we have the strongest reason to believe that leprosy did not exist formerly among the native tribes, but that it was imported from other countries, and has now spread among the aborigines, even where no intermarriages have taken place. The factor of hereditary transmission is here excluded.

The history of leprosy in the Sandwich Islands, if we are rightly informed, is a very remarkable one. According to Dr. Hillebrand's account (which is published in Dr. Macnamara's pamphlet on *Leprosy*), the disease was introduced into Honolulu by Chinese emigrants in 1848, and Dr. Hillebrand saw the first leper in 1853; ten years later, the disease had appeared in six other persons dwelling in the immediate neighbourhood, and, according to a recent census, the lepers now number 250. Mr. Erasmus Wilson, in his lectures lately delivered before the College of Surgeons, remarked on the significance of these facts, and expressed it as his decided opinion that, though leprosy was non-contagious in Europe, it was probably contagious in tropical and semitropical countries.

It would be very interesting to learn more of the history of the disease in the Sandwich Islands than we know at present, and especially as to the number of imported cases, as compared with those that have originated in the Islands. Again, leprosy has existed for some time past amongst the Chinese emigrants in Australia, and lately it has been reported that the disease has spread beyond the Chinese population. I have ascertained, however, that the Colonial Office has received no information as to the authenticity of the report, and in the absence of further evidence, we cannot come to any conclusions on the subject. Landré has lately attempted to prove that the disease is contagious in Cayenne, and he has brought forward many striking cases in proof of

his views; but some of his examples, if they prove anything, prove too much—namely, that the disease is highly infectious, and this no one is inclined to admit.

We cannot shut our eyes, however, to the fact that leprosy very frequently occurs in members of the same family, even when hereditary transmission is out of the question; and that Europeans not unfrequently become leprosy by residence in countries where the disease is endemic. I have lately had under my care a very severe case of leprosy in an English gentleman, who was born and lived in England during the early part of his life, but afterwards resided for many years in a country where the disease is common, and where he fell a victim to it. Many other similar cases are on record. Kaposi has met with four such. Case 1, male, 45; born in Turin. At thirty years of age he went to Cairo. The disease began after ten years' residence there, and after five years it had produced an abundant formation of nodules on the face and hands. 2. His wife, ten years younger. She was also born in Turin, and went with her husband to Cairo. She fell ill two years later with tubercular leprosy, but had after three years' illness anæsthesia of the hands. 3. A female, aged 48; born in Alsace. When aged 17, she went to New Orleans, and was taken ill when 44 with the tuberculated form. 4. A male; born in Hamburg. At twenty-eight years of age he went to Rio, was taken ill seven years later, and, when seen in Hebra's clinic, had well marked tuberculous leprosy.

The problem to be solved is this: Do the physical and natural relations of the country alone explain these facts? If not, we are driven to the conclusion that the disease is some way communicable from the unhealthy to the healthy. For my own part, I am inclined to believe that, though leprosy is possibly not contagious in the ordinary sense of the word, it is nevertheless propagated by the imbibitions of the excretions of those affected, much in the same way as typhoid fever or cholera is propagated; but as leprosy is developed but slowly, there is far greater difficulty in tracing it home to its true source. This hypothesis gives the best interpretation of many facts in the past and present history of the disease which would otherwise remain unexplained.

Sexes.—There is a prevailing opinion in the present day that leprosy more commonly attacks males than females. On this point, we obtain little or no exact information from a study of its history. The leper-houses throughout Europe were sometimes provided for both sexes conjointly—as, for example, that of St. Nicholas at York, which contained both male and female lepers. In other places, they received one sex only, as at Nuremberg, where, of the four leper-hospitals, three were allotted to women, and only one to men. But the records of the time do not generally show the relative number of the males and females admitted; nor would such information, if it existed, be a very certain guide to determine the point in question. An investigation of the number of cases admitted into the hospitals of tropical countries in the present day, would lead us to the conclusion that the disease is far more common in males than in females; but I may state at once that deductions from this source are entirely fallacious. It is well known and admitted on all sides, that in most countries, but especially in the East, the women are far more unwilling than the men to enter the leper-hospitals. Hence it is that we find a great disproportion between the males and females admitted; and this fact has led superficial observers to erroneous conclusions on the subject. The only records I can find, that are not open to this objection, are those of Norway and Jamaica. The latter are obtained from a census of the whole island, where no doubt many lepers of either sex were overlooked, but probably in about equal proportions. We find in Norway, out of 906 cases, 461 were males, and 445 females; and in Jamaica, out of 778 cases, 391 were males, and 387 females. In the latter country, there are about 5 per cent. more women than men. Thus, if we are to judge by the statistics of these two countries, we must admit that the disease is nearly equally common in both sexes. Dr. Vandyke Carter seems to think that the leprosy returns in the Bombay Presidency are sufficiently trustworthy to establish the fact that the disease is there much more common amongst men than women. He says: "The proportion of the sexes amongst all lepers is 4.38 males to 1 female, or nearly four times as divergent as that of the normal population, estimated at 1.1 males to 1 female." We require some further information on this subject.

I will briefly sum up the conclusions to be drawn from the foregoing account of the etiology of leprosy. Firstly, its primary cause is yet unknown. Next, of secondary causes, diet and hereditary tendency are by far the most important; and that climate, soil, and race are not without a certain influence on the development and progress of the disease. Lastly, leprosy, if not contagious, is capable of propagation by the imbibition of the excreta of lepers.

ON THE INSTRUCTION, EXAMINATION, AND REGISTRATION OF MIDWIVES.*

By J. H. AVELING, M.D.

MR. PRESIDENT AND GENTLEMEN,—I am very glad the Council of our Branch has given me the opportunity of introducing, for discussion this evening, the subject of midwives; because, in the first place, it shows that the interest of the profession in this question is becoming aroused; and, secondly, because I am sure that many difficult points relating to the instruction, licensing, and registration of midwives will receive considerable elucidation at your hands.

The word midwife is derived from *mid*, with, and *wif*, a woman—a with woman, or *cummater*. In Spain and Portugal, the word used is *comadre*; in Italy, *comare*; and in Scotland, *comer*, *cummer*, and *kimmer*. The word obstetric, from *obsto*, to stand before, has also the same meaning as the foregoing words. When I use the word midwife, I mean a person not necessarily possessing any knowledge of the theory of medicine, but one able to undertake the management of natural labour, to detect anything abnormal requiring further assistance, and even, in some cases of emergency, to employ active treatment until such assistance can be obtained.

The necessity for such a class of women is undoubted. Among the poor population of villages, a large proportion of women, varying from thirty to ninety per cent., is attended by midwives; and in large manufacturing towns the proportion is equally large. In every other country but England, midwives have a recognised position, and are under the direct protection and control of the State. Up to the middle of the eighteenth century, they were licensed by the bishops; but since that time any needy woman, no matter how degraded or ignorant, may pretend to be skilful in midwifery, and perform unheard-of cruelties with impunity.

A laudable attempt was made by the Society of Apothecaries in 1813 to get enactments passed for the examination and control of midwives, but without effect; and since that time, although the subject has been constantly agitated, no serious effort has been made.

The first step necessary to be taken is to provide those intending to be midwives with suitable instruction. This has been carried on to some extent in London, Manchester, and other large towns, by the medical officers attached to lying-in hospitals; but, when we consider that, according to the computation adopted in Germany and France, we ought to have in England alone no fewer than 11,500 midwives, it must be at once apparent that this is a task beyond private enterprise, and one requiring powerful State aid. The only organised attempt to grapple with this great undertaking is that made by the Obstetrical College in Great Portland Street. Its objects, as stated in its prospectus, are: "1. To establish an Obstetrical College for educated women. 2. To obtain such amendment of the Medical Acts as will give women access to a registrable diploma for the practice of midwifery, and confer upon properly educated midwives a defined professional status." These propositions are admirable in themselves, and must at once secure sympathy; but, when they are analysed and minutely examined, several unsatisfactory aspects present themselves. The most of these have their origin in a pardonable pride—an aiming too high, and an attempt with such a small hand to grasp so huge a subject. To provide us with 11,500 midwives, they establish an Obstetrical College for "educated women". Why not for women who can read, write, and calculate? They would have a woman, before she begins to practise midwifery, to pass one or other of the following examinations: the Preliminary Examination in Arts at Apothecaries' Hall; the Matriculation Examination of the Edinburgh University; the Examinations for Women at the Universities of Oxford, Cambridge, or London; the Senior Local Examinations of Oxford or Cambridge; or obtain either of the Certificates issued by the Royal College of Preceptors of London.

It requires an active imagination to realise 11,500 women thus educated living as midwives in isolated country villages, perhaps having to augment the fund which their poorly paid services might produce, by charring at the hall or washing for the rectory. The Obstetrical College aims too high; it wishes to make medical women, not midwives. Its students are to be "ladies," not sensible poor women possessing bodily strength, and a tolerably good elementary education. It also teaches them the treatment of the diseases of women; its object, therefore, is not to instruct and license poor women in midwifery, but ladies to profess "obstetric science and its accessories:" in fact, to

raise up a legitimate class of inferior ill-instructed female general practitioners of medicine, who, with small pains and little expense would be in a fair position to compete with medical men who have, after long toil and great cost, fully qualified themselves for practice. The Obstetrical College is sitting between two stools, the *midwife* and the *medical woman*; and if it would not have the proverb fulfilled, it must, to obtain a secure and lasting position, shift either one way or the other.

Generally speaking, a midwife's occupation consists more especially in tending to the wants and comfort of her patient, the actual labour being a physiological process to be watched rather than interfered with. It is true, however, that more than this is sometimes required. Sudden emergencies, demanding prompt action, will occur, and it is, therefore, necessary, that she should be able to discover early anything unnatural in a confinement calling for more skill than she possesses. Such intelligence as the Obstetrical College would demand cannot be expected in so large a body of women; average mental capacity and a natural aptitude for the occupation should alone be required. An ordinary midwife can never be a practitioner ranking in education and position with medical men.

Three modes of instruction have been adopted in this and other countries. 1. By a sort of midwifery missionary system, in which the teacher travels about from place to place, giving oral and practical instruction to all the midwives residing in the neighbourhood. 2. By oral instruction in a small institution, and clinical tuition at the houses of the patients. 3. By that method of teaching which is wholly given within the walls of one building, a lying-in hospital and school united. Probably a combination of the last two systems is the best, for a midwife who has no knowledge of domestic midwifery can scarcely be looked upon as completely instructed. A labour conducted in a hospital, with every comfort and appliance at hand, is a very different affair from one taking place, perhaps, on the floor in a corner of a room, with scarcely an article of furniture in it, or, in fact, any of the necessities of life.

For the instruction of midwives it would first be necessary to erect lying-in hospitals and schools in London and other large towns. A staff of teachers, medical men, and midwives, would have to be appointed to each; and the amount of instruction, the method of imparting it, the length of time the pupils should be required to study, the age and conditions under which they should be received, and numerous other questions, would have to be determined. In doing this much, assistance might be gained by carefully examining the working of the excellent midwifery schools in Germany, Russia, and France.

Speaking broadly, they should be taught—"a. The elementary anatomy of the female pelvis and generative organs; b. The symptoms, mechanism, course and management of natural labour; c. The indications of abnormal labour and the emergencies which may occur in practice; d. A general knowledge of the puerperal state; e. The management of new-born children; f. The conditions as to air, food, chambers, etc., necessary for health; and g. The duties of the midwife, with regard to the patient, and with regard to the seeking of medical advice." (*Obstetrical Society's Regulations.*)

It is a remarkable fact that, since the time of Andrew Boorde in 1547, up to the present time, more than twenty distinct proposals for the instruction and licensing of midwives have been published. Amongst the modern ones, Miss Nightingale's is the most valuable. She would erect in an open, airy site, in the immediate vicinity of the centre of population, a lying-in institution of forty beds in single-bed or four-bed pavilions. The staff to consist of one matron, one head midwife, one assistant-midwife, one deputy assistant-midwife, thirty pupils, and four domestic servants. There would also be a medical officer, non-resident, who would make his morning and evening visit, and be called in by the head midwife when any difficult case occurred. He would also give instruction, scientific and practical, to the pupil midwives, such instruction to extend over two years. Her plan is worked out to the minutest details with admirable care; and, if carried out, would very materially assist in rearing a race of midwives competent and creditable to the age in which we live.

If it be an undoubted fact that midwives must be, and this I have never heard disputed, it is certainly necessary that they should be properly instructed. It is not reasonable to suppose that the poor women themselves can organise a scheme for this purpose, and the question consequently arises—to whom does this duty belong? My answer is, the State should do it, under the advice of the General Medical Council. Its performance is of such magnitude as to be beyond the reach of private charity, and of such importance as to demand State protection and aid.

When provision has been made for the instruction of midwives, it will be necessary to adopt some scheme for testing and attesting their

* Read before the Metropolitan Counties Branch.

knowledge. This is at present done in several different ways by individuals upon their own responsibility, by the medical officers of lying-in hospitals, by the Obstetrical College for Women, and by the Examining Board of the Obstetrical Society of London. A question has lately been raised, whether the College of Surgeons has not also this power. In a bill which they obtained in 1852, it is enacted "that a board of examiners be appointed by the said College for the purpose of attesting the fitness of *persons* to practise in midwifery, and of granting certificates of such fitness, and that such board shall consist of not less than three persons." (Sec. 17.)

The question whether this clause applies to male as well as to female practitioners in midwifery, depends entirely upon the interpretation of the word "*persons*." If it be ruled that it includes both sexes, it must also be decided that the "three persons" who are to form the board of examiners may be women. It would be awkward for the Council to have to decide that the word "person" meant both sexes in one line, and only the male sex in the next. I believe that two of the ladies from the Obstetrical College have applied to the College of Surgeons to be admitted as candidates for the midwifery licence, and that the subject is being considered by the Council.

The examination and diploma instituted by the Obstetrical Society of London is looked upon by its Fellows only as a tentative measure. It is believed that some more authoritative licence will be required, and the Society desires to perform this function merely as long as it remains unfulfilled by the corporate licensing bodies. A bill similar to that obtained by the Royal College of Surgeons in 1650, for the purpose of attesting the fitness of persons to practise as dentists, would effect this end; or a similar plan to that employed in Moscow might be adopted, by the London University converting into a diploma the attestation of the examiners of the Obstetrical Society of London. Something more than the certificates at present granted by individual medical men and by the physicians of lying-in hospitals is required. The licence must be given by some body holding a high and responsible position, and be such as the General Medical Council could accept and register.

In the days of our forefathers, when there were no Colleges of Physicians and Surgeons and no Society of Apothecaries, the bishops looked after the interests of the public, and granted licences to physicians, surgeons, apothecaries, and midwives. These bodies, with the exception of the last mentioned, have long since taken into their own hands the power of issuing licenses, and have obtained from Parliament charters protecting themselves and the public from quacks and mountebanks. Midwives alone remain unprotected and uncared for; in fact, they are now in a worse position than they were centuries ago, when every woman practising midwifery was obliged to be a "sworn midwife," possessing a licence from the bishop of her diocese.

A bishop's license to a midwife ran as follows, and cost about eighteen shillings.—"Whereas We understand by good testimony and credible certificates that you the said Elizabeth Chapman are apt and able, cunning and expert, to use and exercise the office, business, and function of a Midwife, We therefore by virtue of Our Power Ordinary and Episcopal, Do admit and give you power to use and exercise the said office, business, and function of a Midwife in and through our Diocese and Jurisdiction of Rochester, with the best care and diligence you may or can in this behalf, indifferently both to poor and rich, as also to perform and accomplish all things about the same, according to your oath thereupon given you upon the Holy Evangelists, as far as God will give you Grace and enable you. In witness whereof, etc."

Owing to the sacred dignity and power of its donor, this licence was valued and respected. Why should midwives be worse off now than then? There can surely be no just cause why midwives who are sufficiently instructed should not be able to procure certificates from such an authoritative source as would command the trust and confidence of the public. If neither of the existing licensing bodies will undertake the task, let us have by all means a twentieth examining body, constituted with full powers to perform this important office; and if this is not practicable, then let us see whether the bishops cannot be prevailed upon to resume their licensing functions. Anything would be better than the present indifference and neglect.

Having determined to instruct, examine, and license midwives, the next question which arises is—Are they to be *registered*? And then—How is this registration to be effected? I believe that the midwife's license, to be of real value, should be of a registrable character. Her qualification having been obtained, it should be made compulsory that a midwife should register it. The General Council of Medical Education and Registration would probably undertake to do this. Until it is done, the public can have no protection from ignorant and rash women, and no ready method of selecting a competent practitioner. Two resolutions, passed in March, 1872, by the General Medical Council, show that

that body recognise the importance and urgency of this question. It was moved by Dr. Acland, seconded by Dr. Stokes, and carried—

"That a committee be appointed to consider and report whether the General Medical Council has power to make rules for the special education of women, such as may entitle them to obtain a qualification to be certified by the Council.

"And that the committee do further report for what purpose such qualifications, if any, should be granted; what are the most desirable means for educating, examining, and certifying in respect of them, with especial reference to midwifery, the management of medical institutions, dispensing, and nursing."

Dr. Stokes said that midwives were practitioners, to a certain extent, of a branch of surgery and medicine, and that the interests of that large number of poor who came under the care of these female practitioners ought to be cared for; also, that the Council should not be an examining body, but that it should register the qualifications derived from licensing bodies. Time will prove whether the General Council will take further action in this matter. I believe it will. But registration should not only be a safeguard to the public, it should also protect the midwife from the competition of ignorant pretenders. It must be made illegal for any but a registered midwife to call herself a "midwife," or to practise the calling of a midwife for profit or gain; and the infringement of this law must be enforced by pains and penalties. In Austria, a midwife who practises without a diploma is fined six thalers for the first offence, double that amount for the second, and is imprisoned for the third.

The second question—how is the registration of midwives to be carried out?—is not so easy to answer. The ordinary midwife can never be looked upon as a medical person, and no one can aspire to be on the *Medical Register* who has not passed through a full medical curriculum and a comprehensive medical examination. Besides, anyone whose name appears in the *Register* has a legal right to practise medicine; and it is this fact, I believe, which has prevented the diploma granted to dentists by the College of Surgeons from being registered. Could not, however, a supplementary or sub-register be instituted, in which the names of dental-surgeons and midwives might appear? Some alteration in the law would probably be required to effect this, but surely it is due to the recipients of an authoritative diploma that its object, which is to defend the public from ignorant pretenders, should not be defeated for want of authoritative publication.

I have no wish to magnify the office of a midwife, for, judging from my experience of her in the country, I am quite sure she can never be a person having any claim to high social or scientific position. Compared with a skilled obstetrician, she is as the organ-blower to the organist; still, we cannot ignore her. The surgeon has separated himself from the barber, and the apothecary from the grocer, but our relations with the midwife can never cease. In practice, we must constantly meet her, and her very weaknesses and inability to improve her position must always claim our sympathy and assistance.

Mr. P. H. Holland has favoured me with the following suggestions regarding the licensing of midwives. I believe, however, that he is disposed to modify the clause relating to annual registration.

"I propose that the Medical Council should be empowered to license any person as a licentiate in midwifery for a year, and to renew such licenses annually upon the attestation of the London Obstetrical Society, or other approved examining body, to the effect that the candidate bears a good moral character, is respectable in conduct, and has had an opportunity of learning the art of midwifery. *a.* By attending a course of instruction satisfactory to the Medical Council; *b.* By attending labours in company with persons nominated by the Society as skilled in midwifery who certify the practical competency of the candidate; *c.* By passing a satisfactory examination in the theory and practice of midwifery. That the license shall be annually renewed without further examination upon attestation satisfactory to the Medical Council, that the licentiate continues to bear a good character for morality and respectability of conduct, and has not been guilty of carelessness or malpractice endangering the life of any mother or child under her care. The Medical Council shall publish annually a list of the licentiates in midwifery whose licences have been renewed, and also of those whose licence have not been renewed, with statement of the reason for such non-renewal. The fee for such licence and for each renewal thereof shall not exceed (2s. 6d.?). Any person assuming the title of licentiate in midwifery without licence obtained or renewed within the preceding twelve months shall, on summary conviction, forfeit and pay any penalty not exceeding ten pounds."

Besides the registration, licensing, examination, and instruction of midwives, there is still another point of great importance, which in the construction of any comprehensive scheme must not be overlooked, viz., their *supervision*.

It has been found advisable in other countries that midwives should remain under State control and supervision during the time they continue in practice. In Prussia, a midwife is not allowed to establish herself in a district without the permission of the authorities, who decide whether one is required, and whether she will have a fair chance of gaining a living. She is relieved from all taxes, and receives a fee at every marriage, birth, and baptism which takes place in her district. If her instruction at the midwifery school have been paid for by any particular county, she is, after obtaining her diploma, obliged to practise in that county for five years. Each midwife is compelled to keep a diary, in which she must enter a faithful account of every labour she attends. This journal she has to show to the obstetric commissioner or inspector, when he visits the district in which she resides. From it he copies the statistics of the cases she has attended, and in doing so finds out whether there has been any undue mortality, the cause of which requires investigation. The midwifery statistics of the whole country are thus most accurately obtained, and every birth, whether it be premature, still-born, or abnormal in any way, is registered. The value to humanity and science which this arrangement ensures can scarcely be overestimated. The obstetric inspector also re-examines each midwife at stated periods to see if she be progressing in knowledge; for her education, like that of a medical man, must not be considered completed when she has obtained her qualification. During this interview she has the opportunity of asking him questions relating to her social position, or concerning any difficulties she may have met with in practice. Every midwife is provided with an authorised manual on midwifery, possessing which she is able to refresh her memory, and extend her information.

A large part of this excellent organisation might be adopted with great advantage in this country. How many valuable lives would have been saved had our midwives only known that an inspector was coming by-and-by to investigate, like a coroner, every fatal case occurring in their practice; and that delay in sending for further help, unwarrantable interference, ignorant neglect, and all the other causes of death which may befall parturient women through their inefficiency, would most certainly be discovered and punished. As the law stands now, England proves herself to be utterly indifferent to the lives of her poorer daughters. When they are most helpless they are often left heartlessly to the care, or rather carelessness, of coarse and totally uninstructed women, whose direful work only now and then attracts attention from its very hideousness.

It is to be hoped that the extended interest which is now displaying itself in their general welfare will soon lead to the appointment of a commission by Government to investigate and report upon the present condition of the midwives of this country, and to gather from the experience of this and other European states the best method of remedying the present deplorably ignorant condition of this important body of women—a condition which a writer has lately very justly declared to be “a scandal and a disgrace to a country which calls itself Christian and civilised.” Were such a commission to examine witnesses from that class of medical men who labour most amongst the poor, their answers would provide materials for a “blackbook,” whose pages would so startle the public with their horrible tales as to ensure the prompt and effective interference of the Legislature.

Before concluding this paper, I would ask you to bear in mind the three following facts.

1. Sixty per cent. of the poor women in villages and manufacturing towns are attended in their confinements by midwives.
2. The majority of these midwives (probably 10,000 in number) are uninstructed and uncontrolled.
3. The fatal results to both mothers and children, arising from the ignorance of midwives, are notorious.

With these three facts fully impressed on our minds, none of us, I am sure, can by any logical process arrive at any conclusion but this—viz., that the present condition of the midwives of this country is most unsatisfactory, and demands immediate attention and amelioration. In dealing with the question we have but two alternatives: we must either abolish the whole race of midwives, or we must instruct them. Licensing and registration are of great consequence, but instruction is of primary and paramount importance. We cannot feed and fatten a man without giving him food; nor can we, by licensing and registration, without instruction, make a midwife. If, then, we decide not to attempt the impossible task of annihilating midwives, we must undertake the possible but difficult enterprise of training them. It has been done in Russia, Germany, and France; and what Russians, Germans, and French have accomplished, surely Englishmen can do. It cannot be that our nation cares less about the welfare of its wives and daughters than other countries; and yet we must admit that there exists a colouring of truth in the taunt which is sometimes hurled at us when this

subject is spoken about. We have our Society for the Prevention of Cruelty to Animals; but a midwife may inflict frightful tortures unquestioned. The captain of a ship may not take command of a vessel without having shown proofs of his seamanship; but a midwife, utterly ignorant, may take charge of a woman in labour, and the State cares not with what result. Dense ignorance alone can be the cause of this indifference. Facts painfully plentiful exist, sufficient to make out such a strong case for parliamentary action as would insure the sympathy of all political parties. The subject, however, it must be remembered, is a large one, and cannot be dealt with in an offhand manner. To grapple with it successfully, great perseverance, extensive investigation, and large political experience will be required—in fact, just such qualities and powers as are possessed in an eminent degree by many of our members. By improving the existing condition of the midwives of this country we should do credit to ourselves, and confer an immense boon on the public; and I cannot conceive an undertaking the accomplishment of which would, more than this, bring greater internal satisfaction, or a larger share of external respect and approbation to our important and powerful Association.

ON VOMITING OF HABIT.

By HENRY M. TUCKWELL, M.D., F.R.C.P.,
Physician to the Radcliffe Infirmary, Oxford.

THE class of cases to which attention is here drawn would ordinarily be grouped under the head of hysterical vomiting: but the term hysterical is from many points of view inappropriate; for, first, this particular kind of vomiting is met with in boys; secondly, it occurs in girls before the age of menstruation; thirdly, it yields to the same kind of treatment in both sexes alike. It may, perhaps, be called vomiting of habit; for, although in certain instances it may at the outset originate in some really morbid condition of the stomach or liver, yet it is afterwards perpetuated simply by force of habit, long after the exciting disease has gone and left no traces; while, at other times, it seems to begin without any assignable cause, and to be continued as a habit for months, or even for years.

The subjects of this bad habit are, as a rule, young; of either sex; of what is called a nervous temperament; quick and clever, but irritable; often descended from parents in whom some neurosis or some imperfection in mental capacity has already manifested itself. Their condition is on the border-land of that of the adult malingerer; but they differ from the latter in this respect, that they are sometimes reduced by the habit to a serious state of weakness and ill health, and that the vomiting from long continuance becomes rather an automatic than a voluntary act. Their mental state has been well described by Dr. West in his interesting chapter on “Mental Peculiarities in Childhood,” in which will be found some instructive illustrations of this quasi-malingering in children.

They go through their performance in various ways. One child will find it necessary, directly after food has been taken, to run to the water-closet, where the surroundings seem at once to give the stomach the necessary hint. To another, the mere sight of a basin after meals is sufficient to excite the act. A third, too weak to get out of bed, will raise himself into a particular posture and begin to vomit whatever food has been taken. The stomach has no time given it for discharging its proper functions, but the food is brought up as soon as it is swallowed. There is also no indication of pain, or even of the discomfort, which ordinarily precedes the sickness of a diseased stomach; while the regularity with which the act takes place after food, together with the absence of all cerebral symptoms, enables one to distinguish this kind of vomiting from the irregular vomiting of cerebral disease.

In the treatment of these cases, all medicines fail; and even the carefully restricted diet which would be advantageous in chronic vomiting from diseased stomach, proves quite unavailing. Small spoonfuls of milk and lime-water, which would be retained by a person with ulcer or cancer of the stomach, are no sooner taken than they are rejected. The first thing to be done is to separate the child from its parents, and give a fresh colouring to its daily impressions by means of new faces and new influences. Next, the child must be watched, and notice strictly taken of the way in which it sets about vomiting, so that one may be enabled, with the help of a kind and firm nurse, to suddenly interrupt the usual performance, and so break in upon the habit. In the cases recorded below, a genuine cure was effected in this way after many weeks or months of medical treatment had failed, and where

even the discipline of a hospital and the most rigorous diet had been unable to break the spell.

CASE I.—Albert S., aged 15, was admitted into the Radcliffe Infirmary under my care on November 2nd, 1871. He was reported to have vomited all his food since the beginning of July. Before this he had been weakly and disinclined to work, refusing to follow up the trade to which his father had apprenticed him. He had not left his bed for three months, but had been nursed and anxiously watched by a foolishly kind mother, who had herself once been insane, and was at all times eccentric. He had not spoken a word for many weeks. All kinds of medical treatment had been tried in vain. His face was pale; his body and limbs were much emaciated; his eyelids, mouth and chin in a state of constant twitching. When spoken to, he burst into tears. No sign of disease could be detected in any part of the body; no pain or tenderness in the abdomen. The nurse stated that he had vomited everything taken since admission, twenty-four hours previously. The vomited matters consisted of unchanged food. He was ordered to take one tablespoonful of milk and lime-water every half hour, and to suck ice; no medicine was given. On the third day, I found that he had vomited each spoonful of milk as soon as it was taken. The nurse had observed that, as soon as the milk was swallowed, he raised himself into a half-sitting posture and began to "heave." I ordered her to prevent him from doing this, to sit by his side and keep him flat on his back after each dose of milk. On the fourth day, he had kept down the greater part of the milk. On the fifth day, he had kept down all the milk and some minced mutton. On the eighth day he was eating mutton and potatoes, and sitting up in bed. He was finally discharged on January 22nd, 1872, fat and cheerful, having gained while in the Infirmary more than a stone in weight. He is at the present time strong and well.

CASE II was related to me by my friend Dr. Gray, who kindly allows me to insert it here. I give it in his own words. "The patient was a schoolboy, aged 13 or 14, pale and thin, much spoiled at home, an only son, of very feeble power of will. His father had died of drinking. He had had chronic vomiting soon after food for some weeks, when I first saw him. With this there had been troublesome constipation, and, for a few days, slight painless jaundice. I continued to attend him at school for some time, trying every remedy I could think of, without avail. From the persistence of the vomiting, long after the jaundice and constipation had yielded, and in absence of any tenderness at the epigastrium, or complaint of pain after food, I suspected that the vomiting, however caused in the first instance, was kept up by habit; and, as I knew the boy's mother well, I got her to let him live with me in my house for a few days. The first day, after dinner, he said he must leave the table to be sick. I made him sit still where he was, brought a basin within reach, and kept him engaged in conversation to divert his mind. The end was, that he did not vomit, or even retch. After tea I did the same, with the same result. After a few days on this tack, without any medicine, or any restriction in diet, he had quite got over his habit of vomiting, and never again had any trouble of the kind."

CASE III.—Kate M., aged 14, was admitted into the Radcliffe Infirmary, under my care, on January 16th, 1873. She was reported to have first begun to vomit her food, directly after it was taken, eighteen months ago, and to have continued this habit for a twelvemonth. The vomiting had then stopped for three months, but had begun again three months previously, and gone on uninterruptedly till the date of her admission. She had never suffered any pain, nor could the sickness be ascribed to any cause. She had never menstruated. All kinds of medical treatment had been tried in vain. She was pale and thin; had a quick, sharp manner; was evidently much interested in the examination of her case, and had plenty to say about her state and symptoms. No kind of disease could be detected in any part of her body. The nurse stated that the girl had vomited everything that she had taken since admission; and added, on my inquiring how the act of vomiting was performed, that, directly after each meal, she ran to the water-closet and began to retch till the stomach emptied itself. Some vomited matters, which I saw, consisted of unchanged food. I directed the nurse to place her on her back, and keep her in that posture, for half an hour after each meal. The regular hospital diet, with meat and vegetables, was ordered, but no medicine was given. From this time forth the vomiting stopped. The treatment by posture was continued for ten days, after which time the girl was allowed to do as she pleased after meals, but she showed no inclination to return to her old habit, and was discharged cured on February 5th.

In all these cases, the habit was broken by first noticing the way in which the child set about the act of vomiting, and then suddenly interrupting it in its performance.

THE SANITARY STATE OF ROME.

By LAUHLAN AITKEN, M.D., Rome.

So many articles had appeared, both in professional journals and in the daily and weekly newspapers and reviews, on the unhealthy state of Rome during the last twelve months, that in the autumn of last year I began to make the necessary inquiries and to endeavour to ascertain the true condition of the city. This I found by no means an easy matter, partly owing to the fact that the proper elements for a fair comparison of the sanitary state of the city in the past year with those which had preceded it were nearly if not altogether wanting, and partly because a very large proportion of the deaths in Rome occur in the hospitals; and it is now, and will be for some time, impossible to obtain exact data for the year from the directors of those institutions. Finally, however, through the courtesy of the Cavaliere Silvagni, the head of the statistical department at the Capitol, I was furnished with all the information the office had obtained on the health of Rome in 1872; and the results embodied in this article have been almost entirely gathered from the various and excellent reports issued by the Cav. Silvagni throughout the year—reports which the author, with the greatest kindness, has allowed me to use at my discretion. I was also favoured by Dr. Bianchi with some excerpts from the books of the largest medical hospital in Rome—the Santo Spirito. These various reports, with the oral information obtained from many of the medical men in Rome, enable me to present a more accurate and detailed account of the sanitary condition of the city, as well as of the reasons for its high death-rate, than I at one time thought it would be possible to do.

The establishment of a registration office at the Capitol in Rome under the Italian government, only dates from the 1st of February, 1871; and as yet, of course, it is unable to supply the materials for a satisfactory comparison of the present state of the city with that of former years, even if such comparison were possible; but, as the Papal authorities were accustomed to furnish the returns from one Easter to the other, there is thus introduced an element of confusion into the reports which it will be most difficult to set aside. In addition to this, as the only official census made by order of Pope Pius IX, was in the year 1853, when the population of Rome and the Agro Romano* was found to be 177,014, it is evident that the estimates of the inhabitants during the decennium from 1860 to 1870 must have been to a great extent conjectural, and consequently untrustworthy for statistical purposes. This is more apparent, if we bear in mind that the first census undertaken by the Italian government on the last day of 1871 and the first of 1872 proved the population to be 244,484, showing an increase of 67,470 in the nineteen preceding years. Another curious fact goes far to prove the unsatisfactory nature of the bases for the returns from 1860 to 1870. In the year 1860, when the population was estimated at 184,000, the births numbered 5,907; while in 1870, when the population had increased to 226,000, the births were only 5,755, or actually fewer in number than in 1860, in spite of the great increase of inhabitants. Nor was this falling off in the births due apparently to any disturbing political element, as the nine intervening years show similar strange fluctuations, though the estimated population gives an increase from year to year; in none of them were so many children born as in 1860.

In turning to the careful and extended report which Signor Salvagni has issued since the establishment of the statistical office in the beginning of 1871 and to the last census returns, it becomes obvious that the basis for the results arrived at may be regarded as fairly accurate. From them, it appears that the death-rate of the city has become materially higher within the last three years; for, while in 1870 the proportion of deaths was 24.8 to 1,000 inhabitants, in 1871 it had risen to 31.1 per 1,000, and in 1872 to 37.4, this last number being very alarming, and greatly in excess of the mean annual mortality of all the larger capitals of Europe. On examining the weekly tables furnished by the registrar more closely, we find that this mortality was unequally distributed over the different quarters of the year. For the first quarter it is impossible to furnish an accurate statement, owing to the fact that in the returns of the first four weeks are included many deaths not belonging to the community; for the second (April, May, June), the mortality was 33.9 per 1,000 living; for the third (July, August, September), 39.8 per 1,000; and in the last quarter it had again diminished, being 35.01 per 1,000 inhabitants.

In estimating the mortality of the year, I have thought myself justified in deducting the still-births and those deaths which occurred in the hospitals or city but did not belong to the community. Of the former

* Rome and the Agro Romano embrace an extent of country of about 815 square miles.

there were as many as 322, while the aggregate of individuals dying in Rome, but belonging to other parts of Italy and to foreign countries, was 836 for eleven months of the year.* After the subtraction of those deaths, the total mortality for the year was 9,144, or 37.4 per 1,000 living. The high death-rate among those not belonging to the community requires some explanation, and seems partly due to the fact of Rome having been overcrowded with the poorest of the labouring classes from all parts of the kingdom, who anticipated obtaining employment on the numerous public works which have been begun since the city came into possession of the Italians, and who, on account of the greatly enhanced prices of food and lodging, have been most wretchedly fed, and have been obliged to live in underground cellars without light or air in the colder season, while in the hotter months their sole sleeping quarters were too often the porticoes of the churches and public buildings. Among those unfortunate people the mortality has been appalling, and, as most of them came from parts of Italy where there was no ague, it has been greatly owing to pernicious intermittent fever. In addition, it is probable that the hospitals of Rome have attracted to them the invalids from a wider district of country than they used to do, as almost all the deaths of those not belonging to the community took place in the hospitals, only 90 out of 836 having died elsewhere in the city; figures which by themselves go far to prove that foreign residents and visitors suffered but little from the prevalent unhealthiness of the year. During the four months, July, August, September, and October, there were admitted 11,000 patients into one hospital, the Santo Spirito, or nearly as many as are usually received throughout the whole year. In the medical hospitals, with the exception of one or two wards used for clinical purposes, there is no part of the various buildings which even partially answers to the requirements of modern hospital construction, and with any great influx of patients the overcrowding must prove most deadly. The surgical hospitals are better constructed, but they, too, are overflowing with patients, and, indeed, rather more than one death out of every three-and-a-half deaths in 1872 took place in the hospitals.

In endeavouring to explain the high death-rate of the past twelve months in Rome, we find that in the first quarter the increased mortality was greatly owing to an epidemic of small-pox which, beginning in the October of 1871, gradually increased in severity until about the end of the third week in January, 1872, when it attained its maximum. Between the 10th of October, 1871, and the 4th of February, 1872, the epidemic caused no fewer than 544 deaths, 209 of which are included in the death returns of 1872. From the middle of February the epidemic began to abate, and by the middle of August the deaths from this cause had fallen to an average of 7 per week. Still, the slaughter caused by small-pox has been truly startling, 737 persons having lost their lives in one year from this the most preventable of zymotic diseases. That a large number of those deaths must be ascribed to the want of vaccination, or to its careless and inefficient performance, may be concluded from the returns, which prove that 67.6 per cent. of all the deaths from small-pox were those of children under five years of age, many of which a compulsory Vaccination Act would have prevented. That this deduction is justifiable is evident from the fact that when we find small-pox occurring epidemically in a tolerably well vaccinated community, such as that of Scotland, the mortality caused by it among children under five years of age does not attain twenty-five per cent.,† or less than one-fourth of all the deaths from small-pox occur at ages under five years, instead of over two-thirds, as in this last epidemic at Rome. In other words, had the population of Rome been even as well vaccinated as that of the larger towns in Scotland, it is probable that the lives of more than two hundred children would have been saved.

Small-pox, however, was unfortunately not the only zymotic disease which raged in the city throughout nearly the whole of 1872. Diphtheria and croup—combined in the Registrar's reports—were terribly prevalent, and occasioned, in the fifty-two weeks ending December 29th, 571 deaths. Here, too, the proportion of children under five years of age who fell victims was enormous, being 78.8 per cent. of the total deaths from those two complaints. Typhoid fever is entered as the cause of 354 deaths, and pernicious intermittents killed 417 persons. Measles, too, seems to have assumed a destructive type, as 166 deaths are registered from it, only 20 being given as those of persons over five years of age. Scarletina, on the other hand, was mild, and caused only 25 deaths; nor does any other complaint call for particular notice, except pyæmia, which also figures prominently in the returns. Summing up the deaths from these seven zymotic complaints

—small-pox, diphtheria, croup, scarlatina, typhoid fever, measles, and pernicious intermittents—we find that they number 2,270, or considerably more than one-fifth of the total mortality of the year.

The fatality of this class of diseases was, however, by no means uniformly distributed over the whole twelve months, as may be shown by the accompanying table. Scarletina has been omitted, on account of its being, fortunately, too insignificant an item in the returns; and, owing to the form of the reports, it has been necessary to draw up the table in periods of twelve weeks. The four weeks omitted, from June 17th to July 14th, present no special features, the mortality from all the complaints mentioned being intermediate between the four preceding and the four succeeding weeks.

Year 1872.	DEATHS.				
	Smallpox.	Diphtheria and Croup.	Pernicious Intermittents.*	Typhoid Fever.	Measles.
From Jan. 1 to March 24 ..	392	142	52	84	3
From March 25 to June 16..	166	184	39	53	14
From July 15 to Oct. 6....	75	110	199	105	107
From Oct 7 to Dec. 29 ...	71	93	109	84	26

This table, though presenting a very high bill of mortality, is so far consolatory that there is a manifest improvement in the last twelve weeks of 1872—an improvement which we may expect to continue in the present year, as the epidemic of small-pox is now virtually at an end; no deaths from this cause having been registered in the third week of January, while only seven cases of discrete and semi-confluent variola remained in the small-pox wards when I last visited them; and the other zymotic complaints, too, show a notable diminution in the first four weeks of 1873.

[To be continued.]

THE ETIOLOGY OF PSORIASIS.

By BALMANNO SQUIRE, M.B.Lond.

As Dr. Myrtle has done me the compliment of commenting on my remarks on the etiology of psoriasis, and has expressed himself as arriving at a somewhat different conclusion from mine, I beg the privilege of a reply. He does not agree with me that psoriasis was the disease of the "leper as white as snow" of the Bible, and he objects because "the word 'white' does not occur in the original, and is never used by eastern nations as it is by us," although later on he says that "the word 'white' is applied [in the Bible] to the hair and spots of the leper." Now, if I waive this apparent contradiction, and assume with him that the original words stand simply "a leper as snow," am I to understand him as saying that they imply no reference to the whiteness of the leper, and, if so, that they refer to a question of temperature, or of purity, or of what? and (if the word white is never used by eastern nations as it is by us) will he explain in what sense they *do* use it? The learned individuals who translated the Bible into English, at least, were of opinion that a "leper as snow" (if that be the original) meant a leper as white as snow; for so they have rendered it.

Dr. Myrtle objects to the identity I have sought to establish between the ancient and the modern disease, that the former, in the instances quoted, "was not disease in the ordinary or natural course, but instances of miraculous interference with healthy skins." But, if it be not profane to think that the constant maintenance of the varied but undeviating laws of nature is a greater miracle than any conceivable deviation from them, this argument will not go for much. I am sure of this, that a strong mental emotion is well capable of determining a general eruption of psoriasis; for such cases have repeatedly come under my notice, and I can conceive no stronger exciting cause of the disease than a solemn curse pronounced by the lips of a person to whom the patient unreservedly imputed supernatural power. To take a case where mental emotion is generally allowed to have a considerable influence, I think I may safely say that most pregnant women would be likely to abort under the circumstances.

Dr. Myrtle then goes on to say that, although there can be no doubt as to psoriasis being hereditary, nevertheless *race*, so far as he has been

* The returns for January do not discriminate between deaths belonging and not belonging to the community; and there is, consequently, a slight error in the way of excess in the estimated mortality of the year.

† See Seventeenth Annual Report of the Registrar-General for Scotland, p. 39.

* According to Professor Baccelli, in his pamphlet on *La Perniciosita*, the maximum number of pernicious intermittents in Rome occurs in the months of July, August, September, and October; the medium in June, November, December, and January; and the minimum in February, March, April, and May.

able to ascertain, has nothing to do with it. Now, this is scarcely enough to refute a more definitely assumed position. He does not even as much as say that he has ever made any careful attempt to ascertain whether race has anything to do with it or not; that he has, in fact, even voluntarily put himself into any other attitude of mind than that of assuming that race cannot have anything to do with it. Still less does he make any reference as to investigations respecting the particular race I speak of.

My interpretation of the biblical phrase was based chiefly on the frequency of psoriasis as computed by myself amongst my Jewish acquaintances and patients, and only secondarily on the patness of that phrase as a pathognomonic description of the disease; but Dr. Myrtle, in disposing of my dogma, does not think it essential to say that any Hebrew patient affected with skin-disease has ever come under his notice. It is a *prima facie* inconsistent, although not quite a contradictory, statement to say, as he does, of a disease which is confessedly hereditary that it cannot be an affair of race. But, to comment on my commentator, who will agree with Dr. Myrtle in saying that, although those whom this disease more particularly attacks "are especially the blooming and healthy," yet "its depressing effect on the spirits is so great and constant" that the female, at least, "soon grows melancholy, and ere long falls a victim to decline?" and who, after joining him in saying "I have been struck with the number of cases where the disease is confined entirely to parts of the body which are always under cover," will then (speaking in general terms of the female subject of it) say "she cannot go into society and dress like other girls?" If evening toilette be referred to, it is inaccurate to impute to psoriasis a general tendency to affect the upper part of the back or the neck and shoulders, and, even if it were so, the remark is hardly a relevant one, now that high square-cut bodies with sleeves to the elbow are *de rigueur* for evening dress. But Dr. Myrtle goes farther, he says "she may be admired, have offers of marriage, but all is a mockery." I sincerely hope it has not come to that.

Is Dr. Myrtle unaware that a great many married ladies have psoriasis, and, more than that, had it at the time they were wooed and won? or does he think that "blooming healthy individuals" are at such a discount, even with the drawback (if it be one) of a patch or two of psoriasis? I wish I could say, with Dr. Myrtle, that, as a general result, the effect of the Harrogate waters on psoriasis contrasts most favourably with that obtained from all other methods of cure previously adopted; if so, I could find a short cut out of many an occasional difficulty. But I have met with too many persons with psoriasis who had "steadily persevered" with the Harrogate waters "for months."

THE LEPROSY OF THE BIBLE.

By A. DUNBAR WALKER, M.D.

THE leprosy of the Bible has always been a vexed question, and in the present day seems no nearer solution than before. That the "creatures" (for really persons without hands and feet, wanting the greater part of the nose, with voices reduced to little else than a croak, and whose existence is a burden to themselves and their friends, are little above creatures) who meet one at the gates of a Syrian town in the present day are the lepers of Scripture, is generally disallowed; for the disease is not contagious, commences quite differently, and produces a disease in no particular resembling that recorded in Leviticus. Elephantiasis Græcorum, also, as seen in the East, is hereditary, which is not recorded about leprosy of old. Dr. Hebra, in a note to his article on scabies, in his comprehensive and learned work on skin-diseases, has suggested that scabies was the leprosy of the Israelites, adducing in its favour—1, the contagious character of the disease; 2, the cure employed in Naaman's case—washing in the Jordan, a river whose water contains sulphur. In analysis of Jordan water sulphur is found, but certainly not in sufficient quantity to remove scabies by "washing seven times". The amount of sulphur in solution varies according to the place from which the water is taken: if near the source, it is in small quantities; and there is no doubt that it was near the commencement of the river that Naaman washed, for it is this part that lies on the road to Damascus. The most convincing circumstance, to my mind, that scabies was not the disease, is its rarity in Syria in the present day. In a year's experience of all kinds of diseases in Syria, amongst which were many cases of skin-diseases, no case of scabies presented itself to my notice.

Mr. Balmanno Squire has put forth in the JOURNAL the idea entertained by many, that psoriasis presents many of the features recorded in Scripture regarding leprosy, supporting his theory by its frequency amongst English Jews and Asiatics. Of the greater frequency of psoriasis amongst Orientals, and more especially amongst Syrians, my ex-

perience in Syria is quite confirmatory; for amongst the Arabs I saw many cases, and more in proportion to the number of inhabitants than in England. But at the same time, of northern and western nations, removed far from Asiatic influence or blood, Norway affords as many cases of psoriasis, in proportion to its inhabitants, as Syria; and we find in this country elephantiasis Græcorum cropping up. Psoriasis is also a non-infectious disease, which was a character that pre-eminently distinguished the ancient leprosy. My own comparison of the Scriptural disease, with diseases now known in Syria or any other country, has brought me to think that the leprosy of the Israelites has entirely disappeared; and that, when in existence, it depended on some fungus which attached itself to the hairs of man and animals, producing a crust similar to favus, only of a white colour, for we find it producing its effects not only on men, but on the skins of animals worn as garments, and on the walls of the houses.

As to the treatment of psoriasis, Dr. Myrtle's remarks are very sensible: that there is no specific in arsenic, cod-liver oil, or any other individual medicine, I quite agree with him. As the patients that labour under the disease are so different in age and constitution, so must our remedies vary; and if one remedy fail, another must be tried. The most potent remedies being, no doubt, change of air and diet, unfortunately the disease is apt to recur, after the patient has resumed for some time his former habits and abode. In a case which I had under my care, a sea-voyage acted beneficially by dispersing the disease, but it returned after two years.

NOTES ON BOOKS.

A VERY useful little *Medical and Surgical Handbook for the Guidance of Officers in command of those Vessels in H.M. Service in which no Medical Officer is borne*, has been issued by the Admiralty. It is very concise, dwelling practically on hygienic measures, as cleanliness, ventilation, sleeping arrangements, clothing, food and water, sun-exposure, and endemic morbid influences; it then scans briefly, in alphabetical order, the common disorders and accidents to which seamen are liable, giving good modes of treatment easily applicable to them. In many respects it resembles the similar *brochures* that have been so well prepared as guides to merchant captains by Spencer Wells and by Harry Leach, excelling them in the style of the pictorial illustrations of surgical accidents, and in the manner in which cases of suspended animation by drowning should be dealt with on the directions of the Royal Humane Society. We recommend it as well adapted to its purpose, and likely to be very useful, as such lessons cannot be too strongly impressed on all executive officers, especially as they are often on detached service in boats, without any medical officer at hand. We believe it is the intention of the Admiralty to institute a series of lectures on this important branch of nautical education at the new Naval College, Greenwich.

The Student's Handbook of the Practice of Medicine, by H. AUBREY HUSBAND, M.B. (Edinburgh, E. and S. Livingstone), is by far too meagre for an useful purpose; and we think it really impossible that any student preparing for examination can be so ill-informed as to benefit by reading it. It savours of the absurd attempt to compress the whole practice of medicine into a *brochure* that can be carried in the waistcoat-pocket.

Syphilis, its Nature and Treatment: with a Chapter on Gonorrhœa. By C. A. DRYSDALE, M.D. Second Edition. London: Ballière, Tindall, and Co.—Dr. Drysdale must be counted amongst the honest doubters. He draws a very heavy indictment against the use of mercury in the treatment of syphilis; and, although this is amongst the heresies of modern times, it is one which deserves attention. This disbelief in the value of mercury as an antisyphilitic may be only an excessive reaction of opinion against the undoubted abuses which have been, and the exaggerated faith which still is, allied with its use. The results of the study of the natural history of syphilitic iritis by J. Z. Laurence, Gascogen, and Hart, alone suffice to show that its value is certainly over-estimated by the majority of ophthalmic practitioners; and no better field of observation could be selected as a testing-ground than iritis and irido-choroiditis, where the processes of deposition and absorption of lymph may be watched with the naked eye and with the ophthalmoscope. It has been sufficiently ascertained that reabsorption will go on very actively without the intervention of mercurial treatment; and it may be doubted whether the influence of mercury really hastens the process. Dr. Drysdale's book is somewhat confused and ill-arranged, and he does not possess sufficiently the faculty of assorting his collections of observations and opinions, and balancing them; but, as a small magazine of collected statements on the important subjects which it treats, it has much interest and value.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 22ND, 1873.

RESEARCHES CONCERNING CHOLERA.*

II.

HAVING thoroughly satisfied themselves that no bacteria, vibriones, or allied organisms, exist, either actually or potentially, in the blood in a state of health or in cholera patients, Messrs. Lewis and Cunningham wished to ascertain whether such organisms would live and multiply indefinitely when introduced into the blood of healthy animals. They made forty-nine injections of "decomposing solutions swarming with monads, bacteria, and vibriones", into the veins of dogs; and the results seemed to show very conclusively that such organisms are not prone to multiply in the blood of healthy animals, or even in those in which there is a slight departure from the condition of health. They say: "Not only is it shown that the organisms under consideration cease to multiply under such circumstances as these, but that they actually diminish in number every hour they remain in the system, and eventually disappear altogether." Whether they become disintegrated in the serum of the blood, or are merely filtered off during their passage through the tissues and glands, will be made the subject of subsequent investigations.

By far the larger part of the Report before us is taken up with details of experiments relating to the effects produced by the Introduction of Choleraic and other Organic Fluids into the System, these being partly injected into the veins and partly into the peritoneal cavity. In only one out of all the seventy-nine experiments upon dogs here recorded was a recent choleraic fluid employed. In the great majority of cases, fluids in a state of more or less advanced putrefaction, and more or less swarming with bacteria, were made use of. These experiments, therefore, however interesting in themselves, must be considered to bear upon the subject of "putrid infection", rather than upon that of cholera, since it has already been very clearly shown, by the investigations of Dr. Popoff of St. Petersburg (see BRITISH MEDICAL JOURNAL, October 26th, 1872, p. 471), that the efficacy of choleraic fluids in producing cholera in animals into which they are injected, is in direct proportion to the freshness of the fluids employed. Not only the ordinary cholera evacuations, but also the urine, were shown to possess this power of communicating the disease when the fluids were in the fresh state—the characteristic symptoms generally manifesting themselves after two or three days. But when the excreta have undergone decomposition, the choleraic symptoms, if manifested at all, are obscured and more or less mixed with those of poisoning by putrid materials. These latter effects also show themselves much earlier, being generally well marked within twenty-four hours after the operation. Messrs. Lewis and Cunningham do not seem to have been quite fully alive to the importance of employing the fluids in a perfectly fresh state, although they do express their regret at the fact of only one experiment of this kind having been made, and their intention of sub-

sequently remedying this defect. In the one experiment which they made, an injection of fresh choleraic evacuation into the femoral veins of a dog gave rise to no choleraic symptoms.

The remainder of the experiments must, therefore, be considered as an interesting contribution towards the completion of our knowledge of the effects produced by the injection of putrid fluids, swarming with organisms, into the circulation or into the peritoneal cavity of the lower animals. Taking, first, the cases in which putrefying choleraic discharges, in quantities of from two to six drachms, were introduced into the venous system, it was found that the mortality amounted to about 43 per cent.—excluding the cases in which the death seemed obviously due to shock, and one in which it was occasioned by a severe erysipelatosus inflammation attacking the wound. Of seven cases in which the choleraic material had been more or less diluted with water, two died, giving a mortality of about 28 per cent. In twenty-one experiments, in which ordinary alvine discharges more or less foetid were injected, nine of the animals died; but the deaths in three cases were set down to shock, so that the mortality really attributable to the introduction of these fluids is estimated at a little over 33 per cent. "Four experiments are cited in which solution of fowls' blood, filtered and unfiltered, fresh and decomposed, had been introduced into the circulation without producing the slightest result; and one rather remarkable case is given, in which fluid obtained from the abdominal cavity of a dog in whom extreme peritonitis had recently been induced, and which might be supposed to be highly noxious, produced no appreciable effect."

The entire absence of any ill effects following the introduction of these putrefying fluids into the blood of many of the animals—indeed, in the larger proportion of them—is not a little remarkable. Why should such marked effects be produced in some of the animals, and none at all in others? The authors are quite as unable to explain this apparent anomaly as other observers have been. They found, moreover, that "when a dog had once recovered from the effects of an operation, succeeding operations had not, in a single instance, proved fatal to it, no matter whether the material introduced into its veins consisted of choleraic or non-choleraic, or of alternate doses of these." One of these animals was made the subject of four experiments—a vein in each limb having been injected without result. Another was made use of on three occasions in a similar way, and ten on two occasions—all recovering perfectly. Do not facts like these throw strong light upon the many instances, constantly thrusting themselves upon the notice of medical men, in which persons peculiarly exposed to the contagion of even the most contagious diseases show themselves unamenable to their influence? Certain individuals, in fact, both amongst men and lower animals, are found to possess unsuspected and quite inexplicable differences—dependent, perhaps, upon some most minute variations in the chemical constitution of some of their fluids or tissues—although this is manifested to us only in an obscure way by their ability to withstand toxic agents, to the influence of which their fellows more or less rapidly succumb. The simplicity and comparative uniformity which we meet in studying purely physical phenomena cannot be reasonably expected, and certainly is not to be met with, when we have to do with such complex sets of interrelated chemical changes as go on in the bodies of all higher animals. This point of view is only too often lost sight of, when such apparent anomalies are brought under our notice.

The *post mortem* lesions met with were essentially similar in the cases of death resulting from the injection of the different fluids which we have mentioned; and, whilst agreeing amongst themselves, they differed from those peculiar to cholera. Almost invariably signs of intestinal disease were present, "varying from more or less intense congestion of the villi and intestinal glands, to complete disorganisation of the greater portion of the mucous membrane of the small intestine, its epithelial

* A Report of Microscopical and Physiological Researches into the Nature of the Agent or Agents producing Cholera. By T. R. Lewis, M.B., and D. D. Cunningham, M.B. (on special duty). Attached to the Sanitary Commissioner with the Government of India. Calcutta: 1872.

lining becoming completely detached". These lesions have been limited to the small intestine, though they have generally extended over its whole extent, from the duodenum downwards, "except for a portion of from one to two feet above the ileo-cæcal valve, a portion which in almost every instance has escaped being materially affected". The cause of this exemption cannot apparently be explained by any known anatomical peculiarities of this part of the gut. The authors say they were the more surprised at this exemption, because, in the necropsies of cholera-patients, they had noticed that it was just this very portion of the intestine which seemed to show the most marked tendency towards the congestions which are so apt to occur in this disease. In no instance did they find any special affection of the intestinal glands, and in no case was the stomach or large intestine in an appreciably diseased condition. On three occasions they observed "a great number of vibriones, or oscillatoria-like filaments, embedded in the mucus which lined the intestine after the substance which was free and filling the lumen of the gut had been wiped away". These may have occurred in other cases, and have been overlooked. In only a very few instances were marked traces of embolism met with—not more than six times in sixty-seven experiments.

Turning now to the cases in which the organic fluids, instead of being injected into the blood, were introduced into the peritoneal cavity, we find the records of twelve experiments. The materials in four cases were choleraic fluids; in three, ordinary alvine discharge; in one, a decomposing solution of beef; and in four, peritonitic fluid, recent and decomposed. Only three of these animals died—two after the introduction of fluid which had just been obtained from the peritoneal cavity of another dog, and one from the effects of a decomposing ordinary alvine discharge. All the others were killed within twenty-four hours after the operation; "and all, whether they died or were killed, presented the same marked lesion at the autopsy, with two exceptions—one a dog, into whose peritoneum an ounce of fresh peritonitic fluid had been injected without producing any special symptom during life, or any lesion evident after death; the other, a case in which the injected material consisted of a solution of choleraic discharge". The marked and constant lesion alluded to was also one of the mucous membrane of the small intestine, though in nature it seemed to be very different from that which was encountered in the last series of experiments. It is thus described by the authors. "The mucous membrane itself was not in a single instance materially affected; but a sanguineous exudation had taken place, giving the tube of the gut a more or less evenly distributed coating, which, when carefully peeled off with a forceps, left the mucous surface and its epithelial lining intact." Microscopical examination showed the structure of the mucous membrane to be almost unaltered, whilst the layer by which it was lined was found to be composed almost entirely of altered blood-elements, blood-crystals, etc., though no entire red corpuscle could be detected. This sanguineous exudation generally ended abruptly several inches above the ileo-cæcal valve, leaving this portion of the intestine, as it had been in the other series of experiments, in a comparatively healthy state. The signs of peritonitis were generally well marked, and sometimes intense; whilst more or less distinct pericarditis was met with in fully one-half of the cases, although extension of the inflammation to the pleuræ was almost invariably absent. The portion of the pericardium in immediate connection with the diaphragm was the part usually affected, together with the portion immediately attached to the sternum. The observations of Drs. Burdon Sanderson and Klein seem to show that the lymphatics of these regions have an especially free communication with those of the peritoneum. This tendency of putrefying fluids to set up pericarditis without pleurisy when injected into the abdominal cavity, together with the anatomical facts above cited, serve to throw much light upon the previous observations of Dr. B. W. Richardson, to the effect that a similar injection of lactic acid into the abdomen also sufficed to set up an inflammation of the serous membrane of the heart. His inference from this fact, however, as to the supposed connection between lactic acid and rheumatism, would now certainly be much weak-

ened, unless it were found that an injection of lactic acid into other parts of the body also sufficed to set up pericarditis. With regard to the nature of the fluids met with in the peritoneum in these cases, they were all essentially similar, except that in some cases red blood-corpuscles were more notably abundant than in others. In the fresh condition, the fluids always swarmed with irregular masses of bioplasm, exhibiting great activity, and very rapidly undergoing the process of segmentation. Although these inflammations were excited by the introduction of fluids swarming with bacteria, the authors say: "We are convinced that no material increase takes place so long as the inflammatory process is progressing actively. It will be observed, in reference to the experiments bearing on this matter, that in several instances not a single bacterium could be detected in the recent fluid, and that in all, the numbers present appeared to bear an inverse ratio to the number and activity of the bioplasts." These results are also very interesting in connection with Dr. Burdon Sanderson's experiments upon the nature of the infective agent in pyæmia. Thus irritative agents of different kinds, acting upon the subcutaneous tissue of guinea-pigs, gave rise to the formation of inflammatory fluids swarming with bacteria; and the introduction of merely a few drops of this fluid into the peritoneum of a dog seems almost invariably to have produced death in from twelve hours to two days. In these cases, also, the peritoneal exudation liquid is said to have been always crowded with minute and active bacteria. These few drops of fluid from the guinea-pig, therefore, seem to produce much more potent effects than the much larger quantities of such other putrefying fluids as were employed by Messrs. Lewis and Cunningham. The bacteria introduced must have been far more numerous in the latter experiments, owing to the much larger amount of fluid injected; and, therefore, we can only infer that the rapidly toxic effects of the guinea-pig fluid were due to some chemical peculiarities which it possessed, but which were absent from the fluids employed by Messrs. Cunningham and Lewis. This view is, moreover, entirely in accordance with many other facts.

In this series of experiments, also, no special effect was produced by the putrefying choleraic fluids different from those brought about by other less specific putrefying liquids; and the affection of the intestine produced in this latter series of experiments, "appeared rather to be the result of local disturbance of the circulation, excited by the inflammatory action induced by the introduction of the extraneous matter into the peritoneal cavity, than by the action of any specific agent".

The experiments of Part III, *On the Section of the Splanchnic and Mesenteric Nerves*, although very interesting, we do not intend to dwell upon at present. We shall look forward with much pleasure for a further instalment of this interesting series of investigations, which, if they have not yet sufficed to throw much light upon the causes of cholera, have at all events helped more effectually to dispel some erroneous notions which had been entertained concerning its relations to certain of the lower organisms, and also to throw valuable side-lights upon several other obscure problems.

HOSPITAL OUT-PATIENT REFORM.

WE are not disposed to think that the gentlemen who have banded themselves together to attempt something practical in the way of hospital reform, will be at all deterred or abashed by the abuse with which the *Lancet* favours them in one of its aberrant prolusions. It has for some time been the happy privilege of that journal not to know its own mind on any subject for many weeks in succession; the fact being apparent that it has none, other than that of a number of successive writers, each of whom from time to time enunciates his views with a most happy and reckless disregard of what some one else wrote (always as "we") a few weeks or a few months before. The particular "we" who has written on the recent meeting of the Hospital Reform Association differs altogether in opinion and inspiration from the previous first personal pronouns who have handled the subject. He takes an altogether consulting surgeon sort of view of the question. "There are no abuses worth

attention in the out-patient departments; and, if the plan introduced at St. George's were adopted, there would be none at all." Nothing can be simpler or more ingenious; and the wisdom of the plan mounts so strongly to the head of its admirer, that he can find no words sufficiently forcible to express his contempt for such persons as Sir C. Trevelyan, Mr. Holmes, Dr. Meadows, Dr. Ford Anderson, and the mass of general practitioners who are persuaded that hospital abuses exist in a form and to an extent which call for and admit remedy.

Both Dr. Meadows and Mr. Holmes, and, indeed, all the speakers, could, we imagine, adduce instances by the score of the abuse of out-patient departments. But if the scandalous abuse were for a moment really in doubt, it could be proved, not by individual but by wholesale evidence. Take, for instance, such a paragraph as this from the Statistical Tables of patients treated in Guy's Hospital during 1870 (page 37). "Besides the above, there were prescribed for in the out patient rooms, *by the house-physicians and senior students*, 49,220 patients." This speaks for itself; and it is a sample of what is going on all over the country, to the grievous injury of the profession and of the public. The result of all this is, that the patients get not first-rate but third and fourth rate advice in the out-patient departments; they become the *corpora vilia* of experimental students; and there is beyond question more malapraxis in out-patient departments in this country than in all the workhouse infirmaries, druggists' shops, and irregular dispensaries put together in their worst days.

The effect of the indiscriminate relief afforded is in the highest degree demoralising; and the nature of that relief is degraded as well as degrading under the present system. The number of consulting physicians and surgeons who will work at the subject is very small. Only a small number of persons can ever be found to take up questions which do not directly affect themselves, or to remedy abuses by which they gain rather than lose. Hospital out-patient physicians and surgeons are very much overworked in some places; and to that extent they will welcome a relief. But, on the other hand, the multitude of patients spreads their fame, enlarges the materials for their easy experience, allows the selection of "cases of interest"; and if they can hand over the ruck of patients to senior students, with instructions to refer to cases of a particular class to them, the greater the number of patients in the department, the better for the physician or the surgeon who controls them. Not much active help in this matter, therefore, can be expected from the "leaders" of the profession; indeed, as a rule, the leaders of all professions find it more easy to follow than to lead. All assistance from hospital officers may be welcomed; but it is not they who will work out the problem. It must be the general practitioners themselves. They are the persons who feel and suffer from the gigantic and overgrown evil which the sciolist of the *Lancet* cynically proclaims to be non-existent. We welcome, therefore, the formation of the Hospital Reform Association, and we shall watch its efforts with interest. It is, we hope, too vigorous and too earnest to be daunted by any kind of criticism. Its future is altogether in its own hands; the subject is one of very great interest, but of great difficulty, and possibly many efforts may fail before success is reached. But the difficulties are not insuperable; and the moment is not unfavourable for attacking them.

PATHOLOGICAL DEBATES.

THE debate on Tubercle at the Pathological Society was very ably opened on Tuesday night by Dr. Wilson Fox, who undertook the task at the request of the Council. Happily, as we think, for the prospects of the debate, the suggestions which we have ventured to offer to the Council for the amendment of their programme have been followed thus far: instead of being limited to half an hour, Dr. Fox was allowed to occupy near an hour and a half in the exposition of his views; and this only sufficed for a clear and close abstract of them, in which all excursions into collateral subjects were strictly avoided. We present a *verbatim* report of his address. We shall not anticipate the course of debate by discussing its substance. At the close, Sir William

Jenner put in force the plan which we last week suggested, of requesting intending speakers to send in their names, and state the length of time which they would probably require for the statement of their views. Of course it is very desirable that this privilege should not be abused. Speakers will be judged altogether by the matter, and not by the length, of the observations addressed to the Society. Proximity will assuredly produce an unfavourable effect, and meet with an unfavourable reception. The present proceeding must be regarded as an experiment. The Pathological Society is especially a working society; and, while no amount of time can be considered to be ill-spent which assists in clearing up the mists which surround the pathology of that most fatal scourge—tubercle—any abuse of the newly conceded privilege, either by tedious verbiage or mere speculative opinion, or the introduction of partially irrelevant collateral matter, would be a misfortune and an injury to the Society. These conditions being kept in view, we apprehend that the Society will be willing to show not less favour and indulgence to other speakers than to the gentleman whom they selected to open the discussion. There would be no great harm if the discussion extended over many nights. It might, however, be arranged to adjourn it each night at nine o'clock, in order to allow the exhibition of recent or particularly interesting specimens during the rest of the time; or it might not be unpleasing occasionally to prolong the meeting till ten. An hour and a half is rather a short time for "extraordinary" meetings, such as those in which set discussions are carried on.

DR. HOPE, Senior Physician to Queen Charlotte's Hospital, has been elected Assistant Physician-Accoucheur at St. Bartholomew's Hospital.

DR. JOHN WREFORD BUDD, formerly Fellow of Pembroke College, Cambridge, died on the 11th instant at his residence in Devonport, at the age of 69.

TRICHINOUS PORK.

IN the course of a recent discussion on trichinosis in the Medical Society of Magdeburg, twenty-six physicians who were present stated that they had under their care at the time a hundred of the inhabitants of the town, who had purchased pork containing trichinae from the same slaughter-house within the same week, and had eaten it nearly raw.

THE LOWER RHINE SANITARY ASSOCIATION.

A SOCIETY was in 1869 founded at Düsseldorf, for the purpose of pointing out defects in the sanitary conditions of the people, and the means of remedying them. At its last general meeting, in October of last year, it had 1,559 members, distributed over sixty-seven towns and twenty-two rural districts. The Society has lately published its first volume of Transactions, a work of 276 pages. It contains a large amount of statistical information regarding mortality, and in it a number of important topics are treated. Among the contributions are, papers by Herr von Sybel on the Efficiency of Legislature on Social and Economical Questions, by Herr Neumann of Bonn on Ventilation, and by Dr. Heusner on Vaccination and Respiration. The volume contains also reports on the drainage and water-supply of certain towns, on the progress of epidemics, descriptions of new hospitals, and other matters of sanitary interest.

PROMOTIONS IN THE ARMY MEDICAL SERVICE.

WE understand that the early part of next month will be signalised by a large *Gazette*, promoting about eighty surgeons to the rank of surgeon-major, and that forty will be at once detailed for Indian service. Should these numbers turn out to be correct, the senior surgeons left on the list will be those of September 1858, and 540 will still remain awaiting their advancement to seniority. We fear that the chances of the juniors will be little improved by a sudden effort like this taking the place of any arrangement for the equable flow of promotion; in the meantime, their responsibilities as well as their actual professional work will be largely increased by the special army circular on "Duties in connection with Hospitals", issued on March 6th.

THE ROYAL INSTITUTION.

DR. BENICE JONES, F.R.S., having resigned the office of honorary secretary, a subscription has been opened among the members to obtain a bust of him by Woolner, to be placed in the Institution, in recognition of his earnest promotion of original research, and his unwearied devotion to the duties of the institution.

HOMO NOTIS COMPUNCTIS.

A BEAUTIFULLY executed coloured engraving of the celebrated Caucasian, George Constantin, is published in the newly issued volume of Hebra's *Atlas der Hautkrankheiten*. The Turkish shawl representations, in blue and red, of the lions, tigers, elephants, storks, and other animals and subjects with which the man's skin is covered, make a very curious picture.

THE MINISTERIAL CRISIS.

AMONG the measures which have been thrown out of their position before the House of Commons by the resignation of Mr. Gladstone, is that of the Bill for the Management of Habitual Drunkards. This stood second for Wednesday, the 12th, and would, we have reason to believe, have passed the second reading, though subject to alteration in committee. Though compelled to defer it to a later and less favourable period, Mr. Dalrymple intends to persevere with the Bill, and avail himself of the first opening that is presented.

HOSPITAL ECONOMY.

DR. STEELE's annual report, as Medical Superintendent of Guy's Hospital, contains this year a very interesting and valuable paper on Hospital Dietary and Economy, which we commend to the perusal of hospital secretaries. A comparison of the systems and the results of the dietaries in the leading British hospitals, renders the paper of very great value; for the extreme difficulty of really getting at the actual cost of the items of hospital necessities, and the cost per bed or per patient, for the purposes of economy and comparison, has been, as far as practicable, successfully encountered. The numerous fallacies which have crept into many of the statistical returns previously published, are, as far as possible, excluded. The food expenses of each patient and the weekly outlay for maintenance are, we believe, given with sufficient accuracy. Dr. Steele concludes by observing that, unless there exist in each establishment a disposition on the part of every one connected with it to assist the executive to a judicious control over the ordering and distribution of articles of consumption, it is hopeless to expect that a hospital can be satisfactorily managed. No other department presents equal facilities for abuses or similar obstacles to their rectification, when these have become hallowed by routine. It is only by unity of administration, and a zealous co-operation on the part of the medical staff as well as of the subordinate officials, that the desirable aim can be attained.

ON THE POINTED EAR IN MAN.

PROFESSOR L. MEYER, of Göttingen, criticises the assumption that the pointed ear in man is a relic of a lower species. In Darwin's book on the *Descent of Man* there is a paragraph, illustrated by a woodcut, in which he asserts that certain processes which occasionally occur in the ears of men, are of a similar nature to the points in the ears of apes. These pointed processes are situated on the anterior margin of the helix, near its upper part. The author of the present paper points out, however, that in most human ears there are irregularities in the development of the helix, especially at this part. In some cases the helix is almost entirely wanting, in some there are greater or smaller gaps in it; and what Darwin looks on as points of processes, are really produced not by an outgrowth from the helix, but by gaps existing on each side of the apparent process. A case is given where the helix was absent, but at intervals there were small knobs, three in number, which were all that represented the rudimentary helix. It is, therefore, concluded that Darwin's pointed ear is no indication of a return to the ape-like form.

CHOLERA IN EUROPE.

IN Moravia, during the week ending February 16th there were 42 cases of cholera under treatment, of which 14 recovered and 18 died. During the following week, there were 16 new cases, making in all 26, of whom 9 recovered and 8 died. In Sillesia, 21 new cases occurred during the week ending February 16th. Of the 29 under treatment, 8 died and 7 recovered. In Hungary, during the first half of February, there were 2,940 new cases of cholera; the total number of cases treated being 3,193, with 1,657 recoveries and 964 deaths. In Galicia, 750 new cases occurred in the first half of February. Of the total number (1,050) under treatment during this time, there were 604 recoveries and 298 deaths. In Bohemia, during the same period, three cases occurred, all of which were fatal.

THE HEALTH OF LIVERPOOL.

IN an old record of this town, bearing the date 1808, we find the following statement. "The high grounds on the east of the town defend the place from easterly winds; but it is open for the western breezes to allay the heat of summer, so that it is very healthy and temperate. Epidemical disorders seldom show themselves in this town, and when they do are only of short duration." At that date it consisted of 11,784 houses, inhabited by 77,653 persons. Let us compare the present with the past. From the census returns for 1871, we find that in that year there were within the municipal and parliamentary limits of Liverpool 78,427 inhabited houses, or exactly 774 more houses than there were inhabitants sixty-three years before, whilst the population had increased to 493,346, so that really the average number of occupants to each house was somewhat less in 1871 than in 1808—being respectively about 6.5 and 6.2. The number for England and Wales in 1811 was 5.7, and in 1871 5.3; in London there were 7.7 to each house, although, so far as space was concerned, our metropolis was less densely crowded per acre than Liverpool, in the proportion of 42.5 persons per acre to 97.9. We may form some idea of the immense development of Liverpool, by supposing the increase in the population of London at the end of sixty-three years from the last census to be equivalent to that of the Lancashire seaport for the same number of years. In 1871, there were 417,348 inhabited houses; in 1934, there would be in London 3,251,804 houses, with an average of six occupants in each, and, therefore, a population of nearly twenty million (19,510,824), or as nearly as possible the present population of London less than the whole of England and Wales, viz., 3,293,284! With greater natural advantages both as to site and climate than London, yet we find Liverpool ranking fourth in the scale of mortality among twelve of the largest towns of Great Britain, whilst London is the lowest in the list. It is gratifying, however, to find from the annual report for 1872 of Dr. Trench, the able and indefatigable medical officer of health for the borough, that the annual rate of mortality from all causes last year was only 27.00 to every 1,000 living, instead of 33.32, which was the average annual rate during the ten years 1851-60. London had a mortality in 1872 of 21.40, and in the above decade 23.76. It must be remembered that during the ten years named the cholera epidemic of 1854 occurred, which naturally swelled the average in both towns. With regard to the mortality of Liverpool, when compared with the three other towns in which it is exceeded—viz., Manchester, 28.50; Glasgow, 28.40; and Leeds, 27.80—there is the fact in its favour, that these towns have a mean mortality of 28.2, whilst their mean density of population is only 61.7: the density of the population, however, of Liverpool, we believe, gives us the clue to its high mortality. We shall now take some facts from Dr. Trench's valuable report, and compare them with the figures of the Registrar-General. Twelve years ago, Liverpool was known as one of the most unhealthy towns in England; and we find, on reference to its mortuary records, that tubercular and zymotic diseases were the chief causes of the excessive death-rate. Since then, under the auspices of sanitary legislation, and the wise supervision of a most able officer of health, Dr. Trench, a gradual change has taken place, so that during 1872, instead of the mor-

tality from tubercular diseases being 5.43 to every 1,000 living, it was reduced to 4.00. From zymotic diseases, instead of the average annual rate being 9.54, last year it was only 5.71; small-pox, 0.10, instead of 0.38; scarlatina, 0.44, instead of 1.49; cholera, diarrhoea, and dysentery, 2.09, instead of 2.91; typhus and infantile remittent fever, 0.90, instead of 2.91; whilst whooping-cough showed a slight increase, the death-rate last year being as 1.18 to 1.08 (1850-60); and there was, in addition, the small item of relapsing fever, 0.05—making altogether a proportional mortality from zymotic diseases equal to 5.71, against 9.54 at the beginning of 1860. Measles, it may be remarked, also held its own in the death-scale. Thus Liverpool, in 1872, had 3.83 lives saved from zymotic diseases alone; and if we add those which escaped fatal tubercular causes, 1.43, we shall have a total per thousand of 5.26, which in an estimated population in the middle of 1872 of 499,897, would amount in round numbers to 2,500 saved lives—a fact sufficiently startling in its magnitude, and immensely significant of what improved sanitary regulations are capable of effecting. The report before us gives evidence in every line of a gigantic work. Let us give one instance. In 1872, 174,825 apartments in street-houses were examined, and 94,099 houses. It will be interesting to many of our readers who are medical officers of health just commencing their new duties, to know that Dr. Trench prefers disinfection with sulphurous acid gas, whenever it is practicable; but when this is dangerous to health, carbolic acid powder is freely used until the sulphurous acid gas can be used with impunity. Let those who are apt to regard the post of medical officer of health as an easy one, read Dr. Trench's report, and they will soon be convinced of the anxiety and labour which it entails from the beginning to the end of the year. What Liverpool was in 1808 it evidently may become again. It has advantages of climate, soil, and aspect, which many other towns have not; and with a steady perseverance in the good work, we doubt not that in a few years to come it will have so levelled down its mortality as to take its place among the healthiest of towns. The subjoined table shows the comparative rates of mortality from the diseases to which we have referred above.

	1872.	1851-60.
Small-pox	0.10	0.38
Measles	0.95	0.94
Scarlatina	0.44	1.49
Whooping-cough	1.18	1.08
Diarrhoea, etc.	2.09	2.91
Typhus, etc.	0.90	2.74
Relapsing fever... ..	0.05	...
	5.71	9.54

PERILS OF HEALTH-RESORTS.

WE have received the following from the wife of a physician. It describes an evil which exists so largely in many fashionable watering-places, that it would be well if the attention of newly appointed health-officers could be directed to a thorough investigation of the subject.

"Upon the recommendation of my medical friends, I sought an improved condition of health by taking 'a desirable family residence' at Brighton at the beginning of the present year. Before taking such a step, I made minute inquiries of the house-agent as to the sanitary condition of the neighbourhood in general, and the house I was negotiating about in particular; and was assured there were no cesspools, the drainage was perfect, and the water-supply safe. Although nothing could be more satisfactory than these assurances, I determined to place the matter in the hands of my friend Mr. Rawlinson, before taking personal possession of the premises. This soon brought the real state of affairs to light; and it is with a view to warning others that I now give my experiences. We found the arrangement of the neighbourhood to be a cesspool for every fourth house, although the main drain of the town was conducted along the roadway, only a few yards off, in front of the houses; but with this there was no communication. In the present case, the cesspool was in my neighbour's back yard, and was innocent of all ventilation except what found its way into the four houses in connexion with it. The waste-pipes in my cisterns were found to be in direct communication with the cesspool, without any check whatever; and, as the adjoining houses are all built on the same plan, the water in their cisterns must necessarily be in a contaminated

state. Thanks to Mr. Rawlinson, the ventilating shaft, which was carried to the top of my house, ventilates the entire cesspool, to the benefit of my immediate and unconscious neighbours; although, I am sorry to say, it cannot have the same beneficial effect upon their cisterns, which remain still in direct communication with the evil. Within the last few days, I have observed a most seductive placard at my next-door neighbour's window, to the effect that a 'desirable family residence' is to be had by inquiries, etc. Having worked my way behind the scenes, I know for a fact that human life is quite as much endangered by entering upon a residence there as it would be by coming within range of the enemy's guns on the battle-field. In fact, the danger is greater; for in one case we are allured by the signs of peace, while in the other we are openly warned by the signs of danger. The house in question has not only the cesspool at the back which I have ventilated, but a cesspool in front; and the waste-pipes of the cisterns remain in the condition I have described. A few years ago, a friend of my own took a house in this immediate neighbourhood for his family, and, after losing a child by typhoid fever, discovered the same evils I have found here. I believe we can compel the landlord to remove the evil on a case of typhoid being proved, but not until the mischief happens. Why should we not have it in our power to arrest the architect and have him tried for culpable homicide? A few examples of that kind, and we should soon have fewer murderers in our path."

BELGIAN MEDICAL REPORT ON INTEMPERANCE.

IN September last, the Belgian Medical Association appointed a commission, consisting of seven of its members, to "report upon the means for opposing the increasing abuse of alcoholic liquors." This report appears in the recently published *Transactions* of the Association. The Commission declares that "the increasing consumption of alcoholic liquors menaces even the vitality of the working class," and complicates every other question relating to their welfare; and warns the government that, if it blindly persist in refusing to conscientiously study this supremely important subject, "impartial history will hold it responsible for all the evils which it would not try to remove." Whilst it is admitted that the wretched condition of the people and the squalor of their homes drive many to drink, it is pointed out that it is not so much poverty which causes drunkenness, as drunkenness which causes poverty. "Medical men, who are obliged in the discharge of their duties to visit the wretched hovels in which the poor herd together, can affirm that very often the misery provoked by drink becomes an incentive to drinking. Thus the workman gets into a vicious circle from which he cannot well escape, and is almost inevitably lost." This is a generalisation which, as sanitarians, we too often overlook. The chief causes of intemperance are held to be—the cheapness of liquors, their injurious effects, the great number of taverns, etc., the custom of giving liquors to workmen, and the lax administration by the authorities of the laws relating to intemperance and the sale of liquor. Having pointed out the gravity of the disease, its extent and causes, the commission then attempts the solution of the problem submitted to it—"la thérapeutique"—"the means for opposing the increasing abuse of alcoholic liquors." First, the government is urged to take prompt action, so as to ensure the purity of the liquors purchased by the working classes. Secondly, it is suggested that the Association should use its influence with the government and with the communal authorities to publish, in French and Flemish, and distribute profusely, a pamphlet of a popular and scientific character upon the properties of the different kinds of liquors, and the sad consequences of drunkenness. Thirdly, the action of the legislature is invoked in favour of education in matters relating to health and temperance, and in aid of temperance, sanitary, and co-operative societies. The government is urged to raise the duties on spirits as high as may be safe, and to diminish those on beer, tea, coffee, etc. Fourthly, the local authorities are advised to adopt and enforce very strict police regulations; to prevent the sale of liquors in groceries, "where women often go to drink," and in cigar-shops; to punish those who sell drink to children and to drunken persons; to keep all taverns under strict surveillance, etc. The report, it will be seen, is of a thoroughly practical yet moderate character, and does credit to the good sense and patriotic instincts of its author, Dr. V. Desguin of Antwerp.

WESTMINSTER HOSPITAL.

A VACANCY has been declared in the surgical staff of this hospital by the retirement, after many years' service, of the senior surgeon, Mr. Barnard Holt, who was elected a member of the Council of the Royal College of Surgeons last July. Mr. George Cowell, the senior assistant-surgeon, will, in all probability, succeed him. Mr. Holt has been elected a consulting surgeon.

SURGEONS IN AUSTRIA.

AN imperial decree issued on February 17th, with the concurrence of both houses of the Austrian parliament, repeals the law prohibiting surgeons (*Wundärzte*) from undertaking the treatment of internal diseases in places where physicians are in practice. Surgical diplomas are not to be granted after the end of 1875; and, after that time, no one is to be allowed to practise surgery alone who has not a diploma dated previously to 1876.

PARISIAN NOVELTIES.

A CORRESPONDENT in Paris writes to us:—You will learn with interest from your amiable contemporary the *Journal de Médecine et de Chirurgie Pratiques*, that in England and America you are generally believers in what we call "criminal chloroformisation"; and that you currently admit that it is easy to profit by any one's sleep to subject him to inhalations of chloroform in "the most unconscious and *subreptice* (*sic*) manner", and thus to obtain a degree of insensibility which favours the most audacious enterprises. You may possibly have been under the impression that precisely the opposite was held to be demonstrated by every serious English and American professional journal, judging from what they have repeatedly written; but it seems that you are wrong, according to the information of your French contemporary. You cannot, however, but congratulate him that, here in France, "people are less credulous". I cannot, however, concur in the "good sense" which deduces from the recent death at Exeter the lesson that protoxide of nitrogen is not less dangerous than chloroform or ether. To my mind, one death in half a million cases is not comparable, in the gravity of the conclusion to be drawn from it, with one death in five thousand. A little less egotism would make the French journals infinitely more pleasant and profitable reading. Towards the history of anæsthetics, France has done nothing. The last great novelty here is the re-invention by my excellent and able friend M. Demarquay of Skinner's well known mask, after it has been figured, described, and detailed for ten or fifteen years here in all the journals, and used throughout the world. Every one here seems to regard it as a grand new discovery, and pre-eminently French; just as M. Nélaton used to lecture on Colles' fracture, and gravely explain how much M. Verneuil had done to clear up its previously unknown pathology and treatment.—We are in the midst of a great discussion on the system of appointing inspectors of the mineral water stations. The Academy has been the scene of passionate debate, into which the journals largely enter. All agree that the inspectors are of no use; but we do not by any means all agree that therefore they ought to be abolished. How many things must be abolished if we are to retain only what is useful? How could you justify your Lord Maire, or your President of the College of Surgeons, or even perhaps your Medical Council? It is very agreeable to be an inspector of mineral waters, with nothing to do, a pretty salary, crosses and medals in proportion, an official position, and the prior right to the cream of the visitors. So the friends of the present inspectors, the expectant inspectors, and their friends and their cousins, will make a good fight. The journals enjoy it immensely; it affords them all subjects for endless leaders, and opportunities for insinuating the most unpleasant motives in the most polished language—Paradise of journalists! Of course they don't mean it, and know each other to be honourable gentlemen; but, when the pen is in the hand, the ink will flow; and the colour is—rarely white.—Did you ever hear of cotton-wool dressings? Did you ever hear of antiseptic treatment of wounds, and the art of surrounding wounds with cotton-wool, with or without

carbolised oil, with a view of filtering off the septic germs borne in the atmosphere? Possibly you have, from Mr. Lister and some hundreds of his disciples all over the world, during the last half-dozen years; and possibly you think that Mr. Lister is the author of an elaborate theory of antiseptic treatment, and of the importance of excluding atmospheric germs, with the view of avoiding putrefactive action in wounds, and favouring union by the first intention. All that is, however, a great mistake. It was discovered here last year by a French surgeon; and the *pansement ouaté* is a brilliant French invention, of which you are destined to hear a great deal more. To our great surprise, and quite contrary to our custom, we have had, thanks to antiseptic dressings, a great many cases of union by the first intention here, and we regard it as a marvellous novelty. You may think it old, and of Scottish origin; but, as M. Lucas-Champagnière says, "en France, nous devons le dire, on est moins crédule."

ST. GEORGE'S HOSPITAL.

THE Committee appointed by the Weekly Board to consider the advisability of admitting cases of delirium tremens, have by a large majority decided they should be admitted if provided with governors' letters.

LONDON INTERNATIONAL EXHIBITION.

THE fifth meeting of the Committee on Surgical Instruments and Appliances took place on the 18th instant at the Royal Commission Offices, Gore Lodge. The Committee examined the instruments which had already arrived, and accepted the majority of those submitted for approval. They formed subcommittees for the purpose of examining the different classes of instruments and appliances, and agreed that they should meet weekly until the opening of the Exhibition. It is therefore hoped that all the arrangements will be completed before the 8th April, so that a clear week for private views and the visits of reporters may be allowed before Easter Monday, when the collection will be thrown open to the public.

DR. EDWARD LATHAM ORMEROD, M.D.CANTAB., F.R.S.

WE deeply regret to learn the death of Dr. Ormerod, F.R.S., of Brighton, from malignant disease of the bladder. Dr. Ormerod was well known throughout the profession as a physician of great accomplishment and application, and of such acquirement and powers of mind as would have raised him to eminence in any sphere. He was a distinguished student of St. Bartholomew's Hospital, where he was subsequently appointed demonstrator of morbid anatomy. He selected a provincial career, against the advice of many friends, who saw that the highest metropolitan positions were within his reach. In the county of Sussex, and as physician to the County Hospital, he has long held a leading position, having very early risen to a high place in professional and social esteem. His most important professional studies were on the diseases of the heart. He delivered the Goulstonian Lectures at the Royal College of Physicians, on Valvular Disease, in 1851; and delivered the Address in Medicine at the meeting of the British Medical Association at Cambridge in 1864. So recently as 1868 he contributed a paper, on Fatty Degeneration, to *St. Bartholomew's Hospital Reports*. He was an accomplished microscopist, and became a Fellow of the Royal Society in virtue partly of entomological researches. Four years ago he published a *Natural History of British Social Wasps*, which is full of original research and acute observation. His health was always delicate, and lately he had suffered much. His premature death robs medicine of one of her most eminent and devoted sons, and the profession in the provinces of a physician who was an ornament and an honour to it—reserved, thoughtful, and unobtrusive.

SCOTLAND.

A PATIENT in one of the medical wards of the Edinburgh Royal Infirmary this week committed suicide by cutting his throat.

THE Scottish Interuniversity athletic sports passed off successfully at St. Andrew's on Saturday.

THE medical practitioners of Arbroath have met and unanimously agreed to revise the scale of fees, with the view of increasing them. They are much too low in that town.

DR. J. F. SMITH of Aberdeen has been elected an Examiner in Medicine of the University, in the place of Dr. Patrick Nicol of Bradford, who has resigned.

ABERDEEN EPIDEMIC HOSPITAL.

WE are glad to observe that the Local Authority of Aberdeen are at length taking active steps towards the erection of an epidemic hospital. They have offered £2,500 for the lands at Cunnigar Hill, extending to about nine acres and three-quarters, as a site, and merely wait the approval of the Board of Supervision before purchasing the ground.

EDINBURGH LICENTIATES IN DENTAL SURGERY.

THE annual dinner of the Odonto-Chirurgical Society took place on Thursday evening, the 13th instant, in the Douglas Hotel, the chair being occupied by Mr. G. K. Chisholm, L.D.S.; Mr. George Buchanan acting as croupier. Among the gentlemen present from a distance was Mr. W. Williamson, L.D.S., Aberdeen, who had that day been re-elected President. The Chairman alluded to the advantages which the public as well as the profession would ultimately derive from the institution of a degree which demanded a thorough training in all the practical details of their profession. He trusted that the result would be to raise the profession, and rid it of those quacks who brought discredit upon it.

THE ABERDEEN MEDICAL SCHOOL.

IT is gratifying in a sense to observe the initiative of the Aberdeen medical students in a matter of so much importance as clinical instruction. It has been, unfortunately, too evident that the opportunities afforded for instruction in the Royal Infirmary are not made properly available; and it has been no less a truth, that the system of certifying to attendance is a fallacy. The result has not been favourable to the school. The University medical classes have of late years been very largely recruited from the London medical schools. Students coming from the metropolitan hospitals have already usually fulfilled a large part, if not the whole, of the required hospital attendance; and accordingly they are not likely voluntarily to attend the Infirmary, unless the instruction there afforded be conducted in a more satisfactory manner than at present. The University, having, most unfortunately, no close union with the Infirmary, does not compel practical tuition in that institution, corresponding with that given in its theoretical courses. In fact, there has been a spirit almost of traditional antagonism between the University and the Infirmary, instead of a bond of union consonant with their community of interest. The result has been to a great extent the neglect of practical teaching in the Aberdeen School. At a meeting of the students of the Infirmary held recently, a committee of their number was appointed for the purpose, as they put it, "of taking some steps to improve the present method of attending the surgical practice in the hospital, so as to prevent overcrowding, and to get as much benefit as possible." The surgeons have approved of the propositions of the committee—viz., the division of the students into sections to accompany each surgeon, and the sanctioning of the practice of posting up histories of the cases at the bedside. The apportioning of students to different members of the staff has been for some time carried out, and, we are informed, with good results, by the physicians; and it is likely to be equally successful on the surgical side. We trust that the independent action of the students may lead to further improvements in the Infirmary. It is surely, however, more within the province of the teachers, than of the taught, to promote and carry out regulations for proper instruction in the Infirmary. As, however, reform generally comes from without, and as the Aberdeen

Royal Infirmary has aimed at an unique position in this direction, the students will possibly have to request, further, that they be permitted facilities for acquiring a knowledge of all diseases treated in the Infirmary, including diseases of women and the maladies attended to in the female lock ward.

IRELAND.

SIR WILLIAM WILDE was, on the 15th instant, presented by the Royal Irish Academy with the Cunningham gold medal, in recognition of the services which he had rendered to science, and to the Academy in an especial manner, by his labours in connection with the compilation of a descriptive and scientific catalogue of the collection of Irish antiquities in the museum of that institution.

ULSTER EYE, EAR, AND THROAT HOSPITAL.

THE ceremony of laying the foundation-stone of this hospital, which is to be erected in Clifton Street, Belfast, was performed last week by the Mayor of that town. The amount to defray the cost of the building, which is estimated at £2,000, has been generously presented to the committee by Edward Benn, Esq., of Glenravel.

THE HIPPOPOTAMUS FOR THE DUBLIN ZOOLOGICAL GARDENS.

THE "baby" hippopotamus presented to the Zoological Society by Governor Pope Hennessy, of Sierra Leone, died almost on its arrival in this country. It was a specimen of that rare variety *Hippopotamus Liberiensis*, was about eight weeks old, and weighed only twenty-five pounds, showing the diminutive nature of this rare species which frequents the river St. Paul, on the West Coast of Africa. The cause of death was proved by *post mortem* examination to have been acute pneumonia of both lungs, the affection evidently being due to the coldness of this climate.

SANITARY LECTURES.

ON the 15th instant, the fourth of a series of scientific lectures on matters relating to public health, was given by Dr. James Little, on the "Geographical Distribution of Disease." The lecturer stated that there were two great classes of disease—zymotic and diathetic. Small-pox was an example of the former; and the most striking fact in these diseases was that the poison was derived from without. The term diathetic was intended to embrace those diseases in which there existed a disposition or predisposition to form an unhealthy kind of blood and tissue; gout and scrofula were examples of this class, and the diathesis might be hereditary or acquired. Certain diseases would be found in all parts of the world, while others were limited to certain areas, beyond which they were seldom found. Dr. Little considered that one of the most powerful circumstances in determining the distribution of disease was temperature. The torrid region was the most unhealthy; intermittent fever prevailed over the entire of it. It existed chiefly at the deltas of the Nile, the Ganges, and the great rivers of equatorial America, where irrigation was carried out, and around undrained swamps. The endemic area of cholera was that portion of India known as Lower Bengal. The lecturer traced on a map the route which the latter disease followed when, in 1864, it started from Bengal, and gradually spread to Dublin, where it arrived two years later. He next referred to the diseases incidental to the Arctic regions, which were generally of the diathetic or constitutional class, the conditions of that realm being unfavourable to the spread of epidemic disease. In the temperate regions of the earth, there were typhus and enteric fever, scarlatina, measles, and consumption; the prevalence of the latter affection recent experience had shown to depend greatly on the dampness of the soil.

MEDICAL FEES.

THE Ulster Medical Society have published a tariff of fees, which is intended to indicate the minimum of remuneration to which any practitioner is entitled, whatever be his rank or the extent of his practice.

This will be especially valuable to junior practitioners and in the case of disputed charges, as it is probable that in both these cases the old assertion of the "guinea fee" proved hurtful to rural medical men and younger men in cities. The patients are divided into three classes, the basis of division being the rent of their residences; viz., Class I, rent £10 to £25; Class II, £25 to £50; Class III, £50 to £100. The fees proposed are as follows. Single visit, Class I, 2s. 6d. to 3s. 6d.; Class II, 3s. 6d. to 5s.; Class III, 5s. to 7s. 6d. Special visit (that is, on an urgent message, or when the visit has been requested after the practitioner has commenced his daily rounds), a visit and a half. Night visit (that is, from 11 P.M. till 7 A.M.), two visits. Sea-side visits, according to time and distance, but not less than 10s. 6d. Detention of more than half an hour, at patient's desire or from urgency of case, first class, 2s. 6d. to 3s. 6d.; second class, 3s. 6d. to 5s.; third class, 5s. to 7s. 6d. Advice at practitioner's residence, or letter of advice, same as visit. Attendance on servants, if employer be responsible, first class, 2s. 6d. to 3s. 6d.; second class, 3s. 6d. to 5s.; third class, 5s. to 7s. 6d. If servants pay for themselves, according to Class I or II. Visit or advice of ordinary attendant with a consultant, two visits. Consultant's fee, not less than 21s., unless with the consent of the practitioner previously in attendance. More than one patient in a house, if head of family be responsible, half visit for each additional patient; if not responsible, full charge. Simple certificate, one visit. Lunacy certificate, 10s. to 42s. Certificate of death, if person insured, to be paid by persons interested in policy, 21s. Ordinary midwifery case (attendance beyond nine days to be charged for extra), first class, 21s.; second class, 21s. to 63s.; third class, 42s. to 105s. Difficult or protracted labours, an extra charge. Midwifery consultant, same for as first attendant. Vaccination by regular attendant, by number of visits. Vaccination by other than the regular attendant, one and a half the visits. Mileage outside the borough boundary, per mile, first class, 1s. 6d.; second class, 2s.; third class, 2s. 6d.

THE RIGHTS OF LICENTIATES OF COLLEGES OF PHYSICIANS.

DOUBTS having been raised as to whether or not medical practitioners in England, not possessed of any qualification or licence from the Society of Apothecaries of London, but holding the licence of the Royal College of Physicians of Edinburgh solely, and as such registered under the Medical Act, can, under the provisions of the Medical Act, sue for the cost of medicines supplied by them,

The Royal College of Physicians of Edinburgh have requested the opinion of counsel on the following points. 1. Can a medical practitioner in England, holding the licence of the Royal College of Physicians of Edinburgh, as such licentiate solely, and as such registered under the Medical Act, and without being possessed of any licence from the Society of Apothecaries of London, sue in any court of law for the cost of medicines supplied by him, while in attendance on a medical case, or would he be liable to a conviction under the Apothecaries' Act for having so supplied such medicine? 2. Supposing that, by the Apothecaries' Act, a licentiate of the Royal College of Physicians of Edinburgh was prevented from suing for medicines supplied, would the fact of his having supplied medicines, although he made no charge therefor, incapacitate him from suing for, and recovering reasonable charges for professional aid, advice, and visits?

Opinion.—1. We are clearly of opinion that a medical practitioner, duly licensed by the Royal College of Physicians of Edinburgh, and registered as such licentiate under the Medical Act, may dispense medicines in England, may sue in any court for medicines so supplied by him, and would not be liable to a conviction under the Apothecaries' Act for having supplied them. The Medical Act superadds another qualification upon that required by the Apothecaries' Act, viz., that the practitioner dispensing medicines as part of his professional practice shall be (among others) a fellow or licentiate of the Royal College of Physicians of Edinburgh, and registered as such. The Apothecaries' Act is not repealed. It still has its application to persons not having the new qualification conferred by the Medical Act, but its provisions are superseded where the new qualification attaches. 2. In our view, it becomes unnecessary to answer the second query.

(Signed) G. JESSEL; J. H. LLOYD.

ANÆSTHETICS.

METHYLENE ETHER.

MR. T. EASTES, dresser in the eye wards at Guy's Hospital, forwards us the following.

Methylene ether has been administered ten times, for operations on the eye, at Guy's Hospital. In five of the ten cases, there was vomiting within five minutes of its being inhaled. The vomiting was slight in only one of the five cases. Insensibility was generally produced in four minutes; two, three, or four drachms of the methylene ether being used to attain that state. Struggling and excitement occurred very much as with chloroform. Two patients, who had taken chloroform badly, were readily rendered insensible by the methylene ether. As a rule, the pulse became rather stronger; in one case it became very irregular. The operations were of the following kinds:—On the eyelids, 3; on the iris, 4; on the cornea, 1; on the sclerotic, 1; on the capsule of the lens, 1.

DEATH FROM CHLOROFORM.

WE regret to have to record another death from chloroform, which occurred last week at St. Thomas's Hospital. The patient, a boy aged 15, had been the subject of fever from simultaneous necrosis of the right humerus, left thigh, right tibia, and a metatarsal bone, four months previously. An examination was being made of his right humerus, which had recently undergone spontaneous fracture whilst the lad was tucking his shirt into his breeches. A very small quantity of chloroform was given (one or two drachms), and he was hardly brought under its influence. It was administered by the house-surgeon. The heart had been previously examined, and nothing amiss found. The examination of the arm had been completed, and directions given for the treatment. In recovering consciousness, the boy vomited, bringing up some greenish fluid. Suddenly his pulse, previously good, stopped; the pupils were widely dilated; and respiration was impeded. Artificial respiration and galvanism were at once had recourse to, and persevered in for an hour and a half, but without the least return of the heart's action. Generally, his viscera were healthy; but some parts of the heart and a kidney were put aside for examination. The chloroform was administered very carefully, in two doses, on lint. His pulse was not such as to contraindicate the administration of chloroform. He seemed to have died from syncope during his recovery from the anæsthetic.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held on Wednesday, the 9th day of April next, at the Office of the Association, 37, Great Queen Street, London, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, 28th March, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE next meeting will be held at the Midland Institute, Birmingham, on Friday, March 28th, at Three o'clock.

VINCENT JACKSON, Wolverhampton, } *Honorary*
ROBERT JOLLY, Birmingham, } *Secretaries*.

Birmingham, March 18th, 1873.

WEST SOMERSET BRANCH.

THE spring meeting is appointed to be held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 3rd, at 5.15 P.M.

The following question will be discussed after dinner:—"What is the best plan of preventing the spread of infectious and contagious diseases, having special reference to Dr. Budd's mode of treatment by camphorated oil and baths?"

Gentlemen who intend to be present at dinner, or who may have communications for the meeting, are requested to send notice thereof to the Secretary.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, March 11th, 1873.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 25TH, 1873.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

ON DISSEMINATED SUPPURATION OF THE KIDNEY SECONDARY TO CERTAIN CONDITIONS OF URINARY DISTURBANCE. BY W. H. DICKINSON, M.D. CANTAB., F.R.C.P.

In this paper the author described the suppurative condition sometimes spoken of as the "surgical kidney." Of all renal disorders, next to those described by Bright, it was, he said, the most destructive to life. It might almost be said to form the natural termination of stricture of the urethra, and was the especial danger which attended the use of the catheter and lithotrite.

The renal change was always associated with signs of pelvic and vesical inflammation, and often with alterations of the gland dependent on wasting pressure and chronic vascular disturbance. It essentially consisted of a peculiar turgidity and friability of the renal structure, with the formation of small scattered abscesses, or soft yellow deposits antecedent to abscesses, throughout its structure. With these were usually seen, in the cones, conspicuous white lines, which were morbidly occupied straight tubes. The microscope showed more or less dilatation of the straight tubes, distention of, or coagulation within, the blood-vessels associated with them, and disseminated intertubular suppuration, the distribution of which was regulated by the course of the veins. (The microscopic appearances were illustrated by drawings, showing the dilatation of the straight tubes; the irregular repletion of, or coagulation within, the vessels of the cones and the larger veins of the cortex; and the origination of abscesses around the affected vessels and throughout limited tracts of the intertubular tissues.) The disorder had its origin in the regurgitation of urine charged with morbid products. This occupied and generally distended the straight ducts, and thence entered the neighbouring blood-vessels, and charged them with an infection resembling in its results that of pyæmia. This was distributed by the veins to the rest of the gland, sowing abscesses in their course, and ultimately causing constitutional symptoms analogous to those of pyæmia.

The urine being obviously either the source or the vehicle of the morbid matter, it remained to inquire whence and in what circumstances it became contaminated. To help in answering these questions, the author collected the particulars of sixty-nine cases from the *post mortem* books of St. George's Hospital. The disorder was traced to mechanical obstacles to the escape of urine (stricture or enlarged prostate) in thirty-one cases; to paralysis of the bladder in seventeen; to stone in the bladder, or operation for its removal in fifteen; to cystitis from other causes in five; and in one to a renal calculus complicated with enlargement of the prostate. Looking at the urine as directly connected with the origin of the disease, it appeared that three conditions usually concurred—retention, ammoniacal decomposition, and admixture with the products of mucous inflammation. Of these, ammoniacal decomposition appeared to be essential, or, at least, to be constantly present. The urine was also generally fetid, and more or less mixed with vesical products of pus, mucus, and blood. The ammoniacal change, although possibly arising independently of mucous inflammation, produced it so constantly that the origin of the disease was always thus complicated. The clinical antecedents to this condition were fundamentally of two kinds—those beginning with retention, and those beginning with cystitis; both in the end producing an ammoniacal and putrescent state of urine. Mechanical obstacles and loss of expulsive power, belonging to the first and larger class, occasioned the retention and subsequent decomposition of urine, and its consequent admixture with the products of mucous inflammation. Stone and other vesical irritants, belonging to the second class, began by causing morbid vesical discharges, which rendered the urine prone to decomposition, and ultimately induced in it a putrescent condition, not altogether dissimilar to that arising from retention. The rarity of the renal disease as a consequence of stone in the kidney was probably to be explained by the less putrefactive tendency of the discharges from the pelvic membrane, or of the urine in that cavity.

In cases otherwise so tending, catheterisation, lithority, or some such instrumental proceeding, seemed sometimes to act as the immediate instigator of the morbid process, as was witnessed by the common phrase which stigmatised the disease as the "surgical kidney." The disorder, however, might arise independently of any surgical intervention, and would, perhaps, be better distinguished by the term

uriseptic, which would declare its general clinical relations more comprehensively.

In the condition of urine which caused the disease, vibriones and bacteria abounded. From this, however, no inference as to the nature of the virus could be safely drawn, except that it was associated with decomposition.

The symptoms of the disease had a general resemblance to those of pyæmia, being those of blood-poisoning rather than of renal inflammation. Unlike what happened with pyæmia, organs other than the kidney appeared seldom to share in the suppurative process. The complaint usually ended fatally within three weeks of the first symptom, though there was evidence that recovery sometimes occurred. Perinephritic suppuration was an occasional result.

In treatment, our efforts must be directed chiefly to prevention. To this end, beyond cautious surgery, measures of two kinds suggested themselves; first, the preservation or restoration of the natural acidity of the urine, a matter of most difficulty where it was most needed; secondly, as a suggestion as yet unwarranted by experience, the introduction of antiseptics by injection into the bladder.

Sir WILLIAM GULL expressed his obligation to Dr. Dickinson for his explanation of the pathology of the disease under consideration. He had believed that the renal suppuration was the result of simple propagation of disease along the ureters and tubules, but it was plain that this was inconsistent with the distribution of the abscesses. The fact that the disease was produced by ammoniacal urine was one of great interest, for it led to the conclusion that, where this state of urine was present, there was danger. The ammoniacal change in the urine, in most cases, began in the bladder, and he would observe, that probably too little attention had been paid to the local treatment of this viscus. At Guy's Hospital, it was now the common practice to wash out the bladder by injections through a double cannula.—Mr. BARWELL asked whether there were any prodromata of the disease in the kidneys which should indicate caution on the part of the surgeon? He had met with a case of perinephric abscess, in which there was no connection with the interior of the kidney.—The PRESIDENT asked whether Dr. Dickinson had met with the state of kidney described by him, in cases of fracture of the spine and paraplegia? Recovery sometimes took place in cases of paraplegia with ammoniacal urine.—Dr. DOUGLAS POWELL did not understand on what grounds the disease was regarded as of a pyæmic nature. No thermometric observations appeared to have been made, and the disease was perfectly local.—Mr. GASKOIN regarded the paper as supplementary to one published many years ago by Sir B. Brodie, who described the diseased condition as originating in the kidney. He did not think that it was entirely a surgical disease, but that it might be induced by the use of stimulant medicines.—Dr. GREEN questioned whether the renal suppuration was the earliest result of the decomposition of urine. He had thought that it would first produce an interstitial change in the kidney.—Mr. THOMAS SMITH did not think that there would be in all cases a backward flow of urine along the ureters to the kidney.—Mr. MARCUS BECK said that the temperature in the disease was generally low, 96 or 97. In the last case that had come under his notice, the pelvis of one kidney contained putrid mucus and alkaline urine; that of the other kidney contained simple mucus and urine, which was not ammoniacal; and the ureter on this side was rather more dilated than on the other. In this case, quinine and sulphuric acid had been injected into the bladder, and the urine had been rendered acid two or three times. This treatment, however, failed, in consequence of the extension of decomposition to the urine within the ureter.—Sir WILLIAM GULL said, that some years ago, experiments were made to determine whether the urine was acid or alkaline when poured into the renal pelvis. On washing the pelvis, and squeezing the urine from the tubules, it was always found to be acid.

After some remarks from Dr. SYMES THOMPSON and Dr. GOODHART, to which Dr. DICKINSON replied, the meeting adjourned.

TUESDAY, MARCH 11TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

ON THREE CASES OF A PECULIAR FORM OF MOLLUSCUM FIBROSUM IN CHILDREN. BY JOHN MURRAY, M.D.

Dr. JOHN MURRAY communicated detailed particulars of the condition of the patients. All three cases occurred in the same family. The eldest, a girl, seven years of age, presented a variety of cutaneous growths on the face, ears, neck, fingers, and toes. Those on the face were of the nature of verruca plana; those on the ears, of hypertrophied connective tissue and dermis, and, from their size and prominence on the margin of the helix, gave to the child a peculiar appearance. The affection on the neck assumed the form of crops of smooth warts,

hard, pale, and glistening on their surface. The isolated cutaneous growths of the fingers were smooth warts, and few in number. The most remarkable phenomena presented, however, were extensive growths of connective tissue, forming frequently distinct and circumscribed tumours, reaching to the size of an orange, on the face, scalp, trunk, and extremities; these growths were rapid in their increase, painless, deeply discoloured by extravasation of blood, and moderately soft and elastic. Over the bones, in some situations, there were periosteal enlargements. The last phalanx of the fingers, with one exception, and several of the toes, were hypertrophied from three to six times their natural size. The enlargement was apparently due to irregular increase of connective tissue and hypertrophy of the dermal structures. The nails were correspondingly enlarged, and marked by transverse furrows. The temperature, which occasionally became elevated for a few days, seemed to point to intermittent increase of the growths; for, on one occasion at least, the extensive formation of new growth over the back was coincident with a decided elevation of temperature lasting for some days. The tendency of the tumours on the scalp was to grow until ulceration and sloughing ensued. The gums were greatly hypertrophied, almost entirely covering the teeth. They were fungous and papillomatous in appearance, and grew again rapidly after being cut away. The disease was more or less symmetrical on both sides of the body. There was no glandular affection, and the viscera were healthy. The child was deaf, but very intelligent. The other two children, aged four and two years respectively, presented the enlarged gums and slight cutaneous affection, and the elder child had only recently exhibited an enlargement of the end of one of the fingers. This child presented also certain peculiar mental and moral phenomena, and gave little promise of speaking well. The disease in all three cases had commenced a few months after birth. The eldest child of the family, a boy ten years of age, presented none of the symptoms found in the others. The parents were first cousins, but healthy. There was no evidence of syphilis or of scrofula in them or in their history. The children's grandmother was stated to have died of consumption; but with this exception, the members of the family were long-lived and remarkably healthy. There was no similar affection to that of the patients in the parents or in any of their relations. The three affected children had been born in a wretched and damp dwelling, and exposed to bad hygienic conditions during most of their life. The eldest and unaffected child resided with the rest of the family, but was during the early part of his life not subjected to the same conditions as the patients. The whole family had for the past year lived in a good habitation and otherwise comfortably, still the disease advanced in all the affected children. Several of the subcutaneous tumours had been removed, and exhibited microscopic characters allied to fibroma with, in parts, cartilaginous structure. The author considered that the disease should be placed in the group of mollusum fibrosum. The enlargement of the gums and ends of the fingers, the deafness, the mental and moral symptoms present in one or more of the cases, the symmetrical character of the affection, and particularly the occurrence of three cases in one family, were remarkable, and in many respects unique, features of the disease. He considered that the bad hygienic condition in which the patients had been placed might have acted as an exciting cause of the affection, but he thought that the predisposing, if not the sole and important factor, was the blood-relationship of the parents.

REPORT OF A CASE OF MOLLUSCUM FIBROSUM, OR FIBROMA;
WITH OBSERVATIONS. BY GEORGE POLLOCK, F.R.C.S.

A woman, aged 33, was admitted into St. George's Hospital, with tumours of the skin, such as are known as mollusum fibrosum, or fibroma, and consisting, apparently, of excessive hypertrophy of the connective tissue. The patient had been the subject of these growths from childhood. They were small in their early condition, but had been slowly growing and increasing in number. There were three large tumours, and over one hundred smaller ones, of various sizes, in different parts of the body, some as small as a split pea. One, of the size of a small melon, was attached to the back of the head; another occupied a space over the right shoulder, between it and the root of the neck. The most remarkable, and the largest, commenced on the right side of the neck, by a pointed extremity, and extended below the umbilicus. Its attachment extended from the above point to the upper margin of the right mamma, and increased in breadth from the neck to the breast. It consisted of a long, thick, and broad pendulous flap of skin, about eighteen inches in length. Its anterior surface was thrown into several folds, which gave it somewhat the appearance of coils of intestine. The skin covering the larger tumours was darker than that of the rest of the body; its surface was coarser, and more rough, and marked by obstructed orifices of sebaceous follicles. Sens-

ation over the larger part of this large mass was impaired. A slight touch over the greater portion of the surface was not detected, but more severe handling was readily felt. In addition to these three large masses, various other tumours occupied the trunk; some solitary, some clustered; some with broad base, others pedunculated; on the forearms were many suspicious spots of commencing future growths. One rather large on the front part of the neck, was partially removed, but had since increased in size. When admitted, the patient was in a very low state of health, and the removal of the portion alluded to was followed by a good deal of suppuration; but, her health being greatly improved since then, removal of a large portion of the larger growth was proposed, and was much wished by the patient. A microscopic examination by Dr. Whipple, of the portion removed, as also of a second small tumour which was snipped off, gave the following results. The tumours were entirely covered by layers of epidermis and rete mucosum, resembling in every respect that of healthy skin. Immediately beneath, and closely connected with the rete, was a layer of wavy well-defined fibrous tissue, mixed with a small amount of yellow elastic tissue, which in many places exceeded in thickness that of the epidermis and rete together. Proceeding inwards, the fibrous tissue became split up into separate wavy bands, varying considerably in thickness; and between these bands was an abundant growth of small, round, or oval cells, closely aggregated in large groups, or arranged in lines between delicate strips of fibrous tissue. In the central parts of the tumour, fibrous tissue, mixed with yellow elastic tissue, abounded: the fibrous tissue was less dense and more wavy, was split up into more distinct bands, separated from one another by wider interspaces, which interspaces were either empty or occupied by the cell-growth above mentioned. The tumour was well supplied by blood-vessels. In the larger piece, sebaceous and sweat glands were present; occasionally, though rarely, a hair was found, always presenting a healthy appearance. The growth was due to excessive hypertrophy of the connective tissue, and partly to abundant cell-growth occupying the interspaces between the bands of fibrous tissue. Virchow had published an engraving of a remarkable case of this disease, representing numerous small growths over the whole body, and one very large one, which hung over the hip, and weighed some thirty-seven pounds. A somewhat similar case was to be found in the catalogue of Guy's Hospital museum, illustrated by wax models of the tumours of the body; and in this case there was also a tumour at the back of the head, and one hanging down from the nates, some sixteen pounds in weight. This man died when over 80 years of age. Another remarkable case was recorded in the *Transactions of the Pathological Society*, vol. xvi, in which the growth of the tumour occurred from the neck, and hung down below the umbilicus. There was also a large secondary tumour attached to the back part of the head and neck. Dr. J. C. Warren also described a peculiar case of skin tumour, in his work on tumours. The tumour resembled a coil of intestine, and occupied the right side of the neck. It was removed, but returned in the course of eighteen months. There was, to a certain extent, a correspondence in the position of the tumours in the cases alluded to. The trunk was most frequently the seat of the larger number of tumours, while the upper and lower limbs were often free. Little was to be said with respect to treatment; and, though there was a prospect of a recurrence after operation, it was proposed to remove the larger portion of the anterior flap, as the patient was anxious to be released of the inconvenience she suffered from it.

Dr. LANGDON DOWN had examined Dr. Murray's cases. The eldest of them presented an interesting condition of the cranium, the result of the strumous diathesis, and often associated with imbecility. The patient was macrocephalic, and the ears were inserted obliquely. There was a history of convulsions in infancy; but there was no trace of mental impairment. It was a question how far the condition of these patients was the result of consanguineous marriage. He had investigated many cases of marriage of cousins, but had never met with anything like that now described. He thought that the two factors were, the strumous diathesis, which had been manifested both on the father's and on the mother's side, and the marriage of consanguinity. Some years ago, he began to write a paper to prove that the marriage of cousins was a cause of imbecility and idiocy; but his investigations led him to conclude that these effects did not follow the consanguineous marriage of healthy persons.—The PRESIDENT called attention to the doubtful prospect afforded by operation in Mr. Pollock's case. It appeared to be essentially one of blood-disease.—Dr. STEWART had some years ago seen a very striking case in a dressmaker, subjected to much privation and anxiety, in whom many tumours like those now described were present. A large tumour had been removed from her hip by Sir Astley Cooper in Guy's Hospital, many years before Dr. Stewart saw her. This tumour did not return; but, when she was admitted into Middlesex Hospital under Dr. Stewart, she had a large swelling, like those

described by Mr. Pollock, on the thigh, and others also on the back and neck. Phthisis set in, and ran a rapid course to death. At the necropsy, all the lacteals in the mesentery were found to be choked with a concrete yellow substance, as if they had been injected with wax. Many of the mesenteric glands were full of the same soft substance, and enlarged.—Mr. SPENCER WATSON mentioned the case of a gentleman under his care, who had tumours at the side of the neck and in the chest similar to those described by Mr. Pollock, but senile; they were firm, and movable on the subjacent parts. He had also seen a somewhat similar tumour in a patient at the Great Northern Hospital; it was, however, single, and, therefore, probably the case was not quite analogous to the others.—Dr. DYCE DUCKWORTH thought that Dr. Murray's cases might be regarded as unique. The histology of fibroma molluscum had been well worked out, especially by Dr. Hilton Fagge and Mr. Davies-Colley at Guy's Hospital. He had gone to Essex to trace the history of a patient in whom large tumours of the kind had been removed, without return; the patient lived in a hovel like a pigstye, and had wretched diet.

Dr. JOHN MURRAY, in reply, stated that the peculiarities in the shape of the head and insertion of the ears in the eldest member of the family had not been noticed by him, but he recognised them when pointed out by Dr. Langdon Down. He did not, however, admit the correctness of Dr. Down's interpretation of their occurrence. This boy now presented a small enlargement, somewhat like a gumboil, close to a decayed tooth. This he had not observed when he examined his gums two months before, nor had the parents seen it until a month or six weeks previously. He thought there was very little ground for entertaining the opinion that the affection was scrofulous. The family had been a remarkably healthy one, and the only evidence of scrofula or phthisis was to be found in the statement that the grandmother had died when young, of consumption. The children were almost entirely free from any of the usual conditions found in scrofula. On the other hand, the arguments in favour of the consanguineous origin of the disease were strong. There was deafness in one child, and mental and moral phenomena existed in another. Moreover, the symmetrical character of the affection pointed to a nervous origin.

Mr. POLLOCK also replied. The prospect of success from operation in his case was small; but the removal of the tumour was urgently desired by the patient.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MARCH 4TH, 1873.

Sir WILLIAM JENNER, K.C.B., Bart., M.D., President, in the Chair.

Microscopic Specimens.—The PRESIDENT showed the following microscopic specimens. A. Specimens of Hæmatozoon, from Dr. Lewis of Calcutta.—1. A drop of Chylous Urine preserved in Carbolic Acid and Spirit, and containing four or more *Filaria*. 2. A drop of Blood from the finger of a patient suffering from Chyluria, exposed some time afterwards to Osmic Acid, and mounted in Acetate of Potash. There were five *Filaria* in the preparation. 3. A drop of Blood from the finger of an European woman, exposed immediately to the vapour of Osmic Acid, and mounted in Acetate of Potash. It contained five or six specimens of the hæmatozoon, two contracting within their enveloping tube.—B. Sent by Dr. Lamprey from Hongkong. 4. Ova and five or six young of *Spiroptera Sanguinolenta* from the heart of a dog. Sir William Jenner alluded to the importance of Dr. Lewis's discovery, and the great credit due to him for his investigations. Dr. Lewis had calculated that every drop of blood contained about 140,000 of *filaria*; and, supposing that the blood represented one-tenth of the weight of the body, an approximate idea of the vast number of these creatures in the body might be imagined. The President questioned whether the term chylous urine was the proper one, and whether the abnormal constituent present was not merely fat.—Dr. COBBOLD said that the discovery of nematode hæmatozoa in the human subject was one of great interest. We had long been acquainted with filariform hæmatozoa in animals. He was indebted to Mr. Swinhoe, H.B.M. Consul at Amoy, China, for some examples, and to Mr. Walsh, for others sent by Mr. Julius Dare, of Yokohama, Japan. The main question was to establish the origin and genetic relations of these sexually immature filariæ. As regarded breadth, the forms encountered by Dr. Lewis were precisely of the same size as those which Dr. Cobbold had himself discovered in the urine of a patient suffering from so-called endemic hæmaturia of the Cape. To establish the question at issue on a secure basis, it was necessary to start by the acceptance of some well defined proposition. He would offer the following. The so-called filariæ discovered by Dr. Lewis, and all sexually immature nematode hæmatozoa, together with such as reside in the tissues gene-

rally apart from the circulation, are awaiting either passive or active transference to their ultimate host. That such was the case here he had no doubt; and he laid particular stress on the fact pointed out by Dr. Lewis that these filariæ were enclosed in a cyst. This envelope furnished satisfactory proof of the existence of a primary ecdysis or moulting such as helminthologists had long been familiar with as occurring amongst nematodes. Mr. Fedtschenko had made some interesting discoveries respecting the development of the Guinea-worm. From the facts personally communicated by that eminent Russian traveller, and from others of a kindred nature, it was quite clear that these sexually immature nematodes formed the progeny of some adult species which either resided in the human body or in the body of some carnivorous animal. It might be that these hæmatozoa had strayed into a territory which was not their ordinary place of abode; but the facts of ecdysis proved that they were in a transitional state. In any case, the discovery was one of the highest importance as a contribution to our knowledge of parasitism.—Dr. BASTIAN had arrived at the same conclusion regarding the cyst, that it was a sort of moult, but he did not attribute the same importance to it as Dr. Cobbold. The very large number of worms was almost incredible; it was against the idea of the body being an intermediary host, and in favour of the opinion that the parent was to be found in the same individual. In a *post mortem* examination which had been made very carefully in Calcutta, no adult worms had, however, been found.—Dr. JOHN HARLEY believed that the infection arose from more than one worm, and that all the changes did not go on in the same individual. He thought that the adult worm would be found in some part of the vascular system. Dr. Wucherer of Bahia had, six years ago, found it in chylous urine, and Dr. Crevaux, a medical officer in the French navy, described it two years ago.—Dr. CRISP referred to the strongyli frequently found in the mesenteric artery of the mule, horse, and ass. Perhaps the ova of the strongylus existed in the blood.

Fibro-cystic Tumour of the Right Ovary.—Dr. C. CARTER exhibited an enormous tumour of the right ovary, removed by Mr. Marshall from a female aged 74. It weighed twenty-three and a half pounds, and measured 26 by 14 inches, and 9 inches deep. It contained several cysts. The left ovary was enlarged, cystic, and calcified. The tumour began about twelve years ago, and latterly grew very rapidly. The patient suffered no inconvenience except from its weight.

Fibrous Tumour of Ovary.—Dr. WILTSHIRE showed a specimen removed from a patient, aged 53, which Dr. Charles Carter had, after examination, pronounced it to be purely fibrous in character.—Dr. HEYWOOD SMITH suggested that the tumour might have arisen from the broad ligament.—Referred to Committee.

Surgical Kidney.—Dr. GOODHART brought forward a specimen of surgical kidney from the body of a patient who had been the subject of stricture ten years ago, and who had died of peritonitis set up by sacculated bladder. There were cystitis and dilatation of the ureter. The kidneys were contracted, and one puckered on the surface. They had apparently never suppurated, but there was interstitial inflammation.—Dr. GOODHART, in answer to Dr. WILSON FOX, said that he considered surgical kidney to mean a diseased kidney from obstruction to the outflow of the urine.—Dr. MOXON said that the term had long been used; and if it were to be taken exception to in future, we should be supplied with a better substitute.—Mr. ARNOTT remarked that at the Middlesex Hospital he had seen a large number of so-called surgical kidneys from the pressure of cancer of the uterus on the urinary passages, but there was nothing surgical in these.—Dr. MOXON rejoined that the effect of pressure was merely to dilate, not to produce suppuration. He believed that patients with calculus and renal suppuration might recover.—Dr. GOODHART, in answer to Mr. HEATH, stated that the urine could not be obtained in the case, and therefore it was not known if it prognosticated kidney-affection.

Phthisis Pulmonalis.—Dr. GREEN exhibited a very interesting specimen of phthisis affecting one lung only, in which there was puckering of the lining membrane of a vomica similar to that sometimes seen in syphilitic spleen and liver. Both these latter were syphilitic and lardaceous, and also the kidneys. The anatomical characters of the affected lung were the same as those of ordinary phthisis, but limited to one lung. The specimen was taken from a boy six years of age, who had inherited syphilis.—Dr. THEODORE WILLIAMS thought that there were not sufficient reasons for believing the case to be one of phthisis due to syphilis.

Cystic Bronchocele.—Mr. DURHAM exhibited a cystic bronchocele removed by him from a woman aged 36. The disease involved only the isthmus. One cyst contained five ounces of fluid with cholesterine crystals. There were numerous smaller cysts. The rest of the mass was composed of hypertrophied gland-tissue. The tumour before removal measured ten inches in circumference. It was of nine months'

duration, and originated, it was said, in a blow. Pressure on the trachea produced much dyspnoea. There was scarcely any blood lost during the operation.

Fracture of the Olecranon.—Mr. CHRISTOPHER HEATH showed a specimen taken from a broken-down billiard-marker. He excised the joint, but the man died two days afterwards. Mr. Heath raised the interesting question, whether it was not better in such a case to remove the bone at once rather than leave it to heal.

Gouty Deposit on the Aortic Valves.—Mr. COUPLAND showed a very interesting specimen of deposit, apparently gouty, on the aortic valves. The matter was deposited between the layers so as to leave the valves quite competent. Chemically, the white deposit was found to contain uric acid, and the kidney-tubules contained a similar material. Microscopically, it was molecular in structure. The patient had been subject to gout for eighteen years, had had dropsy ten years previously, and died in a fit of gout.—Referred to a special Committee.

TUESDAY, MARCH 18TH, 1873.

Sir WILLIAM JENNER, K.C.B., Bart., President, in the Chair.

THE ANATOMICAL RELATIONS OF PULMONARY PHTHISIS TO TUBERCLE OF THE LUNG.

DR. WILSON FOX opened a discussion on the Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lung. He said:—Sir, in introducing this subject, I could fain ask the indulgence of the members on many points. In the first place, no one would voluntarily enter into the arena of discussion on such a subject as this without cause, the chief cause in this case being the desire of the Council that the discussion should take place. Personally I will offer no apology, except to say that the observations which I have to bring forward may at least enable others to express their own views. I must, however, ask indulgence for the comparatively superficial manner in which many points must be treated. As you have yourself said, Sir, the subject is illimitable, and I may appear to dwell briefly on points that may seem important to others. My hope is, that points with which I may deal shortly, and which other gentlemen may think to require further elucidation, may from them receive that amount of attention which time prevents me from bestowing. The other and last point on which I would also appeal to the indulgence of the members is, that I must pass over without remark the opinions of others. If I entered at all into the consideration of these, all the members of the Society must feel that the debates on phthisis, extending now through nearly two centuries, would offer a balance of opinions between one author and another, of which the remainder of the session would hardly be adequate to give a full and sufficient history. There are very few opinions on the subject, I believe, which are not held by some members of this Society, and the gentlemen who hold those various opinions are better qualified to express them than I am. Therefore as to historical or controversial matters I have no statement to offer. I have simply to bring forward a plain, simple, and not very transcendental account of personal observations which, I hope, may serve at least as a basis of discussion. On the history of the subject I have very little to say, except what may elucidate the present position of the question.

When the Secretary of the Society asked me to open a discussion on tubercle, I felt at once that the main interest of tubercle related to the question of phthisis; and that interest will never cease, in relation not only to humanity but to many of the controversial questions of the present day. The etiology of phthisis, the therapeutics of phthisis, and the prognosis of phthisis, all hang upon this point, how far tubercle is concerned in the constant morbid anatomy of phthisis. I allude to this more particularly, because a most eminent German writer, Professor Niemeyer, has stated that every question bearing on the etiology of phthisis must be re-cast, on account of the very small part which tubercle bears in phthisis proper. The same conclusion may be deduced from some points to which he has referred in his work, viz., that a large part of phthisis has nothing to do with tubercle, and that it is only when tubercle is superadded to phthisis that tubercle becomes necessarily a fatal disease. I am not quoting his exact words, but those are the practical conclusions from some of his more important statements. On those points I am not going to enter; nor shall I deal with the question as to whether there are any clinical varieties of phthisis. I believe that most of the clinical varieties of phthisis may be traced to two variations in the subsequent development of the changes that take place in certain growths in the lung, to which, up to the time of Dr. Addison and Professor Virchow, the name of tubercle was almost universally given.

As a brief mode of bringing the immediate points of discussion before the Society in relation to history, I would just state that, commencing with the definition of Hippocrates that phthisis was ulceration of the lung, during the whole or the latter part of the sixteenth century there was a gradual recognition of the fact that the bodies which the authors of this day called tubercle, and designated by the names of scirrhus, or caseous, or indurated and caseous, formed the anatomical basis and the essential constituent feature of phthisis. Chronologically it is impossible here to trace this question accurately, for the opinions of one writer merged into those of another during the greater part of the two preceding centuries. During the latter part of the seventeenth century, the discussion ranged further on the recognition of the similarity of the changes to what took place in what were then called scrofulous glands. The main debate was, whether these tubercles were allied to the scrofulous lymphatic glands or were anything else. It will be seen, I think, that the discussion of the present day has in that respect very little altered from the discussions of nearly two centuries ago. This discussion was continued down to the time of Portal, who supported the former opinion; but with the early part of the present century began another phase in the history of the discussion, principally with Bayle, who regarded what he still termed tubercle as a product *sui generis*, and the result of a special dyscrasia. At the same time, though originating before that period, with Hoffmann or even before him, arose another controversy, which has been that of this century, between the origin of phthisis in a special dyscrasia or in inflammatory changes. The theory of scrofula was maintained in part during this period by eminent foreign and English writers; but whether scrofula was maintained or not, the question of tubercle being an inflammatory product, or a product of a special dyscrasia, a deposit from a morbid state of the blood, was the main controversy in the whole history of medicine. Each side has been maintained with such ability, that to enter minutely into the question in the terms in which it was then discussed would be almost impossible. What I would call the attention of the Society to, is the fact that, whatever theory was held about these growths, products, deposits, masses of any kind in the lung, they were always called tubercle. Sometimes they were grey, sometimes yellow, sometimes hard, sometimes soft, but they were always called tubercle. The history of what is now called tubercular infiltration, speaking not very accurately, but within chronological limit, was practically begun by Bayle. Bayle announced both a grey and a yellow uniform infiltration; the occupying of a large tract of lung with a somewhat amorphous looking material, either grey or yellow, was pronounced by Bayle to be tubercular. This was continued in the same terms by Laennec, who may be said to have solidified the previously floating ideas of tubercle which had before received a strong stamp of homogeneity from Bayle, with the one exception of the grey granulation. What Laennec and Bayle considered to be a grey infiltration of tubercle analogous to grey granulation, has since been largely considered to be pneumonic, and may now, to a great extent, be believed to be so. But the yellow still continued to be called tuberculous; and the yellow infiltration or the yellow masses in the lung were taken to be finally the type of tubercle, until what Bayle had doubted being tubercle was asserted to be tubercle, by Laennec and Louis, because it became yellow. The result of this transformation was considered to be the test of tubercle. Whatever became yellow, caseous, dry, and friable was considered to be the most typical form of tubercle.

With the exception of Dr. Addison—into whose views, with the most profound respect, I shall not enter, because, in the first place, there are many who can expound them better than I can, and secondly, it is within the lines I have laid down not to discuss particular opinions—yellow tubercle was taken by pathologists, until Professor Virchow's time, to be the most characteristic form of tubercle. With Virchow began the main variation in the discussion in our day. He showed that yellow caseous matter might arise from the fatty degeneration, with inspissation, of many products, pus, cancer, and other matters; and he therefore asserted that caseous matter was not a type of tubercle, and that consequently another definition must be found; and seeking for a definition, he chose the grey granulation of Bayle—the granulation respecting which Bayle himself had doubted whether it was tubercular at all, that is, of the same nature as the other bodies, which by their masses and changes had before his time been considered to be tubercular. This definition excluded an immense amount that had been called tubercle; and Virchow further went on to say that a large part of so-called infiltrated tubercle was, in reality, in the lung inflammatory (I am limiting my observations entirely to the lung), that these infiltrations and caseous masses, when not assuming the form of grey granulation, were lobular or caseous pneumonia, or, adhering to the old term,

scrofulous pneumonia, and that they arose from the inspissation of inflammatory products. There is no one here who has a more profound respect for Professor Virchow's work and labours than I have. A large amount of the work of my professional life—what I am going to bring forward to-night—is due to the desire to follow out some of his teaching in this respect; and if I have arrived at different conclusions, it is because I have at length felt myself obliged to believe that tubercle in the lung may assume many other appearances than that of the grey granulation.

Speaking briefly, I still say that proof is wanting that caseous matter in the lung is, in the majority of cases, due solely to the inspissation of inflammatory products, or produced solely by the drying up of pus and other effusions; and proof is also wanting that tubercle in the lung can appear in no other form than the isolated grey granulation of Bayle. These points have a very large bearing on the lung, and therefore I am dwelling on them.

With that acceptance which might be expected from the authority of such a teacher as Virchow, these views have been largely received in Germany; they have been accepted to some degree in this country, and they have found their latest culmination in the text-book of Professor Niemeyer. The logical deduction from Professor Niemeyer's teaching appears to me to be that phthisis, as a disease, has nothing necessarily to do with tubercle; that the destructive changes in the lung are the result of inspissation of inflammatory products, like caseous changes in catarrhal pneumonia; that tubercle, when found in the lung, is merely an accidental product—the result of a second theory which we owe also to Germany, and which has found many points of support in this country, though not, I believe, bearing so largely on this question as is believed in Germany—the theory of infection. According to the theory of Buhl, which has been carried out in its entirety by Professor Niemeyer (I speak of him because his work forms a text-book for students, of whose views I know something when they begin to reproduce them), phthisis is an inflammatory disease; the destructive changes in the lung result from ulceration, from a caseous inspissation (cause almost unknown) of inflammatory products, and tubercle is a secondary accidental product. The theory therefore is entirely inverted from the old doctrine; tubercle has come to be a mere accidental complication of phthisis, and in no respect its chief anatomical distinction. I think I am not guilty of exaggeration, if I state that this is the logical deduction from Professor Niemeyer's views.

Fifteen years ago I came from Germany strongly impressed with Professor Virchow's views, and with a certain ambition, such as young men may feel, to help in some way to work out the definitions and varieties of phthisis from a clinical point of view. I had a great many terms at the end of my tongue—broncho-pneumonia, caseous pneumonia, and scrofulous pneumonia, which sometimes young men use more freely than their teachers; and, coming to the profession of a teacher somewhat early in life, I may have given expression to some of these views to my pupils rather earlier than would be desirable from an older teacher; but I think they will all admit that I have long felt a great hesitation in speaking of tubercle, at any rate in a practical point of view, when I came face to face with the lung; that I felt great doubt and difficulty in telling them what was not tubercle, and still more in saying what was tubercle. I believe that difficulty still prevails among a large number who can speak of caseous changes and alveolar pneumonia, and so on, when they find themselves actually in the presence of morbid changes in the lung, and want to define what these changes are. But before I set to work upon the clinical question, or while I was doing it, I felt that I had to deal with the anatomical question, and settle in my own mind into what I could break up phthisis, when I came to the lungs of patients whose clinical history I had observed. And in that matter I have to thank you, sir, and also many of my senior colleagues, for giving me large opportunities of observing lungs in the *post-mortem* room, and carrying on the work which is my only ground for coming before the Society to-night. I felt at last that I could not say what was tubercle and what was not; and I came to the conclusion not to speak as I did in my earlier days, describing a lung as containing no tubercle because it did not contain what I imagined to be the only type of tubercle, but to describe everything I saw of the lung in detail, and to get good drawings made, for which I have to thank Mr. Tuson. As the result of that, I have tabulated the appearances of lungs in different cases of phthisis, of which I shall venture to speak presently.

When I had done some of this work, I had to go over the ground again, for I found some of the appearances crossing one another in every possible manner, and a large number of them in the lung not corresponding to what I had imagined to be the type of the grey

granulation. At last I came to the conclusion to deal with the question as a disease, and, my main interest being in the question of phthisis, to take the lung in a disease universally recognised as tubercle, acute tuberculosis, to see what changes accompany the disease in which grey granulations occur in other parts of the body, and what it really produces in the lung. Being at the same time occupied in the question of the artificial production of tubercle, thanks to my friend Dr. Gee, and my late lamented friend and colleague, Dr. Hillier, I was enabled to obtain from the Children's Hospital a large number of lungs of children dying of acute tuberculosis, a generalised disease, and to examine their changes. I felt that I had to do one of two things; either to take an arbitrary idea of tubercle as derived from its appearance in a serous membrane, or to take all the appearances of a disease, and to see wherein they differed from other diseases, or whether they corresponded to any general definition that could be given. That is why I have ventured to bring forward the lungs of children dying of acute tuberculosis as the main type of what I have to apply to cases of phthisis to-night. To put the result of my inquiry briefly, I find in the lungs of patients dying of phthisis almost identically the same changes as those found in the lungs of children dying of acute tuberculosis, with such variations of anatomical changes as may, I think, be tolerably clearly traced to lapse of time.

The following are the appearances which I have catalogued from my own notes. The semitransparent granulation of Bayle. Opaque white granulations, for the most part soft, but with varying degrees of firmness and difficulty of crushing. Granulations like the semitransparent granulations of Bayle and those firmer granulations, but more or less caseous in their centres. Yellow soft granulations, easily crushed, but not easily removed from the pulmonary tissue, varying in size from that of a poppy-seed to a mustard-seed, rarely of the size of a hemp-seed, and still more rarely of the size of a split pea. Caseous granulations, dry, opaque and friable; sometimes with, sometimes without, a grey transparent zone of induration surrounding them. Groups of granulations, mostly like the semi-opaque, not entirely opaque, not semitransparent; two, or three, or four, or more in number, about the size of a split-pea, or a bean, or even a small walnut or hazel-nut. Indurated pigmented granulations. And, lastly, tracts of indefinite extent, one or two or more inches in diameter, irregular in outline, prominent above the surface, granular on section or tearing of the tissue, but passing sometimes insensibly into the so-called grey infiltration. Cavities from infinitesimal specks to the size of a hazel-nut or larger. Granulations softening. In some cases, œdema. In some cases, injection or punctiform extravasation. In some cases, emphysema. In some cases, capillary bronchitis and dilatation of bronchi. The point on which I wish especially to insist is, that the grey granulation of Bayle is very seldom found alone. It is sometimes found as an isolated structure throughout the whole lung, but that is the rarer appearance of the two. In the combinations of eleven cases, which only represent those of which I possess minutely accurate notes, the grey granulations were only found alone in two. They either co-existed with caseous, or with white and soft caseous, or with soft caseous, indurated, or with soft, yellow, and caseous, or with soft and caseous matter alone, most of these being combined either with red or grey pneumonia, or with tracts of caseous infiltration. Those are the forms of the combinations of which I made notes in the eleven cases that died under my own observation. What I would insist on is, that the grey granulation of Bayle, the typical tubercle of Virchow, does not exist alone in the majority of cases of acute tuberculosis in the lungs of children; that it is almost always found with other forms of change which predominate in a large number of lungs; that the typical grey granulation is the rarer appearance of the two, and that it is often difficult to find. And what is more, I think I shall be borne out by anyone who has minutely examined these structures with the microscope, when I say that not only is the grey granulation of Bayle difficult to find under the microscope, but that what appear to be grey granulations are periarterial and peribronchial thickenings, existing also in the interalveolar tissue. In the lung-tissue proper, the grey granulation is a rare product. By the grey granulation, I allude to a body composed of minute cells, about the size of a white corpuscle, or smaller, with a nucleus smaller than the red blood-corpuscle, which in older formations are separated by a very delicate reticular network. The reticulum under a microscope with high powers, is to be found in almost all forms of tuberculosis except in the most recent granulations, and their nuclei and small cells crowd upon one another, forming a dense mass, and no reticulum can be seen. This is one point upon which I must apologise for a superficial way of treating the subject. I do not now enter into a discussion of the minuter structure of the typical tubercle, for it would require more time than remains at my disposal. A body isolated and composed of these small round cells densely massed together, sepa-

rated more or less by a reticulum, or only not separated by a reticulum because they are so densely massed, is in itself, for the moment, a typical structure of tuberculosis, with certain exceptions with which I shall have presently to deal. There are, besides, very often much larger cells, and sometimes (though those are comparatively rare in the lungs) very large cells, 1-200th or 1-300th of an inch in diameter, with many nuclei. I have never been able to isolate these cells. Virchow described them in the omentum; but I have tried in vain to isolate them in this situation. You see them occasionally in sections of the lymphatic glands; you see what I believe to be identical appearances with those that have been described in sections of the lung; but whether they are groups of nuclei growing in protoplasm or real cells, I cannot say. Between those and the tubercle, also, are various other forms of large cells. I take it, however, that the typical characteristics of tubercle in the lung are the small cells mostly of the size of the smaller cells of the lymphatic glands, commonly smaller than the white blood-corpuscle, and dense masses of apparent nuclei embedded in a reticulum, which I take to be (to express it in the terms of Dr. Lionel Beale) the formed material produced by the protoplasm or germinal matter of these cells indurating in its external margin, until finally the nucleus blends with what we used to call the cell-wall, which itself blends with the intercellular matter, so that when you break it up you can, as a rule, isolate nothing but nuclei.

To return for a moment to the grey granulations. They are hardly ever found in the alveolar structure of the lung proper. What appear to be grey granulations, are sections of a growth in the perivascular or peribronchial sheaths, or of growths in the interalveolar tissue. When you come to the alveolar tissue, the vesicular structure of the lung itself, this typical growth becomes mixed with other products. With regard to these bodies, they commonly assume a round form to the naked eyes; but in their centre and in various parts of the growth you meet with sections where you have more or less the appearance of epithelial cells, large cells which are produced from the lining of the alveoli. I believe these are the result of epithelial proliferation. As to the word "epithelial", I do not wish to dogmatise on the point whether there is an epithelial lining of the air-cells of the lung or not; but they are, I believe, the result of the proliferation of the lining membrane of the cells found in the interior of the air-vesicles, which assume that larger form, giving rise to a rapid development of nuclei, and die. Mixed with this growth, you have large tracts of reticular growth, and a dense multiplication of cells and nuclei identical in appearance with those of the most typical grey granulation, and mingling with these larger epithelial cells. The proportion between the epithelial cells and the denser nucleated growth varies in nearly every specimen of granulation that you can find in the lung in cases of acute tuberculosis. In some you may find, as in this drawing, a small zone. This represents the sheath of an artery. In the alveolar wall, growing over the sheath of the artery, is the same kind of growth. That is the most common appearance in the lungs in acute tuberculosis in children. A large number of caseous or yellow granulations owe their origin to two sets of changes. In a vast number of cases, the change is an acute caseous change in a large number of air-vesicles. There is nothing to be seen but little round caseous spots, surrounded by a more or less fibrillated material. The next most common change is due to large tracts occupied by changes identical with those before described. The air-vesicles are filled with cells, but they are separated more or less widely by a growth passing between them. Then you find intermediate stages where the interior of the air-vesicles is occupied by a caseous material, and the wall of the vesicle is occupied by a similar infiltrated growth. Lastly, in these large tracts of infiltration, you meet with one of two things (I am speaking dogmatically, as representing my own opinion). You meet with large tracts presenting the appearance last described, or with another set of changes upon which I wish for a moment to dwell. You meet with an universal thickening of the walls of the alveoli, until the interiors of the alveoli themselves are almost obliterated. You find that change where those caseous tracts are passing into tracts of grey infiltration. That thickening is again produced by means of the small cell-growth or nucleated growth similar in character, at any rate, to the softer form. Then you have small cell-growths forming infiltrations and little nodules in the sheaths of arteries and of bronchi; and you find in some cases a similar growth round the bronchioles. I do not mean the larger bronchi, which have a lymphatic sheath, according to recent observation, but those which terminate in the alveolar tissue; and the growths here form little nodular masses, which may be termed peribronchial tubercles. Lastly, that infiltration, when traced in an injected specimen, is found to be growing in an almost similar manner, occupying large tracts, and gradually occluding blood-vessels. In the network of the blood-vessels, larger masses of nuclei may sometimes be found, but the blood-vessels are gradually

obliterated. And I am inclined to think (to correct myself for a moment) that part of the reticulum of which I before spoke is, in the lung, formed of the *débris* of pulmonary capillaries between which nuclei grow. That is a mere hypothetical explanation, having little bearing on the question, except so far as that in the growth of tubercle or cell-growth vessels (as far as my observations go) disappear. The growths may be occasionally traversed by a larger vessel; they have been figured as somewhat vascular in the kidney, but usually the vessels disappear.

I have ventured to describe, as presenting similar characters, three sets of changes in the lung of acute tuberculosis. Excluding, for the moment, pneumonic infiltrations, I have described the typical grey granulation that seldom is found pure and simple in the vesicular tissue of the lung. I have described granulations composed of epithelial infiltration, which differs but little from ordinary pneumonic changes in the interior of the alveoli, but which is attended by the growth in the alveolar wall. I have also described the same thickening as occupying large tracts of lung, and proceeding to a solidification which may almost obliterate the vesicles, at the same time attended with almost complete destruction of capillary circulation. According to my observations, those have all the same structure. I have ventured to affirm that the grey granulation is not the sole essential, typical, distinguishing feature of a tubercular formation; that in the most typical acute tuberculosis you have the same kind of growth occurring in larger areas not in the form of the typical grey granulation. If these two things be separate diseases, and the one be pneumonia or scrofulous pneumonia, or caseous infiltration, then in acute tuberculosis you have either two diseases or you have one disease; and that one disease may appear in two forms, either in the grey granulation or in a wider infiltration. I rather dwell upon this point, because it appears to me one of the keystones of a great part of the present difficulty as to the question of phthisis. If tubercle be only grey granulation, its demonstrable part in the destruction of lung is small; if tubercle may be a diffused growth passing into caseous change, its part in the production of phthisis is large.

I wish also to make a few further remarks on the process of caseation. I would dwell more particularly upon preparations, where you will find large tracts completely caseous. In a large proportion of cases, this is due to a process that may be named a tubercular pneumonia, a term that I have been in the habit of applying to mean that pneumonia is complicated with a growth analogous to that existing in the granulations in acute tuberculosis. Wherever you trace this growth in the walls of the air-vesicles, the capillary circulation is found to cease, and you can even, in a non-injected specimen, see that there are no capillaries there, that the growth is occupying their place. In acute pneumonia the capillaries are still present, and that growth in the walls of the air-vesicles is not there, as far as I have observed, in a large number of specimens of acute pneumonia. This tendency seems to affect pneumonia in the presence of tubercles, or, speaking only as to facts, pneumonia in lungs in which tubercles are found, and the implication of the alveolar wall to an extent insufficient to produce the death of the tissue yet gives it a resistance, and at the same time a bloodless appearance, constituting the grey pneumonic infiltration of Bayle. This point has lately, in a recent work, been insisted on by Professor Buhl, and I had formerly come to a similar conclusion. And at this moment I must become hypothetical. The death of the part, I believe, is due to the destruction of the capillaries, which may take place slowly in the one case, or acutely in the other. In the one case you have a growth capable of further development, of which I shall have to speak in a moment, a fibroid change, and in the other destruction, depending on the acuteness of the process. I need not dwell on the question of pathology in reference to this matter. We have corroborative evidence in the fact, that new formations of rapid growth, under abnormal circumstances of irritation, have a short life in proportion to the intensity of the irritation present. I believe that the acuteness of the inflammatory process with which this tubercular growth concurs, largely determines the rapidity of the caseous change of what would proceed to an infiltration producing thickening of the wall, if the cell-growth had sufficient vitality. If the inflammatory process, the irritation (if I may venture so far on hypothetical ground), be acute, the growth dies on the first destruction of the capillary circulation. On that point, I think, hangs a great deal that we have to consider in the question of the relation of phthisis to tuberculosis. If I have not stated my point clearly enough to maintain my further proposition, my excuse must be the want of time.

The vital characters of the growth tend in two directions; in the one possibly to development, in the other to immediate death; and the immediate death takes place in a manner that is called case-

ous, because it takes place with entire arrest of capillary circulation, simultaneous with the growth. Development may take place, because we know that minute capillary circulation is not necessary to permanent tissue, even in cartilage or in large tracts of fibro-cartilage and fibrous tissue. You may in some way, which we have not ascertained, have a growth and development of tissue to a large extent extra-vascular, and it may become more or less permanent, especially among the lower forms of fibrous tissue, without the intervention of any discoverable capillarity, except from a distance. Therefore, in contradistinction to the destructive change which I have pointed out, the fibrous change may also take place. And you see in some cases shooting into tubercle (in young children, where the process has become more or less chronic in one lung while in the other it is still acute) points almost like what you see in periosteal ossification. All these tubercles, as they advance in age, are more or less encapsuled. Even in cases where in early childhood the process of tuberculisation has been more or less acute, you will see those fibres passing into tubercle. There is nothing new in this; the only difficulty is in accepting this as part of the question of phthisis. That tubercle becomes obsolescent, hard, without becoming caseous, has been known almost from the earliest days of pathology, at any rate during the present century, and was especially insisted on by Cruveilhier, who called the condition *granulations de guérison*, but the application of that question to phthisis has not been so easy in the present day. The point which I wish to lay before the Society is, that all these appearances, caseous infiltration, the mingling of pneumonic product with reticular growth, the induration of that reticular growth, the infiltration of that reticular growth through large tracts of lung which then acquire a more or less caseous appearance, all occur in the most typical forms of acute tuberculosis; and in some cases, when that infiltration occurs in previously emphysematous tissue, it gives the tissue a worm-eaten appearance. That worm-eaten appearance is almost an exact representation of one specimen that came before me, where infiltration occurred in a part that had been previously the subject of secondary emphysema.

I will now briefly dwell on two or three propositions that I have ventured to lay down as corollaries. Under what conditions do we meet with tubercle in the lung in phthisis, especially in relation to the question of inflammation? In the abstract that has been published, I stated that tubercle might occur without inflammation of the elements of the tissue in which it is developed. I think we must admit that in the liver and kidney in certain blood-states, you may have a development of tubercle as part of the signs of a general acute disease of constitutional infection, in which we find no inflammation of the part where it is found. I also stated that in many cases of acute tuberculosis the evidence is strong that you may have inflammation of the serous membranes, and no tubercle can be discovered. There is a fair percentage of recorded cases in which the pericardium, the pleura, and even the meninges, have been found without visible granulations or a sign of tubercle of any kind. In these cases, I think it is fair to believe that inflammation precedes the tuberculosis. I am speaking of these appearances as a general disease. Where you find them at a later period, you commonly find granulations superadded. You find the same thing in the intestines, namely, signs of intense catarrh without tubercle.

I regard them as being an inflammatory process antecedent to the formation of tuberculosis. But commonly you find inflammation and tubercle mixed together. At any rate, in the mucous membranes and in the serous membranes, that combination is almost constant. The only question is, what part each plays in the lung, and can we distinguish one from the other? Again in the lung, I think, as far as we know at present, the implication of the alveolar wall is the most constant and typical. Here I would beg to exclude for the moment a certain number of diseases that I have already recapitulated, bronchiectasis, simple ulcerative pneumonia, diseases proceeding from dust, syphilis of the lung, and all diseases where we may be in doubt as to the nature of the implication of the alveolar wall. Excluding those, I have not (with three exceptions) found a case of phthisis which did not present either the grey granulation or the soft granulation which I have described, or caseous changes or infiltrations, all in greater or less combination. I appeal to my own unbiassed opinion on this point, because it was my anxious wish, when I came to this country, to do something in my day and generation towards finding out a great many varieties of phthisis; and it was only after long search and inquiry that I was led to the conclusion that I have ventured to bring before the Society.

I have not given a definition of tubercle, and I am not going to give a dialectical definition: but as far as we know at present (especially if I may be allowed to refer to the researches of Dr. Sanderson), it may be regarded as a lymphatic overgrowth produced by irritation. We do

not know its origin in all parts. We do not know enough even of the tissue of the walls of the air-vesicles. Professor Buhl has said that the lining membranes of an air-vesicle is the analogue of the endothelium of the lymphatic sheath. On that point it would be difficult to give an absolute opinion. Certainly lymphatics have been traced in a sufficient number of walls of air-vesicles, to lead to the belief that lymphatic tissue must play an important part in the changes of the lung. But that is hypothetical. At any rate, you do not find tubercle most commonly in the lung. And when you give rise to irritation in cases where lymphatic irritability is excessive, under those circumstances you may get tubercle. You may therefore get it from a blood-state, in which the relation of the lymphatic change is abnormal, or you may get it locally by exciting inflammation. As to the last question, which was the great debate of Laennec and Louis, whether tubercle gives rise to inflammation, it is difficult to answer it; but I think that recent observations enable us, at any rate, to give that much answer. I have said that, generally speaking, it arises from lymphatic tissue.

As regards the older theory, that tubercle is an exudation, a deposit of caseous matter from the blood, I take it for granted that that has been abandoned. At any rate, as far as my observations go, I believe that caseous change is the result of the death of this growth. That it originates from the exudation of white corpuscles, I doubt. Certainly, on the other side, no proof has been given. This has some bearing on the question of phthisis proper, as we know it apart from tubercle. To sum up what I have said on that point, I would say that the causes of inflammation may be simultaneously the cause of tubercle; that inflammation and tubercle may arise *pari passu* in the lungs, or that inflammation once set up may give rise in its extension to a secondary growth in the alveolar wall, and that that secondary growth is the cause of ulceration.

These characters of tubercle are distinctive, but they cannot be called specific, and even for the purposes of distinction they require to be taken collectively. It would be difficult, if not impracticable, even with the microscope, to distinguish in all cases tubercle from certain growths which resemble it, such as those of leukaemia, typhoid glanders, and even some forms of inflammation. Time will not permit me to discuss the resemblance to the former. Cases where any close similarity exists between simple inflammation and tubercle, are, however, rare; and even then it is a superficial resemblance, rather than an identity of structure. The dense massing of small cells and nuclei, with an interposed reticulum, seen in tubercle, is seldom found in ordinary inflammation of other parts. The boundary line, as has been long remarked, between tubercle and inflammation cannot be accurately defined. Tubercle is the result of irritation of a particular set of tissues under certain circumstances, and we must therefore expect to find, and I believe we do find, formations which resemble it, arising under other similar but really diverse conditions of organs.

I have limited myself very much to the question of acute tuberculosis. When we come to phthisis, I would (subject to the criticisms of the Society) divide it mainly into two forms, which merge insensibly into one another—acute and chronic. The acute forms are multiple, but they are mainly characterised by yellow infiltrations, by large grey infiltrations, and grey or red infiltrations, in which white caseous spots exist. As to what is termed scrofulous pneumonia, I would put the matter in a few words. There are large caseous infiltrations, and their character is like that shown in infiltrated tubercle with thickening of the alveolar wall, or in tracts of the acuter change before described. The caseous change almost always commences in isolated spots; they are quite distinct and circumscribed from the grey infiltration, in which they occur, as shown in the drawings. In all these, there is the growth in the wall of the air-vesicle of a reticulated cell-structure that I have never with any microscope been able to distinguish from the similar growth occurring in the softer granulations of acute tuberculosis. As to the caseous change that occurs in the middle of the grey pneumonic infiltration, I would distinctly deny—and that is the only piece of controversy into which I would enter—that it is any mere inspissation of pus from accumulation in the interior of the air-vesicle. It is absolutely different from any accumulation of puriform matter that takes place in catarrhal pneumonia or in simple pneumonia. I have here a drawing by Sir R. Carswell, that shows clearly the distinction between the infiltration of simple vesicular pneumonia and the caseous spots that occur in acute tuberculosis. The part dies because the circulation is cut off by this growth, and the death is acute in proportion to the acuteness of the inflammatory processes surrounding it or accompanying it. If the infiltration set up around old tubercles, in many cases they die at once, and yield these caseous matters; but in other cases the growth

takes place simultaneously with infiltration, and caseous spots form in proportion as infiltration goes on. It is only when tuberculous growths exist in the middle of the filtration that those caseous spots occur, and the spots themselves are quite distinct from the surrounding infiltration, and are, indeed, due to a totally different process superadded, viz., a tubercular growth in the alveolar wall. To say that they are caused by a mere inspissation of pus is, I believe, a fallacy, and has led to that second fallacious theory that caseous change results solely from inspissation of catarrhal pneumonia, and that such caseous change is the origin of tuberculous. On that point, I shall have a few words to say before I conclude. There are the acuter forms—the so-called scrofulous pneumonia—in which the process is identical step by step with the majority of the processes that occur in acute tuberculosis. Chronic phthisis offers larger variations, and presents a wider field of difficulty in certain points of view. It is distinguished by the characteristics of induration of the lung, the chronicity depending on induration of these growths rather than on their acute destruction.

The typical change commences with what I have described as an indurating tuberculosis, that change by which the tubercle becomes obsolescent.

There is a preparation under the microscope to which I would call your attention. There are whole groups of granulations, in which you get tracts of tissue that are more like sections of fibro-cartilage, or tendon, than anything that can be called tubercle. You can trace the process by gradual stages, through fibre-growth into the most intense tracts of fibroid induration. These processes of induration have been lately called by German pathologists peribronchitis, periarteritis, and indurating peribronchitis. Such indurations, do not, however, usually proceed from the larger bronchi; they commence from the bronchioles by a growth identical in character with that which I have described, so that, whether peribronchitic or not, it does not alter their main character, which is that to which Virchow has given the name of peribronchitis tuberculosa.

Between the bronchioles and the alveolar tissue, in that sense, there is very little histological distinction. The disease extends indefinitely in every direction. In that sense, I venture to say, that every indurated form of phthisis, and those that I have classed in the table as chronic phthisis, come under that category of indurating tuberculosis, and are mixed with various forms of the other type. In some parts, indeed, of the lung, the induration proceeds in pneumonic tracts, in which a growth of fibre-tissue is proceeding, and to which I have before alluded. This is not strictly itself tubercular, and such indurations may, I believe, constitute transitional forms between indurating tubercular phthisis and indurating pneumonia. They are, however, excessively rare except in the presence of the growths which I include under the category of tubercles.

One word about the origin of phthisis. I have already spoken of the question of pneumonia, and I shall say no more upon that point; but we have lately had some very dogmatic assertions as to the origin of phthisis from pneumonia, scrofulous bronchitis, and scrofulous pneumonia, so dogmatic, that one is almost surprised that more of it is not seen. It is rarely you can see a commencing disease of the lung that terminates in phthisis; you only get certain forms of induration. I have seen one case of phthisis, and one of acute tuberculosis, after parturition, and in both there was grey pneumonia, with soft granulations. The argument from the later stages is the only one possible to us. The point on which I would more especially insist, as giving a harmony that has been lately broken in our idea of phthisis, is that a similar growth attends all destructive changes, whether it be in granulation, or whether it be in filtration.

The discussion was adjourned to the next meeting of the Society.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM A SPECIAL CORRESPONDENT.]

Session of the Faculty of Medicine.—Monstrosity.—Health of M. Thiers.—Mortality in Paris.

THE winter session closed on Saturday the 15th instant; and the Summer courses commenced on the 17th at the Faculty of Paris. The following is a list of the professors, with the subjects of the lectures for this session: M. Baillou, Natural History; M. Béclard, Physiology; M. Charcot, Pathological Anatomy; M. Trélat, Surgical Pathology; M. Tardieu, Forensic Medicine; M. Regnaud, Pharmacology; M. Guéniot, acting for M. Pajot, Obstetrics and Diseases of Women and

Children; M. Vulpian, Comparative Pathology; M. Hardy, Medical Pathology; M. Bouchardat, Hygiene; M. Gubler, Therapeutics and Materia Medica; M. Bouchard, acting for M. Bouillaud, Clinical Medicine at the Charité; M. G. Sée, Clinical Medicine at the Charité; M. Béhier, Clinical Medicine at the Hôtel-Dieu; M. Lasègue, Clinical Medicine at La Pitié; M. Richet, Clinical Surgery at the Hôtel-Dieu; M. Gosselin, Clinical Surgery at La Charité; M. Verneuil, Clinical Surgery at La Pitié; M. Broca, Clinical Surgery at the Hôpital des Cliniques; M. Depaul, Clinical Obstetrics at the Hôpital des Cliniques. Supplementary Clinical Lectures: M. H. Roger, Diseases of Children; M. Panas, Ophthalmology; M. Fournier, Syphilitic Diseases; M. Grimaux, Chemistry.

The following new appointments have taken place in the professorial staff of the School of Medicine in Paris. M. Lozain is appointed Professor of the History of Medicine; M. Lefort, Professor of Practical Surgery; and M. Charcot, Professor of Pathological Anatomy.

The monster birth noticed in the JOURNAL of the 8th instant, reminds me of one exhibited by M. Houel at the last meeting of the Academy of Medicine. M. Houel's monster, which was still-born, was composed of two heads with the faces in the normal position, two trunks united by the pelves, and four legs. Both the subjects belonged to the female sex, as M. Houel discovered that each had its own genital organs, though in rather a rudimentary state; and the specimen was classed among the Ischiopagi, the first division of the Monomphalians described by Isidore Geoffroy Saint-Hilaire.

The health of M. Thiers, the President of the French Republic, is perfectly restored, and he has been on a visit to Paris, where, on Saturday last, he held a reception and returned immediately to Versailles.

There has been a marked decrease in the mortality amongst the Parisians for the week ending March 14th; but that from diphtheria, croup, and pulmonary affections continues rather high. Erysipelas is also on the increase, and is epidemic in some hospitals.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Medical Institution.—Cases of Diseased Heart.—Cardiac Aneurism.—Abscess of Liver.—Prolapsus of Gravid Uterus.—Tattooing the Cornea.—Epilepsy Treated by Sulphate of Zinc.

AT a recent meeting of the Medical Institution, the following cases and specimens have been brought forward.

Dr. Dickinson exhibited the heart from a male patient, admitted to the Northern Hospital, suffering from dyspnoea and anasarca, with albuminous urine. A loud systolic murmur was heard at the apex. There was no history of rheumatism. The heart was enlarged, weighing 1 lb. 8 oz. The mitral valve was hard and calcareous, and its opening much narrowed. The kidneys and lungs were congested.—Dr. Dickinson also showed the heart from a boy aged 15, a small feeble lad, who had never had rheumatism. Anasarca had existed for four weeks previously to admission. There were increased transverse dulness, loud systolic murmur at the apex, and signs of aortic disease. He improved under the use of digitalis, and was sent out from the hospital relieved; but came back in a short time, and was again discharged relieved. On admission the third time, the symptoms were intensified, and a loud double aortic murmur was heard. After death, the pericardium was found adherent, the aorta much narrowed, and the mitral valve diseased.

Dr. Dickinson exhibited also a specimen of cardiac aneurism from a man who had fainted at his work, and was brought to the Northern Hospital complaining of pain in the region of the heart and dyspnoea. He left in a few days quite relieved; but, the symptoms shortly recurring, he was readmitted, and died. The pericardium was found distended with blood. There was a small aneurismal tumour on the left ventricle, formed by a portion of the endocardium; the coronary artery had given way, apparently from pressure of the aneurism.—He showed also the liver from a man who had suffered for twelve months with dysentery and diarrhoea. On admission to the Northern Hospital, a large fluctuating tumour was found in the left hypochondrium; but, owing to the depressed condition of the patient, no operative procedure was deemed desirable. After death, the liver was found disorganised, and the seat of an abscess containing 1½ lb. of pus.

Mr. Higginson narrated a case of prolapse of the gravid uterus. The patient was 32 years old, multiparous. Complete prolapsus of the womb occurred at the fifth month. It was reduced, and Hodge's pessary applied, which was frequently expelled, and partial prolapse recurred. At the seventh month, complete prolapse again occurred, and there was a considerable discharge of liquor amnii. The uterus was

again replaced and supported by a large ring-pessary, which acted well. Labour occurred at the eighth month, and was completed satisfactorily.

Mr. T. Shadford Walker read a paper on the operation of tattooing for the removal of the denser opacities of the cornea. The instruments used were either a sharp grooved needle with a point like an unribbed pen, or a number of fine needles: the former was preferable when the opacities were small and well defined; the latter when they were extensive and irregular. The pigments used were—for the pupil, Indian ink, lamp black, and nitrate of silver; for the iris, ultramarine, burnt sienna, etc. They should be mixed as thickly as possible, so as to flow slowly from the pen or needles. The eyeball being fixed and the instrument held obliquely, the operator pricks the surface of the nebulae, beginning at the lower border, and not puncturing deeper than the anterior laminae of the cornea. The pigment should then be rubbed in, all tears being carefully removed by an assistant. No dressings are required. The operation causes little pain, and very slight subsequent irritation. Several persons were exhibited to the meeting on whom Mr. Walker had performed the operation with very satisfactory results.

Dr. Oxley related a case of the successful treatment of epilepsy by sulphate of zinc, where bromide of potassium had failed. The girl, aged 10, in good health, had three or four fits in a day. Bromide of potassium, in ten- and afterwards twenty-grain doses, three times a day, had no effect. Sulphate of zinc, in doses of three grains three times a day, was given. She had one slight fit, after which she was free for several days, when the fits returned. The medicine was renewed, and the fits entirely left her. Dr. Oxley had never before seen sulphate of zinc of any service in epilepsy, but bromide of potassium had proved very beneficial.

CORRESPONDENCE.

EXCISION OF THE KNEE.

SIR,—Some modification is required of statements made in your JOURNAL, and at the Royal Medical and Chirurgical Society, with regard to excisions done by myself. I have not yet excised a knee for pure rheumatic arthritis. It is true that in one case in which I excised for necrosis of the tibia and secondary synovial mischief, it was thought that a rheumatic element was superadded; the cartilages, where not absorbed, were in places somewhat velvety and fibrous, and some slight rheumatism was complained of in other joints. But the operation was done for expected, and subsequently shown, disease of the tibia. The bone-mischief was the principal mischief; the rheumatic changes were unimportant. The account of this interesting case is in the third volume of *St. Thomas's Hospital Reports* (Treatment of Diseased Joints, Case 8). It occurred in a woman aged only 32. She had previously been the subject of several bone-affections (caries and necrosis). It has not fallen to my lot to excise the knee of any patient above the age of 34. For accuracy's sake, it should also be stated that *eleven*, not *eight*, cases of knee-joint incision are described by me in this year's *St. Thomas's Hospital Reports*.—I am, etc.,

St. Thomas's Street, Southwark.

SYDNEY JONES.

THE ADMINISTRATION OF ETHER IN AMERICA.

SIR,—I have read with peculiar interest the letter written by Mr. C. Tomes about the administration of ether in the Massachusetts General Hospital. A few weeks ago, I had an opportunity of being present during operations at the same hospital. Mr. Tomes' description presents a faithful account of what I myself saw there: there was the same treatment of the patients and the same absence of fear as to the result. At my visit, a case of double hare-lip was operated upon. The patient was, I should say, over 20 years of age. He was sitting upright in Dr. Bigelow's chair all the time; and when I last saw him he was still sitting there, but placed on one side to make room for another case. In another instance a very muscular man had a dislocation of the shoulder-joint. He was carried into the theatre, not on a stretcher, but in the arms of a porter—the right arm being placed under the patient's knee, and the left across the back under the axilla, the effect being nearly to double up the patient. The man was first placed on a chair and manipulation tried; he was then laid flat on the floor and the foot in the axilla tried; this also failed, when I think two other positions were resorted to before reduction was effected. This was one case at least in which manipulation failed, and that, too, in the hands of so successful an operator as Dr. H. J. Bigelow. But the remarkable points were the freedom with which the patient was handled and moved about, and the persistence with which the ether was administered. Only

once during the whole time was the pulse felt. As to Mr. Tomes' parallel between the asphyxial lividity he saw during the administration of ether and that under the nitrous oxide, I think he is quite right. But it seemed to me that under ether there was greater venous engorgement, and that the conjunctiva was injected in a way I have not seen under the influence of the gas. In the case of the ether, however, this state passes away, while I have never seen it pass off under the gas till the administration was altogether abandoned.

I may say that in the matter of restlessness there are degrees, and that the second case I saw passed into insensibility with scarcely a struggle—a result which rather surprised me, considering the reckless wholesale manner in which the drug was administered.

I am, etc.,

J. SMITH TURNER.

A SURGICAL LATHE.

SIR,—Dentists are now very generally employing an instrument constructed upon the principle of foot-lathe, for removing the carious portions of a tooth preparatory to filling it. The arrangements by which the various movements of the instrument are accomplished are admirable, and reflect the greatest credit upon the inventor, Dr. Morrison, an American dentist. Feeling sure that such an instrument might be employed most advantageously in many surgical operations, I am desirous of calling the attention of the profession generally to it. It is very portable, being easily lifted by one hand, and not liable to get out of order. It might be used with the greatest advantage in several operations. In drilling through bones for the purpose of inserting wires or wiry-pegs, it would perforate the thickest bone in the body with the greatest ease in a very few seconds. It might be used for liberating portions of necrosed bone by sawing away those portions of new bone which impact the former; and if made rather stronger than it now is for dental purposes, it could readily carry a circular saw applicable for amputations, the excision of joints, ivory exostoses, etc. The instrument may be seen shortly at Mr. Rutherford's dental depôt, Poland Street. There being a great demand for it, the agent is at present out of stock.

I am, etc.,

ALFRED COLEMAN.

32, Old Burlington Street.

MODIFICATION OF THE STOMACH-PUMP AS AN ASPIRATOR.

SIR,—Some time ago, I suggested that the stomach-pump might, with some small additions, be used also as an aspirator. Messrs. Louis Blaise and Co., of St. James's Street, who carried out my ideas, inform me that many London practitioners have, since then, availed themselves of the opportunity of thus possessing this instrument by the outlay of only a few shillings. As it has in all cases been found perfectly efficient, I am induced to trouble you with this communication, in order that practitioners in the provinces, amongst whom your JOURNAL has so wide a circulation, and many of whom are not in a position to make any large outlay, may be enabled to provide themselves with an instrument which has now become indispensable to a surgeon. In conclusion, I have to thank Mr. H. Debenham, of Presteign, for the important addition which he has suggested, of a small piece of glass tubing placed a short distance from the needle, thus enabling the operator to see at once the character of the fluid that he is extracting. I have also myself, as an extra precaution against the introduction of air, placed a small stopcock immediately above the needle. This should be closed before the needle is inserted, and not opened till the air in the elastic tube and syringe is exhausted.

I am, etc., A. GODRICH, M.A. Cantab., M.R.C.S.

140, Fulham Road, Brompton, March 13th, 1873.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

SOUTHPORT.—The town of Southport, the deplorable condition of the sewage system of which we have already described, has been lately engaged in devising the best means of carrying out the Public Health Act, and of improving its sanitary condition. By a meeting of the Chairman of Committees and of the Sanitary Authority, it was resolved to recommend the Council to appoint a medical officer of health, with a salary of £300 *per annum*. This extraordinary extravagance for sanitary purposes was, however, not approved of by the town; and a

deputation waited on the Mayor, at a meeting of the General Purposes Committee, to petition him to call a public meeting if the Committee should decide to give a salary of £300 *per annum*. It was also suggested that the offices of medical officer and nuisance-inspector should be combined, and that the Government Local Board should pay part of the salary. Government control was, however, considered by the meeting to be undesirable; and it was finally resolved to appoint a medical officer of health at a salary of £100 a year, and that he should not be required to devote the whole of his time to the duties of the office.

ORMSKIRK.—It was resolved at the last meeting of the Guardians to form Burscough, with an acreage of 6,827, into one district, and to appoint a medical officer of health with a salary of £15 *per annum*—the officer finding all medical and surgical appliances. Another district was formed with an officer of £30, and with the same conditions.

RIPON.—Mr. Thomas Collier has been appointed Medical Officer of Health for the Rural Sanitary District of Ripon, at a salary of £150.

WEST BROMWICH.—Mr. John Manley has been appointed medical officer of health for West Bromwich, with a salary of £50. The area of the district is 5710 acres; and the population in 1871 was 47,908.

OBITUARY.

JAMES WALSH, M.D., STAFF-SURGEON, ROYAL NAVY.

DR. WALSH, who was a native of Limerick, entered the medical service of the Royal Navy in 1838. He was assistant-surgeon of the *Zebra* at the siege of St. Jean d'Acre. After the taking of Acre, Dr. Walsh visited the Holy Land, and at Jerusalem was created a Knight of the Holy Sepulchre, being invested with the sword and spurs of Godfrey de Bouillon. He subsequently served on the North American and West Indian stations; and was afterwards promoted to the rank of surgeon, and appointed to the coast of Africa. Fever breaking out on the station, his exertions in its treatment were so successful that he did not lose a single man. On this occasion, he was presented by the crew of his ship with a cocked hat, sword, and epaulettes as "a token of their respect." During the war in the Crimea, he served with the Royal Marines as the senior-surgeon on shore. For his services, he received Her Majesty's medal with two clasps (Balaclava and Sebastopol), and the Sultan's medal, and was also made a Knight of the Legion of Honour by the Emperor of the French. After serving for three years as surgeon of the receiving ship at Greenwich, he was made staff-surgeon. He retired from the service in April, 1870.

Dr. Walsh was a licentiate of the Royal College of Physicians of London, a member of the Royal College of Surgeons of England, and a Doctor in Medicine of the University of St. Andrew's. He died recently in Limerick, of abscess of the ear affecting the membranes of the brain.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 13th, 1873.

Conolly, Stephen Fullom, Bradford
Cookson, Hugh Alexander, Stowmarket
Grindrod, Charles Frederick, Malvern
Palmer, Frederick John Morton, Old Kent Road
Shapley, Harry Thomas, Torquay
Todd, William Hurford, Whitechapel

The following gentleman also on the same day passed his primary professional examination.

Johnstone, C. R., St. Mary's Hospital

As Assistants in compounding and dispensing medicines.

Adams, Richard, Market Drayton
Ekins, Arthur Edward, Malden, Essex

MEDICAL VACANCIES.

THE following vacancies are announced:—

AXMINSTER UNION, Devonshire—Medical Officer for the Kilminster District: £12:8:4 *per annum*.

BASINGSTOKE URBAN SANITARY DISTRICT—Medical Officer of Health and Analyst: £60 for one year.

BISHOPS STORTFORD, Buntingford, Hertford, Royston, and Ware Rural Sanitary Districts, and Bishops Stortford Urban Sanitary Districts, combined—Medical Officer of Health: £700 *per annum*. Applications to Thomas Sworder, Esq., Hertford.

BRACKLEY UNION, Northamptonshire—Medical Officer and Public Vaccinator for District No. 4: £60 *per annum*, and fees.

BLEAN, Bridge, East Ashford, Eastry, Elham, West Ashford, and Thanet Rural Sanitary Districts, and Dover Urban Sanitary District, combined—Medical Officer of Health: £800 *per annum*. Applications to Allen Fielding, Esq., Canterbury.

BRADFORD (Yorkshire) FEVER HOSPITAL—Physician.

BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.—

Surgeon.

CARMARTHEN INFIRMARY—House-Surgeon: £100 *per annum*, lodging, coal, and candles. Applications to H. Howell, Secretary.

CLITHEROE UNION, Lancashire—Medical Officer for the new Workhouse and Infirmary: £20 *per annum*.

COCKERMOUTH RURAL, and Cockermouth, Keswick, and Workington Urban Sanitary Districts—Medical Officer of Health: £400 *per annum*.

COLCHESTER URBAN SANITARY DISTRICT—Medical Officer of Health: £150 *per annum*.

DRIFFIELD UNION, Yorkshire—Medical Officer for the Driffield District: £16 *per annum*.

ESSEX COUNTY GAOL, Chelmsford—Medical Officer.

GALWAY UNION—Apothecary to the Workhouse and the Galway Dispensary: £70 and £30 *per annum*, and furnished apartments. Applications to Thomas Stack, Esq., Galway.

GLOUCESTER, Chepstow, Dursley, Chipping Sodbury, Thornbury, Cirencester, Tetbury, and Westbury-on-Severn Rural Sanitary Districts, and Awre, Cirencester, Kingsholm St. Catherine, Newnham, Tetbury, and Westbury-on-Severn Urban Sanitary Districts, combined—Medical Officer of Health: £600 *per annum*, and £200 *per annum* for expenses. Applications to L. G. Hubert Mayer, Esq., Gloucester.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Two Resident Clinical Assistants.

KILDALTON IN ISLAY—Parochial Medical Officer: £70 *per annum*, and £60 *per annum* from another source. Applications to Colin Hay, Esq., Ardbeg, Port Ellen, Islay.

LEEDS—Public Analyst: £100 *per annum*. Applications to C. A. Curwood Esq., Town Clerk.

LEXDEN and WINSTREE RURAL SANITARY DISTRICT—Medical Officer of Health: £200 *per annum*.

LOUGHREA UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bullaun Dispensary District: £100 *per annum*, and fees. Applications to James Wallace, Esq., Cahcitinny, Loughrea.

MANCHESTER ROYAL EYE INFIRMARY—House-Surgeon and Secretary: £50 *per annum*, to commence, board, lodging, and wrshing.

NEW FOREST UNION—Medical Officer for the Fawley and Exbury District: £46 *per annum*.

NOTTINGHAM DISPENSARY—Assistant Resident Surgeon: £140 *per annum*, furnished apartments, coal, and gas.

NUNEATON UNION, Warwickshire—Medical Officer for the Nuneaton District: £55 *per annum*.

PERTH COUNTY and CITY INFIRMARY—House-Surgeon.

ST. MARYLEBONE—Dispenser to the Southern Dispensary, East Street: £80 *per annum*, furnished apartments, coal, and gas.

ST. MARY'S HOSPITAL, Quay Street, Manchester—Honorary Surgeon.

SHERBORNE UNION—Medical Officer for the North East District: £40 *per annum*, and fees.

SUNDERLAND GENERAL INFIRMARY and DISPENSARY—Junior House-Surgeon: £80 *per annum*, board, lodging, and washing.

WESTMINSTER HOSPITAL MEDICAL SCHOOL—Lecturer on Botany. Applications to George Cowell, Esq., the Acting Dean.

WEST LONDON HOSPITAL, Hammersmith—House-Surgeon.

WESTMINSTER HOSPITAL—Surgeon.

WEST SUSSEX, etc., INFIRMARY, Chichester—House-Surgeon: £80 *per annum*, board, lodging, and washing.

WETHERBY RURAL SANITARY DISTRICT—Medical Officer of Health: £120 *per annum*. Applications to James Coates, Esq., Wetherby.

WHARFEDALE RURAL SANITARY DISTRICT—Two Medical Officers of Health: £50 *per annum* each. Applications to C. J. Newstead, Esq., Otley.

WISBECH RURAL SANITARY DISTRICT—Medical Officer of Health: £160 *per annum*.

WITHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £150 *per annum*. Applications to J. Howell Blood, Esq., Witham.

WOOLWICH UNION—Medical Officer to the Workhouse.

WORCESTER AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Medical Officer: £170 *per annum*, and residence. Applications to C. J. Richards, Esq., 5, Lansdowne Villas, Lansdowne Road, Worcester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

SMITH.—On March 16th, at 18, William Street, Regent's Park, the wife of *Walter Smith, L.R.C.P.Ed., of a son.

TERRY.—On March 14th, at Newport Pagnell, the wife of *Charles Terry, Esq., Surgeon, of a daughter.

DEATHS.

BUDD, John Wreford, M.D., late Fellow of Pembroke College, Cambridge, George Street, Devonport, on March 11th, aged 69.

MUNRO, A. D. N., M.D., at Weston House, Cupar, Fife, on March 15th.

At the annual meeting of governors of the South Staffordshire General Hospital, the hospital was renamed the "Wolverhampton and Staffordshire General Hospital."

BEQUEST.—Under the will of Mrs. Robinson, of Elterwater Hall, Ambleside, the residue of her personal estate, probably amounting to £200, has been bequeathed to the Devonshire Hospital and Buxton Bath Charity.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAYSt. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Vandyke Carter, "On the Pathology of Leprosy"; Mr. Barwell, "Case of Amputation at the Hip."

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Christopher Heath, "A Case of Recto-vesical Fistula in the Female treated successfully by Operation"; Dr. Ogle, "A Case of Acute Rheumatism, with Pericarditis and Extensive Effusion"; Dr. Headlam Greenhow, "Case of Muscular Tumours and Phlebitis, with Plugging of Veins of both Legs, in a patient the subject of Constitutional Syphilis."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

In reply to several correspondents, we have to regret our inability to answer questions by private letter.

DR. FOSTER (Birmingham).—Many thanks for the documents.

DR. THOMPSON DICKSON.—There would, we fear, be little probability of meeting our correspondent's wish for some time to come.

DR. TUKE (Cupar).—Many thanks. Of course, only really good matter is desired; and we are greatly obliged for the trouble taken in removing away the chaff.

MR. HODGSON (Brighton).—Many thanks.

COUNTER-PRACTICE AND COUNTER CONFERENCES.

MR. SANDFORD writes: You say in your article of the 15th instant, in remarking on my letter published in your JOURNAL of the same day, "Mr. Sandford...seeks to maintain his position by slightly shifting it." I think that, instead of shifting *my* position, I caused you to shift *yours*. You inferred in your former article that the "listening to the description of bodily ailments over our shop-counters" must naturally be for the purposes of "counter-practice"; and when I, for myself, utterly repudiated such practice and told you why I was sometimes compelled so to listen, you, "with wondrous force of strong imagination," scented a new evil to arise from "the mysteries of a Piccadilly chemist's shop"—pecuniary mischief to one physician whom I might happen to prefer to another! I thank you for warning me of the danger of injuring my neighbour in which I stand; but your suggestion that what is done by me in the capacity of a "Medical Directory," "should be done a little more in the daylight," is an insinuation of conduct which I defy you or any physician in London to substantiate against me. Although the trade of a chemist is only collaterally connected with the profession of a physician, I, as a member of that trade, have always had too high a respect for the head of the family and my own position to be tempted into slimy paths in which a man need shun daylight.

* * * Our correspondent should blame himself, not us, if there be any cause for the irritation which the ill-bred wording of this letter betrays. The information, both as to counter-practice and as to the prevalence of counter-conferences, was derived wholly from his letters, and the passages were quoted. We had throughout a strong suspicion that Mr. Sandford's practice was better than his preaching; and his indignation at the insinuation that the two might coincide is no doubt real. In that case, it was his argument which was founded on a fictitious basis. Obviously, however, we could not assume that Mr. Sandford was otherwise than earnest in his facts as well as in his opinions. His own sufferings on this occasion may perhaps teach him to show more justice and compassion, as well as "gallantry" to the weaker sex on another.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

MR. WALKER (Norwich).—The question has been referred to Mr. Benson Baker, who is experienced in such matters.

"THE MEDICAL LIST."

SIR,—Some time since, I noticed that the subscriptions to this work were to be returned. I should like to know if any subscriber has received his six shillings back, because I have not. I believe the editor or proprietor is M.D., a Member of the London College of Physicians. I am, etc.,

ONE TRULY RURAL.

DR. J. O. BROOKHOUSE (Nottingham).—The paper shall appear in an early number.

PSYCHOLOGICAL COUNTER-CONFERENCES.

A CASE of alleged kleptomania was recently tried at Huddersfield. The principal witness was a Mr. Jones, a chemist and druggist, apparently given to "counter-conferences", who stated that he had treated the prisoner for an affection of the head, having supplied him with medicine many times; and he thought it extremely likely that a man—say the prisoner—might have committed an offence of the nature described without actually knowing at the time he did it that he was doing wrong. But he admitted, in reply to the magistrates, that during the whole of his experience of thirty years he had not known such a case. The magistrates, after considering the case very carefully, came to the conclusion that the evidence of Mr. Jones was not sufficiently strong to show that the prisoner committed the act in a fit of kleptomania; and they therefore sentenced him to twenty-one days' imprisonment.

L.R.C.P. LOND.—There is no *membership* of the College of Physicians in Ireland. The *licentiate* of that College is the equivalent of the *member* of the Colleges of London or Edinburgh.

CHEAP AND READY VAPOUR-BATHS.

A RETIRED army medical officer will find that very cheap and effective vapour-baths can be procured from most instrument-makers on the model of the Malvern Bath. Hawksley and Blaise and Co. have specially convenient forms. For cheap and readily improvised vapour-baths for the very poor, a red-hot brick with a little water sprinkled on it, or placed on it in a shallow pannikin, is the simplest. Perhaps, however, some of our readers can suggest to an army medical officer cheap and ready ways of constructing a vapour-bath.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, March 15th; The Manchester Guardian, March 19th; The Aberdeen Daily Free Press, March 15th; The Bath Express, March 15th; The Birmingham Daily Post, March 17th; The Constitution, or Cork Advertiser, March 14th; The Newcastle Daily Journal; The Eastern Morning News and Hull Advertiser; The North of England Advertiser; The Bedfordshire Times; etc

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Dr. R. Liveing, London; Dr. Smart, Penge; The Secretary of the Clinical Society; Mr. J. W. Langmore, London; Dr. C. Handfield Jones, London; Mr. A. B. R. Myers, London; Dr. Tuckwell, Oxford; Dr. J. Crichton Browne, Wakefield; Dr. Lauchlan Aitken, Rome; Mr. Davy, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. John Ford Anderson, London; The Secretary of the Royal Medical and Chirurgical Society; Dr. J. H. Aveling, London; Our Dublin Correspondent; Dr. Graily Hewitt, London; The Secretary of the Devonshire Hospital, Buxton; Dr. Harris, Redruth; Mr. A. Godrich, London; Mr. Wickham Barnes, London; Dr. Skinner, Liverpool; Dr. Balthazar Foster, Birmingham; Mr. MacCormac, London; Dr. Wilson Fox, London; Mr. J. S. Turner, London; Dr. Moxon, London; Mr. Adams, Bungay; Dr. Finlay, Helensburgh; Mr. V. Jackson, Wolverhampton; Dr. Russell, Glasgow; Our Paris Correspondent; Mr. Haviland, London; Mr. Sims, Cheshunt; Mr. Walter Smith, London; Mr. Riley, Salford; Mr. Cowell, London; Our Birmingham Correspondent; Mr. Collier, Ripon; Our Glasgow Correspondent; Mr. Poole, London; Dr. Cayley, London; Mr. Clover, London; Dr. Glascott, Manchester; Mr. E. T. Payne, London; Dr. T. H. Redwood, Rhymney; Mr. Musgrave, Cockermouth; Dr. F. J. Brown, Rochester; Dr. Batty Tuke, Cupar, Fife; Dr. Grimshaw, Dublin; Dr. D. R. Haldane, Edinburgh; Dr. Thompson Dickson, London; Mr. F. S. Moger, Carshalton; Dr. J. W. Moore, Dublin; Mr. R. B. Cuffe, London; Mr. A. W. Stocks, Salford; Mr. John Starling, Kensington; Dr. P. J. Molony, Waterbeach; Dr. Franklin Parsons, Beckington; Mr. Hickinbotham, Birmingham; Dr. A. Meadows, London; Mr. Chesshire, Birmingham; Mr. D. Dalrymple, M.P., London; Dr. Hinds, Birmingham; Dr. Seguin, New York; Mr. O. Wood, Cupar Fife; Dr. H. L. Snow, Shrewsbury; Mr. Manley, West Bromwich; Dr. Marshall, Clifton; etc

CROONIAN LECTURES

ON

MIND, BRAIN, AND SPINAL CORD,

IN CERTAIN MORBID CONDITIONS.

Delivered at the Royal College of Physicians, March 1873.

By C. B. RADCLIFFE, M.D., F.R.C.P.,

Physician to Westminster Hospital, and to the National Hospital for the Paralysed and Epileptic: etc.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—In the present lecture, my subject will be speculative rather than practical, and yet not altogether without practical bearings; in the two lectures which follow, I intend to be practical enough—so practical as to make amends for all my shortcomings in that respect now. The actual plan pursued will be to speak, in turn,—on Mind,—on Incipient Insanity,—on a state which is at the bottom of hysteria, hypochondriasis, and other disorders of the nervous system, and to which I propose to give the name of Neuriasis,—on Cerebral Exhaustion,—and on Spinal Exhaustion. The present lecture will be wholly given to the first-named subject; the remaining subjects will be dealt with in the second lecture and in the third.

CONCERNING MIND.

I find it difficult to sympathise with the disposition to materialise mental phenomena which is so much in accordance with the spirit of the times—the *Zeitgeist*. I cannot bring myself to believe that mind is resolvable into a function of brain—into mere cerebration; and the more I reflect upon the subject, the more I am indisposed to accept this materialistic view. If I reflect, for example, upon the workings of *memory*, before long I find myself regarding them from a spiritualistic rather than from a materialistic point of view; and, do what I will, I cannot prevent myself from coming to the conclusion that mind must have its foundation, not in matter, but in spirit, or rather in a central something underlying both matter and spirit. In the limited time at my disposal, it is of course impossible to say much to the purpose upon so wide a subject as mind. At most, indeed, all that is possible is to make a few comments and suggestions, and leave them to their fate without making any serious attempt to fight for them; and what I now propose to do is simply this and no more, taking *memory* as my text.

Coleridge, in his *Biographia Literaria* (vol. ii, p. 112), relates the case of a girl in which is to be found a very cogent proof that there is something imperishable in memory. “This case,” he says, “occurred in a Catholic town in Germany a year or two before my arrival in Göttingen, and had not then ceased to be a frequent subject of conversation. A young woman of four or five and twenty, who could neither read nor write, was seized with a nervous fever, during which, according to the asseverations of all the priests and monks of the neighbourhood, she became *possessed* by a very learned devil. She continued incessantly talking Latin, Greek, and Hebrew, in very pompous tones, and with most distinct enunciation. This possession was rendered more probable by the known fact that she was a heretic. Voltaire humorously advises the devil to decline all acquaintance with medical men, and it would have been more to his reputation if he had taken this advice in the present instance. The case had attracted the particular attention of a young physician, and by his statement many eminent physiologists and psychologists visited the town, and made cross-examination on the spot. Sheets full of her ravings were taken down from her mouth, and were found to consist of sentences, coherent and intelligible each for itself, but with little or no connection with each other. Of this, however, a small portion only could be traced to the Bible; the remainder seemed to be in the Rabbinical dialect. All trick or conspiracy was out of the question. Not only had this young woman ever been a harmless, simple creature, but she was labouring under a nervous fever. In the town in which she had been resident for many years as a servant in different families, no solution presented itself. The young physician, however, determined to trace her past life step by step; for the patient herself was incapable of returning a rational answer. He at length discovered a place where her parents had lived; travelled thither, found *them* dead, but an uncle surviving, and from him learnt that the patient had been charitably taken by an old Protestant pastor at nine

years old, and had remained with him some years, even to the old man's death. Of this pastor the uncle knew nothing but that he was a very good man. With great difficulty, and after much trouble, our young medical philosopher discovered a niece of the pastor's, who had lived with him as a housekeeper, and had inherited his effects. She remembered the girl; related that her venerable uncle had been too indulgent, and could not bear to hear her scolded; that she was willing to have kept her, but that after her patron's death the girl herself refused to stay. Anxious inquiries were then, of course, made concerning the pastor's habits, and the solution of the problem was soon obtained. For it appeared that it had been the old man's custom for years to walk up and down a passage in his house into which the kitchen door opened, and to read to himself, with a loud voice, out of his favourite books. A considerable number of these were still in the niece's possession. She added that he was a very learned man, and a great Hebraist. Among the books were found a collection of Rabbinical writings, together with several of the Greek and Latin fathers; and the physician succeeded in identifying so many passages with those taken down at the young woman's bedside, that no doubt could remain in any rational mind concerning the true origin of the impressions made upon her nervous system.”

“This authenticated case,” continues Coleridge, “furnishes both proof and instance that reliques of sensation may exist for an indefinite time in a latent state in the very same order in which they were originally impressed, and contributes to make it even probable that all thoughts are in themselves imperishable; and that if the intelligent faculty should be rendered more comprehensive, it will require only a different and apportioned organisation—the body *celestial* instead of the body *terrestrial*—to bring before every human soul the collective experience of its whole past existence. And this—this, perchance, is the dread book of judgment in whose mysterious hieroglyphics every idle word is recorded! Yea, in the very nature of a living spirit, it may be more probable that heaven and earth shall pass away than that a single act—a single thought—shall be loosened or lost from that living chain of causes, to all whose links, conscious or unconscious, the free-will, our only absolute *self*, is co-extensive and co-present.”

As bearing directly upon these remarks of Coleridge, De Quincy also says: “I was once told by a near relative of mine (a woman of masculine understanding and unimpeachable veracity) that, having in her childhood fallen into a river, and being on the very verge of death, but for the assistance which reached her at the last critical moment, she then saw her whole past life, clothed in its forgotten incidents, arrayed before her as in a mirror, not successively, but simultaneously; and that she had at the same time a faculty developed as suddenly for comprehending the whole and every part. This, from some opium experiences, I can believe. I have, indeed, seen the same thing asserted twice in modern books, and accompanied by a remark, which is probably true—viz., that the dread book of account which the Scriptures speak of is, in fact, the mind itself of each individual. Of this at least I feel assured, that there is no such thing as ultimate *forgetting*; traces once impressed upon the memory are indestructible. A thousand accidents may and will interpose a veil between our present consciousness and the secret inscriptions on the mind. Accidents of the same sort will also rend away this veil. But alike, whether veiled or unveiled, the inscriptions remain for ever: just as the stars seem to withdraw before the common light of day, whereas, in fact, we all know that it is the light which is drawn over them as a veil; and that they are waiting to be revealed whenever the obscuring daylight itself shall have been withdrawn.”

Instances pointing to the same conclusion might readily be multiplied, but the two which I have culled from the pages of these classical writers are of themselves sufficient to make it much more than probable that the records of memory are indelible, that it is the power of reading the obscurer passages which is alone wanting now, and that this power will not always be wanting. And if this be so—and that it is so is to me a conviction not less certain than that which testifies to my own existence—then memory becomes altogether unintelligible, unless it be supposed that the mind of which it is a faculty has its foundation, not in perishable and ever-perishing brain, but in something, perhaps a *spirit*, of which *imperishability* may be an attribute.

There is also good reason to believe that the records of memory are not all preserved *within* the body—that some of them have been noted down elsewhere. The knowledge of identity, by which a thing once seen is recognised as having been seen, is a reason for believing that this thing retains in itself some mark by which it can be recognised. Without such mark any knowledge of identity, any act of recognition becomes impossible, inasmuch as every fresh impression of the same thing must strike upon the mind as something new and different. To me, indeed, the knowledge of identity which is involved in the act of

recognition is in itself, and by itself, a conclusive proof that the records of memory are not all kept in the ganglionic brain-cells—that some of them are to be found elsewhere; nay, it even suggests the idea that these latter may be the originals of which the former are only copies at most, copies, too, which may perhaps be dispensed with. For, after all, if mind be a spirit, what is *within* and what is *without* in relation to it? If heaven be *within* me—and I cannot doubt the authority for so believing—then surely the world in which I live is not beyond me. And if mind be a spirit, this idea is not altogether unintelligible; for spirit is in essence precisely that which is not hemmed in by bounds like body. If mind be a spirit indeed, it must have the capacity of embracing all things, of *including* all things. If mind be a spirit, it may for that reason be in very deed *ubiquitous*. And thus there is no need that the records of memory should be copied in the ganglionic brain-cells, all that is wanted being that they should remain wherever they were originally written down, no matter where; for, by virtue of its faculty of ubiquity, it is as easy for the mind to find them in one place as in another. Nay, it must be more easy for the mind to find these originals than the copies in the perishable and ever-perishing brain-cells. How can a record which is indelible be written upon a tablet which is no more constant than a drop of water at a given point in an ever-flowing stream? What never-ending work for the recording angel or other agent whose hard task, according to this view, it is to keep this record. Surely, no demand can be made upon credulity more incredible than this. And yet it is this very demand which is made when it is supposed that the records of memory are stored up in certain brain-cells. Moreover, to suppose that memory has its seat in these cells is to attribute to the very simplest and crudest of organic forms the most exalted of functions—to make a demand upon credulity almost as great as that which is required to see, potentially, man himself, body and mind, in a marine ascidian, which creature is little more than a large simple cell. No doubt these ganglionic brain-cells have some all-important function to fulfil in relation to memory and every other mental faculty, but it does not follow that this function is that which it is assumed to be. It may be, indeed, that they have to help in keeping up that electrical state of the brain and of the nervous system generally without which mental action of any kind could not take place at all—that the brain and the rest of the nervous system is a wonderful telegraphic apparatus by which the mind communicates with its own body and with other bodies; or it may be that they have some other function, equally essential, which has yet to be discovered; but be this as it may, after what has been said, it is difficult for me to believe that their function can be that of storing up within themselves the records of memory. After what has been said, indeed, the difficulty is rather *not* to believe that memory has its seats anywhere and everywhere, wherever the mind may have roamed; that, once made and appropriated, these seats are never abandoned; and that it is by the mind being always upon them, and awaking or remaining awake, not by reading any words or signs or symbols written upon them, that the memory acts, what is remembered coming back, as it does in fact, *as a scene*. At all events, the fact that a thing outside the body, once seen, is recognised as having been seen, is to me a reason for believing that the memory relating to it is, in part at least, lodged in it; and thus it is that I am left free to conclude that the mind, of which memory is a faculty, may range beyond body as a spirit may be supposed to range—that mind, indeed, may be a spirit, of which one attribute is *ubiquitousness*.

This view of mind, as gathered from the history of memory, would also seem to derive no small degree of countenance from the light it sheds upon more than one recondite mental question.

If mind be a spirit, and if memory testifies to the *immanence* of this spirit in the things remembered, wherever these may be, no matter whether without or within, then once to know a thing is always to know it, and this act of *recognition* ceases to be separable from the act of *cognition*. Upon this view, a thing once seen from that time remains part and parcel of the spiritual being of him who sees it; and it must be recognised, if seen again or remembered, without any question being raised as to its identity. Once held it is never let go; and by ever holding it, the mind wants no other proof of its identity.

Again, the view here taken of memory is not a little supported by the light it sheds upon the association of ideas; for if the mind remain wherever it has roamed, never vacating territory once occupied, does it not follow that the subjects or objects appropriated must ever remain in that particular relation to each other which they occupied when first appropriated; so that for the memory to go back along any one chain of thought to any one link in that chain is of necessity to bring to the mind's eye the overlappings of the adjoining links?

Again, in this view of memory there is what would seem to be a sort of explanation of the strange backward way in which memory fails

as old age advances and under the ravages of certain diseases. In this failure recent events are forgotten first, then those which are less and less recent in turn, until at last all that is remembered is that which happened long long ago. Very recently, for example, I saw a French lady whose case supplies a memorable instance of the way in which disease may act in this manner—the case being one of relapsing mania, with epileptiform symptoms, rapidly passing into dementia. Until she reached her sixteenth year, this lady lived in France and spoke only French; after this she came to live in England, and began to speak English. When about twenty she married an American; and from this time for the next twenty years she lived sometimes in America, sometimes in England, speaking English habitually, and French scarcely ever. About two years ago, when I saw her first, her mind was feeble, and that was all; four months ago, when I saw her last, she had forgotten everything connected with her married life, her English not excepted; and if asked who she was and where she was, she gave her maiden name, and mentioned in French the street in Paris where she had lived when a girl. So completely had she forgotten her English, and gone back to her French, that it had become necessary to change an English for a French maid. What happened in this case, and happens in cases of the kind, as well as in old age, is the very reverse of what might be expected to happen. It might be expected that the memory of early events would be the first to fade, and that of recent events the last; but in reality there is no good ground for this expectation. So far from this being the case, there is indeed reason for believing that that which actually happens is precisely what might be expected to happen. It is possible, regarding it as a spirit, to believe that mind goes on expanding through a series of concentric circles until it reaches its maturity, and that, so long as it retains its full vigour, it retains its hold upon the memories in each of these circles, inner and outer; and that afterwards, when a contrary movement to that of development is taking place, the mind, as it were, falls asleep in circle after circle in which it had previously kept awake, until at last it only remains awake in the innermost circles of all, and that in this way the memories of recent events, which are in the outer circles, will be the first to fade, and those of early events, which are in the inner circles, the last. That would happen, in fact, which is really found to happen; and thus, what seemed to be so very unintelligible at first, becomes not altogether inexplicable when it is more clearly looked into.

Upon this view of mind, also, it seems to be possible to not a little simplify the operations of mind, so far as the nerves are concerned, in the processes of muscular motion and sensation. If the mind be not in brain exclusively, but *in* the muscles and *in* the organs of sense, it may act upon the muscles and be acted upon by the senses *directly*; and the nerves may have nothing to do in the matter except to serve as telegraphic conductors between distant parts of the organism which must be kept in communication, and as parts of a nervous system one of whose functions is to keep up an electrical condition without which any form of mental manifestation would be impossible.

And thus memory may show—and that, too, in no unequivocal manner—that the mind of which it is a manifestation is something more than a function of certain brain-cells, something more than a mere mode of cerebration, by showing that mind can have no less unsubstantial a foundation than that which can only be supplied by a spirit which is at once imperishable and ubiquitous in its essence. Nay, it is possible to find in memory, in addition, certain reasons for believing that the spirit of which mind consists is endowed, not only with imperishability and ubiquitousness, but with what, without any great stretch of fancy, may be looked upon as a creative power; for may not the particular *ideas* with which the memory is stored have their origin in a kind of *fiat* on the part of mind akin to that by which, according to Revelation, all things were called into existence in the first instance?

Nor is a different conclusion to be drawn from the stories told of mind by other mental faculties. On the contrary, each and all of these faculties—as it would not be difficult to prove if I had only time to do it in—point, beyond body, to a spirit wondrously endowed with various gifts; *imagination* to a spirit absolutely superior to time and space, and having also a creative faculty; *will* to a spirit endowed with almost indomitable energy; *intellect* to a spirit of intelligence which grasps at all things, and scarcely fails to comprehend them; *conscience* to a spirit recognising the absolute supremacy of truth and justice and goodness; the *religious instincts* to a spirit which is capable of seeking and receiving Divine help; the *conviction of personality* to a spirit which is, not a vague essence, but an actual person.

The story told of mind in these several ways, indeed, is the same in substance as that told by memory. It is, that mind must have for its basis not body merely, but spirit endowed with *divine* attributes. It is a story, in short, which tallies well enough with that told in the Scriptures—that man was created in the image of God, even of Him who is

invisible, self-existent, eternal, omnipresent, omniscient, almighty Spirit, who is perfectly just and true and holy, and who is at the same time the very cause and substance of all things; and that man's present state is not this, but one in which this divine image is marred at best and sometimes obliterated—which tallies with this story rather than with that in which man is regarded as having originated in a marine ascidian, or in a creature still lower down in the scale of being, and as having *risen* to his present position, ever ascending from a lower grade to a higher through many different forms of being—first brute, then human—by a process of evolution, dependent upon his own aspiring efforts in the main, which efforts have had to be carried on with weariness and uncertainty through countless ages. Upon the former view, as it seems to me, something is really gained in the interpretation of mind; upon the latter view, nothing, or even less than nothing, if that be possible. But I shall be better able to discuss this question presently; and here, therefore, I will only repeat what I have already said—namely, this, that the story of mind told hitherto is not intelligible enough if man have that spiritual nature which he is declared to have in the Scriptures.

Nor is there even in body a flat contradiction to these soaring notions respecting mind. The visible body is certainly a transitory phenomenon: the matter of which it is made is ever changing, never abiding. Something abiding there is, no doubt, or the visible body could not continue in existence; but that something cannot be that which meets the eye. And if that which remains is not this, what is it? Is it spirit? Is it, in short, an archetypal form, a spiritual body, the body celestial to which Coleridge alludes in the quotation already given? May it be that this archetypal form, this spiritual or celestial body, is made manifest to the eye by matter passing across it, and being illumined in passing, as a ray of light through a dark room is made visible by the illumined motes of dust floating in it? Like the appearance which went before the Israelites of old, in a pillar of cloud by day, and in a pillar of fire by night, may it be that the visible body hides rather than reveals the real presence and person within it? Is the natural visible body capable of a transformation by which the ties of earth may be so unloosed as to allow it to float in air or walk on water, or become actually invisible, without losing the capability of again becoming visible—a transfiguration by which, as a spirit, it may be anywhere in a moment, not by becoming mere disembodied spirit, but by becoming spirit capable of embodiment wherever it may be, anywhere, everywhere? If there were time for the search, it would not be difficult to find much to justify an affirmative answer to each of these questions. As it is, all that I can do is to say that the visible body must have its foundation, like mind, not in mere matter, but in spirit; that there is nothing in the body, philosophically regarded, to contradict this conclusion respecting mind; nothing, in short, to contradict the view which regards man as having a spiritual nature, which is the image of the Divine Spirit, and which explains his various powers, bodily and mental alike, as *gifts*, which are now in great measure withheld, because man will act, practically at least, as if he were independent of the Giver.

Taking this view of mind and body, it is easy to find a deep meaning in the grand old tale of him who slew the Gorgon and won Andromeda as a bride. For what is the gist of this story? Perseus triumphs, not by his own unaided earthly might, but by gifts from on high, by which his body is transfigured, spiritualised, dematerialised, energised. He receives the polished shield of Pallas Athené, the cap of Pluto, the winged sandals or talaria, and the diamond-bladed weapon, herpé, of Hermes. Shod with the sandals, he is emancipated from the material ties which bound him to earth or dragged him under water; and he can move as he lists, with the freedom of a spirit, over earth and sea, without touching either, but he is still visible. Covered with the cap, this emancipation from the material world is still more complete, and he becomes invisible—invisible, yet visible as before the moment he uncovers himself. Armed with herpé, with equal ease he beheads the Gorgon, or severs the adamantine chains which bind Andromeda to the rock. In order to kill the Gorgon he must be thus shod, covered, armed; and, besides all this, he must use his shield: he must look only at the image reflected there, and direct the stroke of herpé accordingly. A single glance at the Gorgon herself, and at that very moment he becomes stone. And why? Is the eye to be turned away from this beautiful terror in order to signify that the visible material object must not be mistaken for the invisible spiritual substance which alone is real, and that not to turn the eye away is to mistake matter for spirit—a mistake which may be said to materialise or turn into stone the observer? Is the eye to be turned away from the face of Medusa to its reflection on the shield, in order to signify that the distinction of within and without is a blunder not less compromising than that which mistakes spirit for matter; that there is no without so far as the mind is concerned, and that objects which, judged only by the eye and the senses, seem to

be without, are really comprehended within the all-pervading spiritual being of the observer?

There is a strange fascination in these old stories, and the fancy is very apt to run away with the reason in dealing with them. Still, after what has been said, there can be no great difficulty in bringing the reason to accept this particular interpretation: after what has been said, indeed, the difficulty is rather to find another interpretation which may be acceptable. And yet a full half of what might have been said to the same effect remains unsaid—namely, that of which the material is to be found, not in profane philosophy, ancient or modern, or in profane poetry, ancient or modern, but in sacred philosophy and poetry. Nay, that which remains unsaid is much more than the full half of what might have been said, for it is not too much to say that the grand proofs of the view of mind and body which has been taken are only to be found in sacred philosophy and poetry. But this is a part of my subject upon which I must not enter here, though, as will be well understood, in refraining from doing this I omit arguments of the weightiest sort in favour of the conclusions at which I have been compelled to arrive. As will be well understood, I say—for it must be familiar to all that this philosophy and poetry is full of statements which are absolutely meaningless if there be not a divine spirit in man whose office it is to do all the work of mind, and if the body or flesh be not capable of spiritualisation.

Having arrived at this conclusion, it is impossible for me to have much sympathy with certain views which have found much favour in many quarters, and upon which, before coming to a close, I would wish to say a word or two, less with the intention of controverting them, than for the purpose of showing that I have not overlooked them. I might make many references: I content myself by referring to the views with which the names of Auguste Comte, Mr. Herbert Spencer, Professor Bain, and Mr. Darwin are associated.

The positive philosophy of Comte is not to be easily disposed of in few words. Its author seems to call it *positive* because he regards all other philosophies as *negative*, or negative in their results, at any rate; at least, this is a not unfair inference from the temper in which many of his disciples, the positivists, as they have come to be called, are apt to bring it forward. Master and disciples alike believe strongly. And what do they believe? Fundamentally this. The world is made up of matter, and the forces which are immanent in matter. Beyond these phenomena of matter and material force nothing is known, or to be known, and even this possible knowledge is not absolute, but relative. Everything divine, everything metaphysical, is repudiated; no attempt is made to look into the essence of things, or to deal with ultimate causes, whether efficient or final; and all that is done is to study phenomena in themselves and in their mutual relations, with a view to discover their laws, which laws are the constant sequences which unite them as antecedent and consequent. Beyond matter and material force, then, the positivist philosophy knows nothing, or if a step further is taken, it is from force to matter, rather than from matter to force. Matter, it is held, is in all cases endowed with certain *physical* properties; *chemical* properties are developed by a binary combination of matter: *vital* properties come into existence when matter enters into more complicated combinations. All vital manifestations are no more than physical actions arising necessarily in particular organisations. The mind is nothing more than cerebration, and this or that system of phrenology supplies the key which will unlock all its mysteries. A physical basis, *la physique sociale*, is also found for the phenomena of social life. Just as the life of an individual man is supposed to result from certain physical changes in the organism belonging to that man, so the life of a community, social life, is supposed to be equally dependent upon certain physical changes in that larger organism (so to speak), in which many men form component parts. *La physique sociale* supplies the explanation of all that is mysterious in social life, doing for this life all that is done for the life of the individual by (to coin an analogous expression), *la physique individuelle*. All *a priori* reasoning from any abstract axiom is looked upon as purely chimerical: all reasoning must be founded on actual observation. All phenomena are regarded as subject to invariable material laws: and the sole object of positive philosophy is to discover these laws, and to systematise them in the direction of unity—to regulate by reducing them to one single law. One grand law, which Comte claims to have discovered, and upon which he bases his demonstration in many parts of his grand argument, is this—that there is an inevitable order in the discovery of truth, testified to by the history of mankind, no less than by that of individual man, by which the view taken of truth is first theological or fictitious, then metaphysical or abstract, then scientific or physical, or positive. A theological view of things is that which serves as the necessary starting point in the movement of the human intelligence. In this infantile condition, the mind grasps after primal

and final causes, and all phenomena are referred to the direct and arbitrary interference of supernatural agents, more or less numerous at first, and of one grand agent at last, so that monotheism is the climax of development in this way of thinking. To this follows the metaphysical view of things, in which abstract and orderly forces are made to take the place and do the work of the arbitrary supernatural agents, which haunted the fancy before theological trammels were shaken off. The grand generalisation of *nature*, in this way of thinking, corresponds to that of monotheism in the former way. Last of all, in the maturity of the intelligence, comes the physical *positive* way of looking at things, in which everything metaphysical, no less than everything theological, is given up as mere child-play, with which manly intelligence can have nothing to do. Comte himself says, man is "théologien dans son enfance, métaphysicien dans sa jeunesse, et physicien dans sa virilité," and adds, that all men "au niveau de leurs siècles," may verify this for themselves, if they will, in their own experience. Do what I will, however, I cannot bring myself au niveau de mon siècle. I cannot bring my mind to give up metaphysics and theology, and to believe that "whatever for man is true men can verify." Nor can I believe that the history of mankind, or of individual men, justifies the conclusion that the mind of man develops in a way which associates theology and metaphysics with states of comparative ignorance. Often, I am sure, the order of development is the reverse of this, men who, without knowing it, perhaps, were practically positivists to begin with, becoming dissatisfied with speculating upon phenomena and their laws, and ending by taking metaphysical and theological views of everything. And certainly Comte's own history is in flat contradiction to the doctrine in question. Up to a certain point he is positive enough; further on, as his later writings sufficiently prove, the objective synthesis of his positive philosophy does not content him, and he must have a subjective synthesis, and even a religion of a certain sort, with a most complicated *cultus*—a subjective synthesis, in which the most unselfish love, *altruism* in place of *egoism*, figures as the law of laws to be evolved. He passes from physics, that is to say, on into metaphysics, but he can scarcely be said to have passed on beyond metaphysics into theology, for though he has a religion of a sort and a complicated cultus, he still holds the same negative attitude towards God—the Grand Être of which he talks being no more than an impersonal abstraction, which he makes for himself as an object of adoration, out of all the good qualities of all men, in all times, together with certain additions derived from pet dogs, and other beasts, which possess any good qualities. But it really does not matter whether Comte himself remained a consistent positivist throughout his life or not. The question is, whether this positive philosophy, as professed by the positivists, now renders it necessary to reconsider the conclusions already arrived at respecting mind and body, and this question is soon disposed of. For what is the case? Matter is all in all. The several manifestations of mind are only different forms of cerebration, localised according to the rules of this or that form of phrenology. And therefore the question remains where it was, the answer to this positivist view being simply that which is applicable to any materialistic view. Indeed, instead of becoming a convert to positivism I feel compelled to take up a position in antagonism to it, and to suppose that brain has its origin in mind rather than that mind has its origin in brain. The elements of living brain cannot be kept together without life; of this there can be no doubt; and, if so, then the very foundations of the notion that mind is a mere function of brain, mere cerebration, are swept away. For what holds good of the relations of simple life to brain must hold good also of the relations of mind to brain, mind being only life in its fullest manifestation. And thus I fail to find anything in the positive philosophy to make it necessary to set aside, or even to qualify, any of the conclusions respecting mind and body to which I have been led by the course of the argument hitherto.

Nor am I disposed to abandon these conclusions and become a disciple of Professor Bain. Mind, Dr. Bain holds, objectively as well as subjectively, is made up of feeling, intellect, and will. By the side of all mental phenomena there runs a line of physical causation. The two worlds, mental and physical, must stand or fall together. Mental phenomena are as subject to absolute law as physical phenomena, and as incapable of irregular action. As with the physical, so with the mental, under the same circumstances there must be precisely the same consequences. The power to act voluntarily upon the muscles, or in any other way, is in reality no independent power; the act, when thoroughly looked into, is only a reflex phenomenon, in originating which the feelings have much to do. Free will, however exercised, whether in choice, deliberation, self-determination, moral action, responsibility, or in any other way, is nothing more than a delusion engendered in self-conceit, the will being as much the subject of law, and as little entitled to freedom of any sort, as the feelings and the

intelligence. Even the conviction of personal identity must be got rid of in the same manner, this, like the will, being lost in law. But surely a view like this cannot be otherwise than unsatisfactory in the fullest sense of the word, if what has been said upon mind have any claim to be regarded as probable. It is materialistic, with all the shortcomings of this view, and it supplies no real explanation of what it professes to explain. It supplies no real explanation, for what is gained by saying that mind is made up of feelings, intellect, and will, and by describing the various ways in which these act and react upon each other, in turn, as cause and effect? Such description is full of interest, without doubt; but when it is made I am as far as ever from understanding why I feel, why I reason, and why I will; and the more I reflect upon the subject, the more unwilling am I to explain myself, feelings, reason, and will, as a highly complicated mechanism, which is set to go in various ways, but which must always go in the same way if set to go in the same way. There is that in me, indeed, which altogether repudiates a view so mechanical, and with this remark I may content myself, for I have already said enough to show why I do this, and what view I would substitute for it.

With Mr. Herbert Spencer I have much sympathy, and yet I cannot be content to stay at the end at which he arrives and stays. I thoroughly sympathise in his belief that all true philosophical reasoning has its end in unity—that there are abundant proofs of this unity in matter and spirit, in things visible and things invisible—that the truths of science and religion find reconciliation in this unity. I reject, as he does, a purely spiritualistic view of things, no less than a purely materialistic view. But I cannot agree with him in believing in indefinite evolution. Nor can I agree with him in believing that life and mind are to be interpreted in terms of matter, motion and force, even though this interpretation be taken as only symbolising provisionally arbitrary aspects of an Unknown Reality; and, least of all, can I agree with him in believing that the principle of unity, underlying matter and spirit alike, is merely an Unknown Cause, the Unknowable, a Power without limits of either time or space, of which the nature ever remains inconceivable. Much, no doubt, is of necessity unknowable, but I would not place the limits of thought where Mr. Spencer would place them. On the contrary, I would hold that there is nothing *unreasonable* in widening these limits so as to bring within them an actual God, even the God of the Scriptures, and that by so doing a much more *reasonable* realisation of unity is to be found than that which can be found in an Unknown Reality. I would hold, indeed, that the nature of the Unknowable is to be encroached upon in this way, and to this extent, by the power of the reason, and also that there is nothing in the speculations to which I am now referring which can stamp as *unreasonable* that particular view of mind and body which it is the object of this lecture to set forth cursorily.

But what of that view of mind which arises out of the doctrine with which the name of Mr. Darwin is at present especially connected?—a name which must always command the highest respect of all *naturalists*. Is not the view arising out of the doctrine of evolution altogether at variance with that which I have been led to take in this lecture? Unquestionably so. It is simply impossible to reconcile the two views; and it is also certain that if that which arises out of the doctrine of evolution be right, the other must be abandoned. What, then, are the facts upon which this doctrine of evolution is based? This is the question. Are they to be read only in favour of this doctrine, or is there another reading? I venture to think that there is another reading; but how can I make good this statement with the hands of the clock standing where they do? At most I can only throw out a hint or two of what I might say on the subject if I had the time, and this is all I propose to do.

No one can believe more firmly than I do that there is a common plan in all animals and in all parts of animals, as well as in all plants and in all parts of plants; or that there is a common unity for the whole organic world, plant and animal alike. No one can believe more firmly than I do that there are manifestations of mind, not dissimilar in kind to human mind, in the brute creation; and that the law of mind is one and the same everywhere. But it does not follow from this belief in unity that I should believe that one organ should be developed into another organ, or one animal or plant into another animal or plant. The doctrine of unity is quite as consistent with a belief that there are certain fixed differences in organs or organisms; it has nothing to do with the doctrine of evolution, except, perhaps, in making its acceptance a little less difficult; for it is a little more easy to suppose that a higher creature may be evolved from a lower, if there be the same archetypal unity of plan underlying the two. More than this it cannot do.

I cannot doubt that in the embryonic life of the higher animals there is a process of development at work by which the embryo, before

arriving at maturity, passes through certain stages which seem to shadow forth certain permanent states of being lower down in the scale of life. I cannot doubt that in this case the more perfect is preceded by the more crude, and that there is a process of evolution at work up to a given point. But what follows? Certainly not this—that these resemblances are realities; that the embryo of a higher animal, in developing to maturity, passed through a succession of different animals, each one a little more perfect than its predecessors. Certainly not more than this—that the higher animal, in the embryonic period of its history, without ever ceasing to be itself, passes through certain stages of development, in which there are certain *likenesses*, never very close, to certain forms of animal life lower down than itself in the scale of being—likenesses which simply bear witness to the unity of plan in all forms of animal life.

I also find it difficult to twist the marvellous improbability of man into an argument for the doctrine of evolution. Who shall say that this improbability is not restricted within certain prescribed limits? As yet man, in his struggle for life, has never turned his opportunities of natural selection so far to account as to make even the slightest advance towards *physical* improvement. And it is possible that the change for the better which is actually witnessed in man may have to be explained in accordance with the Scriptures, rather than in accordance with the doctrine of evolution.

Nor can I rest satisfied with what may be spoken of as the more special evidence in favour of evolution. The pigeon, by developing under cultivation into what may be considered as improved varieties of pigeon, may at first seem to be the subject of evolution; but the changes produced in this way are never more than those minor changes which go to make up the differences called *varieties*—never so great as to constitute another *species* of bird. Moreover, only let the varieties thus produced be let alone for a few generations, and the inevitable result is a return to the original form of common pigeon, if not to that of the wild blue rock-pigeon. The history contradicts the notion of evolution, rather than confirms it. And so with the dog or any other animal which may be modified as the pigeon is modified; the change produced is never beyond that of mere *variety*, never into that of a new *species*; and let the constraining influences which brought it about come to an end, and, as with the pigeon, it is not long before the original wild form has again cropped out. And what other conclusion can be fairly drawn from the infertility of mules than this—that there is a barrier between different species of animals, even between those which are most closely akin to each other, by which one is prevented from passing into the other? Nay, it is even difficult to find any evidence in favour of evolution in the history of the rudimentary creatures which swarm in dense crowds around the very feet of the scale of being.

Here are wonderful changes at work, by which, as Dr. Bastian so clearly demonstrates, *bacteria*, the simplest of all living units, may be developed, possibly from inorganic elements, almost at the will of the experimenter, into *monads* and *ameba* and *paramecia*, or into the lowest forms of *fungus*—into forms of animal life, that is to say, or into forms of vegetable life; but not much is to be built upon this fact in favour of evolution. For what follows? Simply this—that these forms are unstable in the highest degree; and that, instead of passing on into higher forms of being, they presently again break up into their original bacterial units, which units are destined again and again to go through the same narrow round of combining and separating. The evolution, if evolution it be, is kept within the narrowest limits; the tendency to retrograde is quite as marked as the tendency to go forwards; and, as respects evolution, the conclusion to be drawn is even that which has been drawn from the changes witnessed in the pigeon and the dog—this and no other.

It may be questioned, also, whether this doctrine of evolution derives as much support as it is supposed to do from the facts belonging to astronomy and geology.

The nebular hypothesis, which may be taken as the real starting-point of the doctrine in question, is certainly very nebulous. The facts upon which it is founded show unity of plan; of that there need be no doubt. But this unity of plan is really a matter quite apart from the nebular hypothesis founded upon it. Besides, where did the heat come from which kept up the nebulous state which preceded the formation of the heavenly bodies of various sorts? and what has become of it since the time of this formation? What real proof is there of the continual cooling which should still be going on according to this view? Like light and gravity, heat may result in the mutual reactions of the heavenly bodies, or be a property of one or other of these bodies; but to conceive of it as independent of these bodies is, to say the least, no easy matter. Indeed, so difficult is it so to conceive it, that, until the difficulty is overcome, the nebular hypothesis may be set aside as a

dream which is as little calculated to give probability to the doctrine of evolution as the evidence which has been already glanced at.

And so likewise with that particular evidence in favour of evolution which the facts of geology are supposed to supply. Endless ages are needed to allow of evolution; and the facts of geology are believed to testify unequivocally to the lapse of these ages. But is it so? If the rock in which the skeleton of a plesiosaurus is embedded had been deposited as slowly as it is supposed to have been deposited, every trace of organisation must have decomposed and disappeared long ages before the animal could have been covered up in its bed. For the skeleton to be there at all, indeed, is a plain proof that the rock, at least to the thickness needed for embedding it, must have been deposited before decomposition had time to do its work fully. And so likewise in every other analogous case. Nay, it may even be questioned whether there has been a separate upheaval and sinking to allow of the formation of each coal-seam or limestone-bed; for many of these seams and beds which are parallel may have to be explained as *drifts*, which have to do with *one* cataclysm of upheaval and sinking rather than with *many* such cataclysms; for how could this strict parallelism be preserved if there had been many cataclysms? Moreover, it must not be forgotten that there are not a few fossils out of place in the strata—fossils which ought not to be where they are if living things had made their appearance on the earth in the order required by the doctrine of evolution.

In a word, I fail to find anywhere sufficient reason for believing that man began his history as a marine ascidian, or as a creature still lower down in the scale of being, and that he has worked his way to his present state of civilisation by ceaseless strugglings upwards—first, in countless forms of brute life, each one succeeding in the series being a little more advanced than that which went before it, and then through an interminable line of savage ancestry, of which the first in the series was only a shade more advanced than the tailless ape of which he was the immediate descendant. And glad I am that it is so; for this idea of imperfect being, ever, and almost for ever, straining after perfection, and constantly failing in the struggle, produces a feeling approaching to a painful shudder. At any rate, until these and other difficulties are swept away, I find it more easy to accept the doctrine of creation than to accept the doctrine of evolution, and to believe that each creature was created perfect in itself, and in its relations to all other creatures and to the universe of which it is a necessary part—so perfect as to deserve to be spoken of at the beginning as “very good”; and that man originally was no brute-descended savage, living in a wilderness, and fighting his way step by step upwards to a higher level, but a demigod, walking and talking in a paradise with the God in whose image he was made, until, for some fault of his own, he was driven out into the wilderness, a slave to body, naked, and all but altogether oblivious of everything relating to his high original. This view, I honestly believe, is the more *reasonable* of the two; and with this confession, without saying more in its support, I will abruptly bring to an end the roundabout remarks into which I have been led by the wish to say something to the purpose *concerning mind*.

But why, it may be asked, have I dwelt so long upon this subject? Why at all in this place? Partly because I believe that to all men, to physicians most of all, the subject is of supreme interest speculatively; partly because I am sure that it has very important bearings upon the actual practice of medicine. I believe most fully that a low materialistic view of mind is mischievous in a thousand ways in the practice of medicine. It places the physician in a wrong attitude to begin with, in that, too often at least, it leads him to regard his patient as a piece of admirable mechanism which comes to pieces and is done with at death; while at the same time, reacting upon himself, it is of necessity not a little calculated to make him callous and unmindful of the high responsibilities of his office. The more, indeed, I see of disease, the more I am satisfied that it is a very grave error to ignore the action of mind upon body both as a cause of disorder and as a remedy for it—the more I am convinced that mind even now—even now, for now, so far from possessing its full powers, mind must be looked upon as in great measure paralysed, *demented* even, in a morbid rather than in a healthy condition, so that, after all, in treating of mind in its present condition, I am keeping to the promise in the title of these lectures, namely, to speak of *mind in certain morbid conditions*—even now, I say, I am convinced that mind is the master of the body rather than the slave. No doubt the body reacts on the mind most prejudicially; but scarcely ever does the mind fail to assert its mastery in some unmistakable way, though not always very loudly. Indeed, the familiar fact that a hopeful patient will go on living long after his body has become diseased to an extent which would seem to be more than sufficient to kill, and that a hopeless patient will die with little or nothing the matter with him, so far as mere bodily disease is concerned, is of

itself sufficient to establish the position that mind is the master of body rather than its slave; that the body droops or revives because the mind has or has not given in, rather than on account of any changes in itself; and to make it probable that a primary indication, as well in the prevention as in the treatment of disease, bodily no less than mental, is to put in order as far as possible the mental condition of the patient. In the next lecture, perhaps, I may find occasion to speak a little more particularly on this subject: now I can but bring my present lecture to an end by making these broad statements.

ABSTRACT OF THE GOULSTONIAN LECTURES ON ELEPHANTIASIS GRÆCORUM.

Delivered at the Royal College of Physicians, 1873.

BY ROBERT LIVEING, M.D.,
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LECTURE III.

THE identification of leprosy as a distinct disease has been beset with difficulties. Up to a late period it was confounded with several other disorders, such as the Barbadoes leg, syphilis, and scurvy. By some it was supposed that certain local maladies, such as the radesyge of Norway and the pellagra of Lombardy, were only different varieties of leprosy; and it was even believed for many years that the leprosy of Iceland and Madeira respectively, and the spedalsked of Norseland, constituted distinct species from elephantiasis Græcorum. All this of necessity led to much confusion; and not until Drs. Danielssen and Boeck had visited the eastern shores of the Mediterranean was the question finally set at rest, and the identity of leprosy in all parts of the world fully established.

At the present day, leprosy is universally recognised as a constitutional disease, *sui generis*, and manifesting certain well marked and characteristic features. It is especially a malady of young adult life; yet no period from infancy to old age is entirely exempt from it. Dr. Vandyke Carter was one of the first of our countrymen to describe accurately the three principal forms assumed by elephantiasis Græcorum, namely, (1) the macular, (2) the anæsthetic, and (3) the tuberculated. These three forms are often only different phases of the same disease, and are sometimes seen coexisting in one and the same individual. Nevertheless, in typical cases, their clinical features are sufficiently distinct to justify the nomenclature now usually adopted.

The Premonitory Stage.—The early stage of leprosy is characterised by lassitude, and a sense of bodily and mental weariness and depression, without any assignable cause. These symptoms last for an uncertain time, which may be measured by weeks or months, and are usually accompanied or followed by slight rigors, loss of appetite and nausea, with occasional nocturnal febrile attacks, and other unequivocal signs of general constitutional disturbance. After a time, this is followed by what Danielssen and Boeck call the "periodically eruptive stage", in which an acute eruption breaks out on different parts of the body, the skin of which becomes red, swollen and tender in patches. After a few days or weeks, these blotches subside, but often leave behind a patch of brown pigment in the seat of the eruption, which may be for a time more or less anæsthetic; sometimes, however, they pass away, and leave no apparent trace of their former existence. Several months may elapse between successive crops of these red blotches, but with each return there is an increased liability to permanent tissue-changes in the true skin.

Among the prodromata, belong occasional outbreaks of bullæ, like those of pemphigus, which may last for many months before the regular leprosy sets in. This eruption is distinguished from idiopathic pemphigus by the fact that bullæ usually appear singly and suddenly, one healing before another shows itself. They vary in size from a nut to a hen's egg, and generally break a few hours after they appear. During the febrile attacks, there is often an insatiable thirst.

This drawing has been made for me by my friend and pupil Mr. David Hepburn, from a case of leprosy now under my care at Middlesex Hospital, and shows the disease in an early stage of its development.

I. MACULAR LEPROSY.—After a longer or shorter premonitory stage

(or sometimes without any at all), permanent maculæ appear in the skin; the spots assume various forms, of which the following are the most common and characteristic. They consist of more or less circular spots, varying in size from half-a-crown to the palm of the hand. The edges are a little raised and of a reddish colour, the redness disappearing under pressure. The centre is slightly depressed, pale, dry, and sometimes white and shining. The tendency of these spots is to spread at the circumference. The hairs on the patch are more or less atrophied, and may become grey or perfectly white, and the skin in the centre loses its sensibility. After a time, the spots shrivel and become atrophied, either uniformly or in patches, so as to present an appearance of many small, shallow, white, scar-like depressions. The areas affected sometimes become blended, and then form large surfaces of altered skin.

2. A more common appearance than the one above described is that of discoloured patches, which sometimes present a raised margin, and often occupy a large tract of skin, which becomes covered with a dark pigmentation. The centre of these may be of a lighter shade, or even white, and thus irregular rings and markings are produced. These white spots may again become brown, in consequence of fresh pigmentary deposits. In most of them, sensation is impaired.

Danielssen, speaking of what he calls the "permanently eruptive stage", says, "the discolorations no longer disappear under pressure; their colour is more intense, the thickening of the corium more notable; and there will be no longer any retrogressions or disappearances of the eruption."

The various forms and appearances which macular leprosy assumes in the different stages of its progress, and in different individuals, hardly admit of a detailed description. They can only be fully realised by the inspection of a large number of cases.

II. ANÆSTHETIC LEPROSY is sometimes a further development of the macular variety. At other times, the changes in the skin are so slight as to escape notice, until numbness over patches of otherwise healthy looking cutis first attracts attention. It is in anæsthetic leprosy that the eruption of bullæ, which I have already described, is most frequently seen. After the blebs have burst, they usually dry up and scale, leaving dark pigmented patches, or more commonly white spots, from the absence of pigment. Occasionally, however, instead of drying up, they form into ulcers, which subsequently slowly cicatrise, and give rise to thick, smooth, irregular scars. At first, the spots which remain after the disappearance or cicatrization of the bullæ, may retain their normal sensibility, but sooner or later they all become anæsthetic. At the same time that these changes are going on, hyperæsthesia may exist in healthy looking parts of the skin; and patients often complain of pricking and shooting pains in the fingers and toes, with jerkings and shakings of different parts of the body, so much so in some cases that they require to be fed. This hyperæsthesia, which may be either local or general, often lasts for months or even years, and causes great distress to the sufferer, who lies torpid in bed, because walking or even moving is attended with great pain. The handling things, moreover, causes all kinds of subjective sensations, such as burning, stabbing, and irregular reflex muscular action. Later on, the hyperæsthesia diminishes or disappears, and is followed by the characteristic feature of the disease, namely anæsthesia, which commonly, though not universally, develops in those parts of the skin which have been previously hyperæsthetic, or the seat of abnormal pigmentation.

Thus we see that the pemphigus, maculæ, the hyperæsthesia and the anæsthesia, are all closely related, and follow each other in a kind of series. For example, a spot of the size of a crown may appear on the face, of a pale red tint, slightly swollen, and painful to the touch; to this succeeds an alteration in the pigmentation of the part, so that the spot becomes white or brown, and at the same time its red edge advances, and forms a small hyperæsthetic zone around an inner anæsthetic area; outside all, is healthy-looking skin. The anæsthesia, which is at first confined to one or two spots, may gradually invade almost the whole surface of the body, and especially it may affect unchanged patches of skin.

The insensible parts do not generally correspond with the distribution of particular cutaneous nerves, but spread into the area of several nerve-trunks, or occupy one only partially; even in the midst of a large anæsthetic district, there may be sensitive islands. In some cases, the loss of sensation is so complete that patients may be severely burned without knowing it. Mr. Arthur Gordon, speaking of a visit that he paid to the Leper Hospital at New Brunswick, says: "One individual was pointed out to me whose hand and arm had been allowed to rest accidentally on a nearly red hot stove, and who had never discovered the fact until attention was arrested by the strong scent of the burning limb, which was terribly injured."

As the disease advances, atrophic changes occur in the skin and deeper

tissues. The cutis becomes dry and wrinkled, and assumes in patches the appearance of extreme old age, whilst the adjacent parts are plump and natural. The face looks prematurely aged, and the expression comfortless; the muscles waste, and, as the atrophy advances, the features become twisted and deformed; the lower lid is everted and recedes from the eyeball, leading to an overflow of tears, and haziness of the cornea. The lower lip falls away from the gum, the saliva dribbles, and the whole expression becomes vacant and painful.

The hands and feet are similarly affected with muscular atrophy; the flexors overcome the extensors, the backs of the hands sink in (especially at the first interosseous space), and the palm is arched outwards; the fingers are curved, stiff and claw-like, and their tips club-shaped. The skin over the semi-flexed joints becomes tense, thin, and shining, the epidermis scales off and bursts, and thus indolent ulcers are formed. Gradually the destruction extends deeper, the joint ends of the bones are laid bare and the joints opened; and at last, as a consequence of the gradual shrinking and breaking up, a whole phalanx is separated. When the distal bone is removed, the altered nail and pulp are sometimes transferred, as it were, to the second segment of the digit. Generally, however, two or more phalanges are involved either together or consecutively; the parts fall off without giving pain, and thus a whole hand may be amputated. The mutilation does not often extend to other joints than those of the hands and feet. The pathological process which produces all these changes in the tissues has been aptly called dry mummifying necrosis.

Associated with these visible effects of the disease, there is often an abnormally low temperature, which, however, is not confined to cases of the anæsthetic variety. These tables of temperatures, very carefully prepared by my friend and clinical assistant, Dr. Balding, from two cases of tuberculated leprosy now under my care at the Middlesex Hospital, serve to illustrate this point. It will be seen that the morning temperature at 9 A.M. is always below normal (about 97°); while in the evening it is sometimes a little above, but more often below, the mark.

III. TUBERCULATED LEPROSY.—This variety of leprosy is that most frequently met with in Europe, but is less common in India than the anæsthetic form. It is ushered in by the usual premonitory symptoms, and, like anæsthetic leprosy, is sometimes an advanced stage of the macular variety.

As I have already mentioned, with each eruptive attack pigmentary changes are apt permanently to alter the appearance of the skin, and in these patches the characteristic tubercles are most liable to develop; the original maculæ acquire greater stability, the skin thickens, and flat prominences appear on its surface; as their number increases they coalesce, and cause an exaggeration of the original lines and furrows of the skin, which acquires at the same time a shining coffee-coloured tint, and the consistency of India-rubber. The tubercles and thickened cutis are tender on pressure; their chief localities are the eyebrows, the lobes of the ear, the alæ of the nose, and the extensor surfaces of the upper and lower extremities. The skin of the forehead becomes thickened, its furrows deepened, and its prominences exaggerated; on the eyebrows especially tubercles are apt to be well marked, forming a kind of roof over the eye, furrowed by deep partitions, and producing the morose aspect so characteristic of the disease. The hair of the eyebrows, especially at the outer part, is soon lost; the nose is tumid, and occupied by nodules and tubercles; the cheeks are thick and hanging; the lips hard, swollen, shining, and everted; the chin broad and nodular; and the ears—stiff, shining, and thickened—stand out from the head. The bronzed appearance, and the thick everted lips and ears, give to an European the aspect of a mulatto. The hands and feet are, next to the face, the parts most commonly affected: the backs of the hands become swollen with œdema and thickening of the tissues, and the skin of a brownish red colour; the fingers stand stiffly apart, are thickened and club-shaped at the tips; the nails dull, dry, and fissured. Various retrogressive changes may occur in the tubercles and altered skin: among these, atrophy is the most common. The nodules shrink, and are more or less absorbed; the epidermis scales off, and a round, flat, pigmented spot remains; over the spot the skin is thin and atrophied. More rarely the nodules suppurate, and the entire mass breaks up into cheesy pus. Not unfrequently superficial ulcers or simple excoriations form over the surface, and give rise to a thin secretion, which dries and forms into crusts. Occasionally, though rarely, the ulcers spread deeply into the subcutaneous tissues, and may lead to a separation or destruction of the bones of the phalanges, producing an effect similar to that described in anæsthetic leprosy; but in this respect, what is the rule in the latter is the exception in the tuberculated form.

During the early stages of the malady, the lesions are confined to the skin and subcutaneous tissues; and it is only after it has lasted for years that the mucous membranes of the tongue, mouth, fauces, larynx,

and conjunctivæ, are affected. The changes which occur in these structures are akin to those met with in the skin. The hard and soft palate may be seen to be nodulated and fissured; the dorsum of the tongue acquires a peculiar aspect, from the great prominence of the papillæ and the grey opacity of the epithelium; the tongue itself becomes dense, stiff, and furrowed; the epiglottis is also nodulated, and almost immovable; while the implication of the true and false vocal cords produces the obstinate cough and the peculiar hoarse whisper which are marked symptoms of an advanced stage of the disease. Inflammatory changes may occur in the conjunctivæ which are independent of any leprosy formation, and produced by imperfect closure of the lids; and sooner or later, from one cause or another, the cornea becomes opaque and vision impaired, or entirely destroyed.

As the changes in the skin and mucous membrane progress, the general organism suffers more and more, and there is increasing feebleness, loss of appetite, and mental depression; the powers of nutrition fail, and an attack of phthisis or diarrhoea soon closes the scene. The average duration of this form of leprosy in countries where it is endemic is about eight or nine years, or less; that of anæsthetic leprosy sixteen or seventeen years.

After tubercular leprosy has run its typical course for many years, a new symptom may appear—namely, anæsthesia; and the disease may gradually assume the type of the anæsthetic form. Much more commonly, however, the type remains unchanged—the loss of sensibility in small patches of skin being very common in true tubercular leprosy. This combination of symptoms has given rise to the name of *mixed* leprosy.

With regard to the febrile attacks which recur during the course of the disease, Hebra and Kaposi remark: "We are of opinion that the fever has partly the same importance as that which accompanies the outbreak of variola or syphilitic roseola, and in part is the result of a metastatic process, as Hansen holds. When many nodules soften at once, it is obvious that the absorption of broken-down elements may excite fever, and this may be associated with a new external metastasis (softening of one set of nodules, production of another). A metastasis may also occur in internal organs, as the *post mortem* examinations show, or elimination may take place by the ordinary excretory apparatus. For the initial fever, a toxic influence, as of a disease of the system at large, may readily be assumed."

I shall illustrate the clinical features of tuberculated leprosy by the short history of a very severe case that has been under my care at Middlesex Hospital for upwards of two years.

M. A. E., aged 45, was born of English parents in the West Indies, where she remained during the first twenty years of her life. She then resided in England for four years; subsequently she returned to the West Indies for one year, and at the age of twenty-five she went to live on the West Coast of Africa, where she remained until 1869, when she again came to England, and has since lived near London. The present disease began in Africa, nearly eight years ago. She describes the first symptoms as having consisted of vomiting and pain in the abdomen, with a sensation of numbness and tingling in the limbs, especially affecting the hands and feet. These were shortly followed by slight swelling of the upper and lower extremities, with some discolouration of the skin, and six months afterwards the face became similarly affected.

Her state has changed but little during the last two and a half years that I have had her under my observation, and may be briefly described as follows: she is a tall well-formed woman, but emaciated; the hands, feet, face, and mucous membrane of the mouth and throat are the parts of the body most seriously affected. The face is frightfully disfigured by the irregular thickening and wrinkling of the cutaneous tissues, which are especially marked about the lips, nose, that part of the cheeks just below the eyes, and the forehead, so as to present the well-known leonine expression. There exist the remains of several scabbed sores and scars on the face and hands; a large one is especially noticeable in the centre of the forehead. The skin of the hands is of a darkish brown colour, and enormously thickened by tubercular swellings, which are scattered, irregularly, chiefly on the dorsal aspect of the hand and wrist. The palms of the hands are comparatively free from disease. She is, however, quite unable to close the hand, or even to bend the distal joints of the fingers. Brown patches of discolouration are scattered over the skin of the fore-arm, some of them reaching as high as the shoulder, while here and there a small hard lump can be felt in the skin. There is entire loss of sensibility at the back of the right wrist over a patch of skin rather larger than a crown-piece; elsewhere the sense of touch is almost perfect, although a sensation of numbness exists. The feet, like the hands, are diseased.

The hair of the eyebrows is gone. Rather more than the lower half of each cornea is opaque, but the pupil may be seen by looking ob-

liquely downwards through the upper part, which remains tolerably clear. The patient can perceive light, but is unable to distinguish objects. The tongue is fissured and indented, the mucous membrane of the fauces, soft palate, and epiglottis is much thickened and tuberculated; she speaks in a hoarse whisper, and is troubled with a harsh, persistent, laryngeal cough, showing that the larynx is seriously involved. The skin of the trunk is tolerably healthy; the senses of taste and smell are not much impaired, and the hearing is perfect.

Morbid Anatomy: Changes in the Skin.—On examining a section of one of the leprous tubercles, it is found to consist of a yellowish red mass, finely granular and uniformly dense and firm. The tubercle often extends close to the surface under the cuticle; sometimes, however, a layer of apparently healthy skin intervenes. The deep surface is usually not very sharply defined, but shoots off into irregular branches. At other times it is bordered by a firm, dense, fibrous layer. Microscopically, the nodules consist of small round closely packed cells and nuclei, mixed with some spindle-shaped filaments, which are seated in a delicate fibrous network of the corium. In young nodules the cell infiltration is not uniform, but is composed of small clusters which are chiefly found near the thickened walls of the vessels, and around the glands and hair follicles, while the intervening connective tissue only shows scattered cell infiltration, and is in places quite healthy. Vessels are very numerous round the infiltrations, but rare in their interior. The older nodules consist exclusively of cells and soft areola network; in them the gland elements have vanished. The hair-follicles are barren, or provided only with a thin crooked hair. The papillæ are distended with cells. The epidermic layer is thinned, while the proper connective tissue of the corium is atrophied; the muscoli arrectores pilorum, on the contrary, are hypertrophied. Outside the infiltration, the tissues are normal, or only slightly thickened. Thus we see that the neoplasm of leprosy is not unlike that of lupus, syphilis, and some other diseases. *Its mode of invading the tissues, and the stability of its elements, constitute, however, an important difference.*

The changes which occur in the nerves have been described by Drs. Carter, Danielssen and Boeck, Virchow, Hebra, and others. If one of the long nerves of the arm, for example, be examined, swellings will be found developed at intervals along its course. They are mostly situated at points where the nerve is exposed to mechanical injuries by its superficial position, or its relation to the bones; thus the median is most severely affected where it runs over the bones of the wrist, whilst the ulna is especially liable to suffer at the elbow-joint.

At the enlarged spot the normal colour of the nerve becomes changed to a dirty grey or brownish semitransparent hue; at the same time the nerve itself becomes tough and hard, and on section looks abnormally homogeneous.

Under the microscope the neurilemma of the nerve is seen to be changed, sometimes only slightly, while at others it is metamorphosed into a hard resistant mass. The most important changes lie deeper in the inner septa of the nerve-fibrillæ and in the interstitial nerve-substance. These changes begin frequently close under the neurilemma, where we find a strongly refracting mass deposited; they continue thence to the greater septa, which split up the nerve bundles into a series of smaller ones. The dark mass which fills these parts is composed of a dense accumulation of cells which are found everywhere between the individual primitive fibres surrounding and enclosing them.

Virchow says that after the disease has persisted a long time, fatty degeneration may occur, or there may be complete atrophy of the primitive nerve-fasciculi. Danielssen and Boeck found similar changes in the small nerve-branches of the skin and subcutaneous areolar tissues. The disease of the nerves thus seems to be a chronic inflammation, and the frequent interchange between hyperæsthesia and anæsthesia is explained by the more or less complete absorption of the inflammatory products. Similarly the remarkable fact is explained, that the anæsthetic area does not always tally with those of the distribution of the larger nerves, by the discovery that in the first period of nerve-disease, all the fibres of a great trunk are not simultaneously implicated. When once the growth is uniform, and there is persistent thickening of neurilemma, the anæsthesia becomes permanent, especially when atrophy or fatty changes in the nerve itself ensue.

A question arises whether, independently of other proper clinical symptoms of leprosy, the anatomical changes just described in the nerves can be regarded as strictly leprous. Bergmann says that the leprous new formations between the nerve-fasciculi, differ from inflammatory ones by the mode of their accumulation in small circumscribed groups, giving a decided resemblance to cutaneous tubercular formations. But Virchow and others hold that the atrophy of the nerve-fibres is produced, not by the leprous disease itself, but by a chronic inflammation often connected with it.

Hebra and Kaposi are of the same opinion. They admit that the

cellular infiltrations along the connective sheaths of the nerve-fasciculi and primitive fibres, the thickening of the walls of the vessels and the fatty changes and atrophy of the nerves themselves are among the symptoms of leprosy, but not characteristic of it, and that they can only be so regarded when found in connection with other signs of the disease.

Identical changes of the nerves and similar functional disturbances occur, though rarely, when nerve trunks lie near the seat of chronic inflammations, and are occasionally met with in the Barbadoes leg, in lupus, and in chronic forms of scrofulous caries and necrosis.

The lymphatics, especially the inguinal ones, are attacked in all forms of leprosy, particularly in the tuberculated variety. They become enlarged, firm, thickened, and varicose. The testicle is also sometimes attacked, and deposits of round cells are sometimes found in its substance; and, if leprosy begin before puberty, the testis is apt to remain but poorly developed.

Of internal organs, the lungs, liver, spleen, and kidneys are often found diseased, but the researches of Danielssen and Boeck tend rather to show that the changes in these organs do not specially belong to leprosy, but are rather incidental complications. The appearances these observers have found in the lung, pleura, mesentery, peritoneum, etc., admit of the inference of a tubercular origin rather than of a specific leprous affection, and it is well-known that Bright's disease is a frequent concomitant of advanced leprosy.

Complication.—The only complication of leprosy to which I shall direct attention, is scabies, so commonly met with in Norway; and which is interesting, because some observers have believed that it served as a means of propagating the disease by contagion. Norwegian scabies is a very severe form of the ordinary disease, and becomes so, simply because it is allowed to go on for years unchecked; and for the same reason, it was formerly extremely common among lepers, many of whom were more or less covered with dry horny crusts, of a dirty brown colour, and upwards of an inch in thickness. These crusts were found to be composed of the dead bodies, eggs, and other remains of acari agglutinated together; the products, in short, of twenty or thirty years of scabies piled over each other. On forcibly removing the crusts, living acari were sometimes found on the excoriated surface beneath. This disease has really nothing in common with leprosy, and occurs only in the way I have explained, through neglect.

Allied Diseases.—Some account of those diseases which are most nearly related to leprosy would be a very interesting part of my subject; but it is one which time will not allow me to dwell upon. Leprosy is undoubtedly allied, on one hand, in its pathological processes, to such diseases as scrofula, lupus, and syphilis; while, on the other hand, it is closely connected, both clinically and etiologically, with maladies of the scorbutic class: amongst these I may mention, scurvy, pellagra, ergotism, chronic-poisoning by lathyrus sativus, and, perhaps, the button-scurvy of Ireland. Now, all these are admitted dietetic diseases, and are known to depend on the persistent use of defective, or actively injurious, food; while their clinical features forcibly remind us of true leprosy. For example, the dry mummifying necrosis of the distal segments of the upper and lower limbs met with in chronic ergotism closely resembles that of anæsthetic leprosy. Again, in pellagra, we have a constitutional disease, more or less chronic, and characterised by recurrent febrile symptoms, with an eruption of red patches, and sometimes bullæ, especially attacking the skin of the face, hands, and feet, and followed by desquamation of the cuticle, leaving the skin thickened, rough, and fissured; the bullæ appear in succession, and leave behind pigmented spots. As the disease advances, there is diminished general vitality, defective nutrition, pain in the limbs, cramps, convulsive movements and atrophy of the muscles, and not unfrequently permanent discolorations of the skin. Subsequently, nervous symptoms may supervene in the form of mania or melancholy, or, as more frequently happens, death occurs from nephritis, phthisis, or some other disease. It is impossible to find another malady so closely allied to leprosy as this, both in its history and clinical features; and if we assume that it is specifically produced by the habitual use of diseased maize, we have a suggestive fact as to the influence of bad food on leprosy itself.

No one has ever succeeded in curing a case of leprosy; and however much we may hope that some drug may yet be discovered which will exercise a curative effect on the disease, we cannot but admit that means of *prevention* are more likely to be efficacious than any attempts at *cure*.

Before concluding, I desire to express my thanks to my friends Dr. Duffin, and Dr. Creighton of St. Thomas's Hospital, for their valuable assistance in translating for me various passages from the German writers of the day, several of which I have quoted in the foregoing

lectures; also to Dr. Balding and Mr. David Hepburn for their drawings.

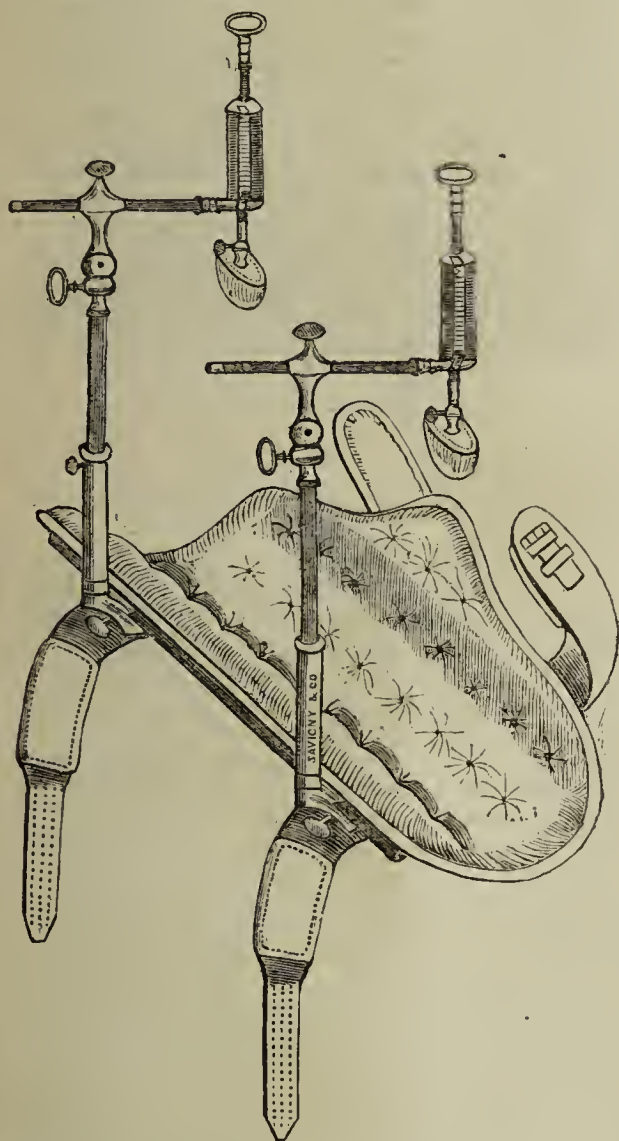
In conclusion, I beg to thank you, sir, and my audience generally, for the kind encouragement you have given me in attending lectures on a subject which must, of necessity, be uninteresting to the great mass of our profession in this country.

ANEURISM OF THE LEFT FEMORAL ARTERY: INSTRUMENTAL AND DIGITAL COM- PRESSION: RECOVERY.

By A. B. R. MYERS, Esq.,
Surgeon in the Coldstream Guards.

So numerous have been the cases of late years of successful treatment of aneurism by compression, that it seems almost unnecessary to add to the number; but, as there were in this case a few points of special interest, I think it as well to bring it before the notice of the profession.

Serjeant S., aged 39, twenty years in the service, was admitted into hospital on May 23rd, 1872, for a pulsating tumour about the size of an orange, situated on the inner side of the front of the thigh immediately over Hunter's canal, and extending slightly also into the popliteal space. The patient stated that the swelling first appeared three



months before his admission, after running up and down stairs a great deal on duty; but he did not take any particular notice of it until very recently, when, after a fortnight's duty at Aldershot, which involved much marching, the pain in the tumour and along the front of the leg became so great that he was obliged to report himself sick. He was of slight build, and nervous temperament, but a healthy man and of steady habits.

The following day, a double femoral compressor was put on the thigh, and the pulsation of the aneurism was readily arrested. From that date to July 2nd (nearly six weeks) this instrument was constantly applied without any beneficial result, beyond, perhaps, developing the

collateral circulation. For a portion of this time partial compression by one or other pad was tried; but, this not succeeding, it was made complete. Owing, however, to the pain thus produced, and the consequent restlessness of the patient, it was very difficult to keep the instrument in one position, and consequently the circulation was never completely arrested for more than two or three hours consecutively. It was then determined to try the improved femoral compressor of Messrs. Blaise and Co., and with this instrument the femoral artery was compressed with great facility against the os pubis, and with much greater comfort to the patient; it also had the advantage of being much less liable to get out of position than the other one. Unfortunately, the patient could not bear the pressure to be continued for more than a few hours at a time, and after a week's trial it had not apparently produced any beneficial effect upon the aneurism.

Digital compression over the pubes was then (July 9th) commenced (this mode of treatment not having been previously adopted, owing to the difficulty of getting proper assistance), and continued without the slightest intermission for twelve hours. On slightly relaxing it, the pulsation of the aneurism returned; then, as digital compression could not be well continued any longer by hourly relays, I replaced Messrs. Blaise's instrument, and for the following twelve hours it was kept most carefully in position; occasionally, when the patient found it unbearable, it was relaxed by one nurse whilst digital pressure was kept up by another. On again examining the aneurism as before, pulsation had evidently diminished, and the sac felt more solid.

Mechanical pressure was now partially reapplied, and on the 13th pulsation had entirely ceased. From this time nothing untoward occurred, and the patient was discharged from hospital, on August 15th.

The chief points in this case to which I wish to draw attention are the unusual situation of the aneurism; the length of time mechanical pressure was applied without avail; the ultimate satisfactory result of combining mechanical with digital pressure; and the great value of Messrs. Blaise's instrument in the treatment of this disease.

THE SANITARY STATE OF ROME.

By LAUCHLAN AITKEN, M.D., Rome.

[Concluded from page 312 of last number.]

ALLUSION has already been made to the probable causes of the prevalence and fatality of pernicious intermittent fevers among the unacclimatised labourers who have flocked to Rome from all parts of Italy. The Municipal Council has now seriously turned its attention to the subject, and it is to be hoped that before long better and cheaper accommodation may be provided for the working classes, a small beginning having already been made by the mayor, who recently signed an agreement with a building society, according to which 6,000 rooms for the poorer classes are to be finished within thirty months. For the present, too, the fear of further inundations from the Tiber has disappeared; and, as the government is engaged in examining the different projects for the avoidance of such disasters in future, and is prepared to take action so soon as a feasible plan is selected, it may be confidently anticipated that this oft-recurring cause of increased sickness and mortality among the poverty-stricken inhabitants of the low-lying districts of the city will soon be remembered only as a danger of the past. It is certain that the terrible flood of 1870, which submerged the streets in a great part of Rome, has been highly instrumental in causing the increased death-rate of the last two years.

There is, however, another important factor to be taken into account in explaining the increased mortality of late years from pernicious intermittents. It is well known that the shepherds and farm-labourers of the Campagna—men whose lot in life is a most miserable one—are the classes who mainly suffer from virulent types of ague, and who, when attacked, are usually brought into the hospitals of Rome in many cases only to swell their death-returns. It appears from the census taken at the beginning of last year, that the combined number of agricultural labourers and shepherds in the Agro Romano is now over 20,000, while in 1853 there were only 3,700 of the same classes of the population; and as the condition of the Campagna has undergone but little change during the intervening years, there must now be a larger proportion of cases of intermittent fever admitted into the hospitals from the country round Rome. It is possible that this marked addition to the population of the Agro Romano may be in part fictitious, and due to the season of the year in which the last census was taken: that of 1853, ordered by Pope Pius IX, extended over a prolonged period, while the census of 1872 was begun and ended in a single day in midwinter, when the population of the Agro Romano is at its maximum. But even granting a possible error from this cause,

it is quite obvious that the whole increase of inhabitants which the census demonstrates cannot thus be explained.

Typhoid fever, under which head are included apparently more than one variety of continued fever, is neither more prevalent nor more fatal in Rome than in several of the larger capitals of Europe, such as Berlin and Vienna; but it is, unfortunately, impossible to compare the mortality from the disease in 1872 with that of the whole preceding year, as the necessary data for 1871 have only been supplied for the six months of that year, beginning with May. During those six months, the death-rate from typhoid fever in 1871 was materially higher than in the same period of last year. The water-supply of Rome is still good, though by no means so abundant as in the days of its great glory. All its chief sources are ancient and well known, though often cut off and renewed. The four principal waters are the Acqua Vergine, or Trevi, so called from supplying the famed fountain of that name; the Acqua Felice, the Acqua Paola, and the Acqua Marcia; the first and last named being much the most pleasant to drink, and containing least organic matter. In one litre of the water of Trevi there are fixed principles to the extent of gr. 0.26381; in the same quantity of Acqua Felice, gr. 0.27045; and in the Acqua Paola, gr. 0.14084, chiefly chloride of sodium, carbonates of lime and magnesia, and sulphate of soda. The Acqua Trevi contains more gaseous elements than the other two. Of the Acqua Marcia, re-introduced into the city only in 1870, no good analysis has as yet been published. It is to be feared, however, that all the three waters, Acqua Trevi, Felice, and Paola, receive organic impurities; the Acqua Trevi from the aqueduct in which it runs, being open here and there in the Campagna; the Acqua Felice at its source, and the Acqua Paola on the Janiculum, as Professor Scalzi points out, in an article on the subject in the *Giornale Medica di Roma* for December, 1869. There are besides several other sources of water-supply of minor importance, and many wells, unfortunately still in use, within the walls; but as regards the quantity, no city in the world is better off than Rome, as the four chief aqueducts alone provide 1,439 litres, or 317 gallons per day, for each inhabitant.

The present article would not be complete without some reference to the chief meteorological features of the year; and those I have been able to obtain from the observatories of the Capitol and of the Collegium Romanum, and now present in the following table.

Table showing the Temperature, Rainfall, and Deaths in each Month of the Year.

[The observations on the temperature were made at the Capitol at a height of nearly two hundred feet above the level of the sea; those on the rainfall at the Collegium Romanum at a height of one hundred and sixty-two feet above the level of the sea.]

1872. Month.	TEMPERATURE.*				RAIN.		DEATHS.		
	Highest Day Temperature.	Lowest Day Temperature.	Mean Temperature.	Mean monthly range.	Number of days it fell.	Amount in inches.	Daily average.	From prevalent zymotic diseases,†	Total.‡
January ..	60.8	26.6	46.7	12.6	13	3.622	34	288	1041
February ..	57.7	34.5	50.3	13.6	14	3.385	27	220	782
March	64.7	35.7	54.6	13.6	15	4.527	26	208	792
April	73	43.5	59.9	15.4	9	2.952	25	163	758
May	84.2	46.5	66	19.2	8	2.322	24	201	742
June	85.3	51.9	71.7	17.4	5	1.889	27	147	810
July	92.1	57.7	79.1	18.9	1	0.118	27	164	839
August ..	89.9	59.1	78	19	3	1.181	29	237	911
September.	88.5	50	74.4	18.9	3	3.582	30	230	890
October ..	75.9	48.2	66.5	14.2	16	9.370	26	158	808
November	68.3	37.4	55.2	14	14	4.133	27	139	818
December.	75.7	35.7	53.7	13.3	15	4.015	25	137	786
Total					116	41.096	27	2292	9977

Temperature.—The mean temperature of all the months of the year, except May, June, and July, was above the average mean monthly temperature, as deduced from the observations taken at the Collegium Romanum for the ten years from 1863 to 1872 inclusive. May and June were slightly colder than usual, while July had almost exactly the average mean temperature. March, October and December, were remarkably hot months, and their mean temperatures were greatly in excess of the average.

Rainfall.—The amount of rain which fell at Rome in 1872 exceeds the average rainfall taken from eighty-five years observations, by nearly ten inches. Much of this excess of rain fell in March and October,

when double the mean quantity for those months was registered; but January, February, April and September, were all wet months, their rainfalls considerably exceeding the average. The number of rainy days throughout the year was one hundred and sixteen, or fourteen more than the average in the last ten years.

Winds.—The prevailing winds of the year were directly north or south. For periods of four hours observations the north wind was registered four hundred and nine times, the south wind four hundred and thirty-five times, in the eleven months of the year ending with November. The next most prevalent directions of the wind were S.W. and W., chiefly in the five months from May to September. December presented the peculiarity that for the first twelve days the wind blew steadily from the south and south-east, while from the 13th to the end of the month the direction was just as persistently from the north and north-east.

Births.—The birth-rate in Rome has often been stated to be exceedingly low by those who have not noticed that, according to the census returns, the city contains a surplus male population of over 34,000 souls. This excess of males is usually supposed to be due to the number of unmarried men belonging to the priesthood, and to the various monastic orders; but as there are only about 3,600 members of both these classes, we can thus account for but an insignificant part of the surplus. The garrison of Rome does not amount to 6,000 men; and indeed the true explanation of the large excess of males is found in the fact, that the shepherds and farm labourers inhabiting the Agro Romano outnumber the female population there by nine to one, there being 18,000 males to 2,000 females. True, a great number of those men are married; but, as most of the wives live elsewhere, their children are not registered in Rome, and the birthrate, as compared with the population, is thus proportionately diminished.

In the past year there has been a considerable improvement in the birth-rate, as it has risen from 25.4 per 1000 in 1870, and 27 per 1000 in 1871, to 29.4 per 1000 in 1872. The number of male children born is surprisingly large, the proportion for the year being 111 boys to 100 girls, which is very much above the average excess of male births in civilised countries. In close relation to this high proportion of male births, we find that the still-births among the boys outnumber those among the girls by two to one; and on deducting those still-born children, the proportion of boys to girls born alive is reduced to 109.2 to 100.

ON THE TESTING OF FLOUR AND BREAD.

By J. ALFRED WANKLYN.

In the course of my work for the chemical section of a Manual, which Messrs. Smith and Elder are publishing, for the Guidance of Medical Officers of Health and Public Analysts, I have had occasion to make some original observations on the subject of flour and bread, which appear to be called for at the present time. Notoriously, the detection of alum in bread is beset with difficulties, and is in a very unsatisfactory condition. This depends partly on the excessively small proportion of alum which is put into bread, and partly on the difficulty in dealing with alumina in presence of the ash of bread, which, as is well known, contains phosphoric acid, along with magnesia and lime, as well as silica. It has already been insisted upon by various authorities, that the testing for alum should not be on too small a scale: 100 grammes of flour or 200 grammes of bread appear to me to be proper quantities to operate upon; and I find that similar quantities have been recommended before. The novelties that I am introducing are, first, the acceleration of the incineration by the use of a jet of oxygen gas directed on the ignited mass. This is by no means unimportant, inasmuch as otherwise the task of incinerating 100 grammes of flour might last for a few days. Secondly, instead of using nitric or hydrochloric acid for the attack of the ash, I use sulphuric acid; and, thirdly, I use weighed quantities of reagents, and as little as possible of them, and at the same time avoid all unnecessary dilution. Attention to these particulars renders the detection of alum in bread a certainty. I will give an outline of the process.

The ash from 100 grammes of flour weighs 700 milligrammes, and, in a case of aluminised flour, may contain some 30 milligrammes of alumina in addition. I moisten this ash with a measured 0.5 cubic centimetre of oil of vitriol, then heat up until the oil of vitriol begins to volatilise, whereby the silica is rendered insoluble and the attack of the alumina in the ash is insured. Having done this, and allowed the ash to cool, I dilute with a little water and filter. The filtrate is then treated with 1½ gramme of pure caustic potash, which renders it alkaline and redissolves the alumina. The solution is then filtered, and

* Taken six times daily: at 7 and 10 A.M., and at 1, 4, 7, and 10 P.M.

† Only approximately correct, owing to the causes of death being returned as per week.

‡ Stillbirths alone deducted.

the filtrate treated with $1\frac{1}{2}$ gramme of chloride of ammonium, and boiled and allowed to stand, whereupon the alumina is precipitated as phosphate of alumina, which admits of being got on a filter, washed, ignited, and weighed.

The advantage gained in this instance by using weighed quantities of reagents, and by avoiding dilution, will commend itself to chemists, who will not fail to recognise that, though there be difficulty in insuring that an indefinite quantity of acid and alkali shall be quite free from alumina and silica, there is not much difficulty in getting 1 gramme of sulphuric acid, $1\frac{1}{2}$ gramme of potash or soda, and $1\frac{1}{2}$ gramme of chloride of ammonium, so as collectively not to contain a couple of milligrammes of alumina or of silica.

The testing whether flour be sound or not by the strength of the aqueous extract is not new, but has been developed and rendered easily practicable in the course of my experiments. The basis of the method is, that in sound flour there is very little sugar and dextrine, but that in unsound flour there is either much sugar and dextrine, or else that a short exposure to the action of water converts much of the starch of the flour into dextrine and sugar. In the space of an hour and a half, I can by a little management make a determination of the quantity of extractive given by a sample of flour. I take 100 grammes of the flour, mix it well with some water, and then dilute the whole mass with water until it occupies exactly half a litre. I then pour it on a dry paper filter in a dry funnel, whereupon the liquid runs through tolerably rapidly at first; by and by, as is known, such a filter will become clogged up, but not until at least some 50 cubic centimètres of filtrate have run through. These may be measured and evaporated down to dryness in the water-bath, and the residue weighed. Ten times the residue yielded by the 50 cubic centimètres is equal to the amount of extractive yielded by 100 grammes of the flour. The extractive furnished by 100 grammes of sound flour is 4.69 grammes. Of this, 0.44 gramme is ash and 0.92 gramme vegetable albumen, leaving 3.33 grammes of dextrine, sugar, and gum. If sound flour be left for twenty hours in contact with cold water, and then the aqueous extract be taken, it will be found to be increased somewhat: I found it to be 6.01 grammes. In unsound flour, Odling has found 12 and 18.2 grammes of extractive per 100 grammes of flour. I believe that Odling first proposed the determination of the amount of extractive yielded by flour to cold water as a test of the soundness of flour. I am inclined to the belief that this test may be made very practicable and valuable.

METHYLENE ETHER AS AN ANÆSTHETIC.

By J. O. BROOKHOUSE, M.D., Surgeon to the Eye Infirmary, Nottingham.

SINCE a more prominent professional attention has been generally directed to the subject of anæsthetics, in consequence of the number of recent fatal accidents with chloroform, I have made use of Dr. Richardson's new compound, methylene ether (C^2H^5) $_2$, CH^2Cl^2 , specific gravity 1000, prepared by Messrs. Hearon, Squire, and Francis, of Coleman Street, London. The opinion formed is deduced from a limited number of cases, and would have been valueless, by reason of such limitation, had it not happened that the special lethal influence of the agent was manifested on more than one occasion.

The ether was given on a wire skeleton mask covered with one thickness of flannel closely fitting the nose and mouth; over this was then laid one fold of an ordinary towel. The majority of the patients were under twenty years, and all free from vital organic disease. The following are some of the cases and facts observed.

CASE I.—H. B., aged 26, married woman. About three drachms of ether were used. Anæsthesia was produced in three minutes. The time of operation was two minutes (the operation was for closed pupils). The pulse was 104 before, during and after operation. Respiration was unaffected. The facial aspect was unchanged. There was no excitement. The time of recovery was four minutes. The sickness was very slight.

CASE II.—C. Y., aged 17, single woman. About three drachms of ether were used. Anæsthesia was produced in two minutes. The time of operation was six minutes. The pupils were medium-sized and fixed. The pulse before operation was 84; it fell to 60 during the anæsthesia, and became intermittent. The respiration was slow and very feeble. The face was pale. Excitement was small. She recovered in four minutes, and was subsequently very sick. The symptoms shown by this girl were most alarming.

CASE III.—W. S., a boy aged 13. About three drachms of ether

were used. Anæsthesia was produced in three minutes; he was under its influence three or four minutes, when the pulse fell away quickly—14 beats per minute. He was allowed to recover, when the pulse rose 20. He was put under a second time, without any alteration of pulse, rate or quality. His face was flushed; the lips purple in colour. The excitement was very slight. The time of recovery was four minutes. He was afterwards sick.

CASE IV.—L. T., a girl aged 11. About one drachm of ether was used. Anæsthesia was produced in two minutes. The pulse was 100 before and during insensibility. The excitement was very slight. Recovery was quick. The face was flushed; the pupils contracted. This girl had the ether three days before, and took it well.

CASE V.—R. C., a boy aged 5. About two drachms of ether were used. Anæsthesia was produced in a minute and a half. The time of operation was three minutes. There was no excitement. The pupils were medium-sized and fixed. The pulse was 120 before employing ether (this boy was nervous and frightened); it fell 16 per minute during insensibility. The respiration was unaffected. The face was pallid. He recovered in five minutes.

CASE VI.—C. M., a girl aged 15. About four drachms of ether were used. The time in producing anæsthesia was eight or ten minutes; of operation, five minutes. The pulse before the operation was 104; during the inhalation of ether, it fell to 78, and was unsatisfactory in quality. The respiration was not specially affected. The face was suffused and purple, with marked capillary blood-stasis. Recovery was quick. He was subsequently sick. This patient did not take the ether well. As soon as she began to get fully under its influence, her pulse fell away; whilst, if only under it in a degree hardly less than dangerous, she struggled. She was a fine, well developed girl, and, during partial unconsciousness, manifested feelings of a sensuous character.

CASE VII.—C. B., a girl aged 16. About three drachms of ether were used. Anæsthesia was produced in five minutes; she was under its influence eight minutes. The excitement was small. The pupils were medium-sized and fixed. The pulse before the operation was 96; it fell to 68, and was small and weak. The respiration was not specially affected. The face was suffused and purple; capillary congestion was marked. She recovered quickly, and was subsequently sick.

All the above patients were in the recumbent posture, and their dress was loosened about the neck and chest.

It appears clearly, therefore, from these cases, that this ether is a direct paralysing of the heart, and not certainly in any less degree than chloroform. This, indeed, so far as I can judge, is its only objection; whilst in many ways it possesses advantages. It is quicker in its action and time of recovery. Sickness, although almost always present, is not so persistent; and the patient does not complain of feeling so altogether "seedy". It does not blister the skin. The leading question, however, is the question of comparative safety; and if this, as I fear, cannot be answered satisfactorily, the anxious expectancy of the profession and public is still indefinitely continued.

THERAPEUTIC MEMORANDA.

CARBOLIC ACID DRESSINGS.

I HAVE watched with great interest the recent communications in your paper on the above subject, and am bound to say I feel considerable difficulty in explaining to myself the different statements regarding this (in my estimation) most valuable agent. Might I, therefore, take the liberty to give my experiences on the matter? For the last five or six years I have used carbolic acid in almost every possible form and under the most varying circumstances, and always with the most happy results. In wounds, accidents, and surgical operations, I invariably use it either in the form of lotion or mixed with oil, or the acid undiluted. In the latter case, I consider it acts as a caustic; and in all cases where I have had a dirty unhealthy wound to deal with I have found it to serve my purpose well. Recently I used the pure acid in a case where sloughing took place after the operation (flap) on the leg. Under its use in a short time the sloughs were thrown off, and the wound filled up rapidly with healthy granulations. The stump is now progressing most favourably under a dressing of carbolic acid and oil (one pint in twelve). In this case there is no perceptible change in the urine. In conclusion, I beg to state that I have never observed the slightest symptom of injurious action in all my varied experience in the use of this valuable agent.

E. CROCKETT,
Chief Surgeon, Cyfarthfa Ironworks.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC
INSTRUMENTS, AND RECENT IMPROVE-
MENTS IN THEIR APPLICATION:WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE
MEDICAL PRACTITIONER.

III.

Mayer and Meltzer's Farado-galvanic Apparatus.—Stöhrer's Hospital, Portable, and Electrolytic Batteries.—Constant Battery of the Galvano-faradic Manufacturing Company of New York.—Batteries of Dr. Jerome Kidder of New York.

MESSRS. MAYER and MELTZER, of 59, Great Portland Street, W., have had the ingenious idea of combining a constant battery of considerable power with an induction-apparatus in the same box. Their instrument is, therefore, complete for all purposes of medical electricity. It has, however, yet to be shown whether there will be any real advantage to country practitioners in this arrangement, as it might be objected to it that, where the practitioner has two instruments, one for galvanisation and another for faradisation, and one of them were to get out of order, he would not be entirely deprived of some source of electricity while the one instrument was being repaired; while, if anything happened to the combined arrangement, he would be altogether bereaved for a time. We do not say this by way of disparagement of Mayer and Meltzer's idea, which deserves all praise, but merely to suggest that there are two sides to the question, and that it is well for the practitioner to weigh them both before deciding on purchase. (Fig. 8.)

The constant battery in this box is a modification of Bunsen's pair—viz., carbon and zinc, charged with diluted sulphuric acid (1 in 20). The carbon seems to be of a particularly good kind, as it is not nearly as fragile as Stöhrer's carbon, and generates a more powerful current than the latter. The battery is charged by lifting up the handles 1 and 2, and filling the cells rather less than half with the charge. They are then replaced, so that the fluid and the plates are not in contact. For putting the battery into action, there is a lifting arrangement, which raises the cells so as to make the liquid touch the plates, whereupon the galvanic current commences to flow. In the first specimens of this battery, the manufacturers had arranged the leverage on the outside of the case, so that every knob that was depressed, raised a tier of four plates. In the present arrangement, however, nothing is projecting outside, which is a great improvement. The cells are raised by pulling up metal rods inside the battery. There is a dial with an index for selecting the power that may be required; and we have suggested to the manufacturer a slight change in its arrangement, so as to avoid the occurrence of voltaic shocks on increasing or diminishing the current. There is also a commutator or current-reverser on Stöhrer's principle, the central block in which is made of vulcanite. A galvanometer shows the condition of the battery. A valuable addition is an arrangement similar to that of Tripier's double collector (*vide* this Report, No. 1, p. 45), which allows one to branch off for use any cells in the circuit, so that the chief strain is not, as in almost all other machines, put on the initial pairs of the battery. The chemical action is thus more divided, and the instrument can be used much longer than if the initial pairs always formed part of the circuit.

The induction-apparatus is put in action by turning the lever No. 5 so as to cover the two brass pins. This establishes the contact between the battery and the coil, and the familiar musical sound indicates that the faradic current is induced; 6 and 7 are the studs for the primary, and 8 and 9 for the secondary current. The intensity of either current may be increased by passing an index along the semi-circular row of pins marked from 1 to 12. The graduations are sufficiently extensive for allowing the use of a current which is hardly perceptible on the tongue and face, and all intermediate degrees up to a point which would not be relished by the most hardened garotter. The price of this instrument, which is, in its latest development, a perfect piece of workmanship, is £12 : 12.

The prototype of most portable constant batteries is that which has been constructed by Dr. Emil Stöhrer of Dresden, to whom the merit is due of having been the first to devise a handy and really useful machine for administering the continuous current. Stöhrer has con-

structed four kinds of constant batteries, apart from the chloride of silver battery which has already been mentioned. These are the portable, the hospital battery, the electrolytic battery, and the one for the galvanic cautery. With the latter of these we have nothing to do at present.

a. The *portable battery* is made up of twenty cells and thirty cells (Fig. 9), the prices being £8 : 8 and £11 : 11. It is a modification of Bunsen's pair, and consists of plates of carbon and zinc suspended on a wooden carrier, and vulcanite cells filled with diluted sulphuric acid (1 in 8 or 10), with the addition of a small quantity of bisulphate of mercury for keeping the zincs amalgamated. The cells being only half filled with the exciting liquid, there is no fear of spilling the latter, if ordinary care be taken. The cells are kept on the bottom of the case when the battery is at rest; and they may be lifted up by a rod of ebony wood, so as to come into contact with the plates when it is desired to use the battery. When the rod is lifted up, a quarter of a turn given to it places it horizontally, and keeps the cells suspended. All this time, the current is circulating. At the end of the application, another turn it given to the black rod, and the cells are lowered again, so as to disconnect them from the plates.

Those parts of the battery on which chief ingenuity has been expended, and which have been extensively copied both in Europe and America, are the sledge or current-selector, and the commutator or current-reverser.

The sledge is a square piece of wood, which can be made to slide on the plate-carrier. This latter is marked with figures progressing from the left to the right side, and indicating the number of cells to be used. The sledge should be so placed that it covers three of the wires visible on the plate-carrier; and the middle one of these then indicates the number of cells in the circuit. If we omit taking this precaution, there is collateral closure of circuit between two adjoining pairs, in consequence of which there is a copious development of gas, and the battery is more or less injured. At its lower surface, the sledge is furnished with two metal rails, which are long enough to touch the next pair of plates before the preceding one is left. This arrangement has the advantage of avoiding voltaic shocks on increasing or diminishing the power of the current, which is an important consideration, inasmuch as voltaic shocks, when given about the face and neck, give rise to giddiness and dazzling sensations of light, which is quite unnecessary and very disagreeable. In cases of hemiplegia owing to recent cerebral hæmorrhage, they may even be dangerous.

The commutator is a roller of brass, divided in two parts by a central piece of ebony wood; the two parts are in contact with two springs which are connected with the rails of the sledge. The roller may be turned by means of a handle; and the studs for the insertion of the conducting wires, which are fixed at each side of the commutator, may thus be alternately placed in contact with the anterior and posterior surface of the rails. If the handle be placed perpendicularly, there is no metallic contact at all, and the circuit is therefore broken; when the handle is turned back, the stud on the right hand of the observer is in contact with the carbon, and is therefore positive; but, when the handle is turned to the front, the stud on the right side becomes negative. This may be easily verified by electrolysis water, when hydrogen will be seen to bubble up alternately at the right and the left side, according to the position of the handle of the commutator.

In the lid of the box is a small compartment for electrodes and conducting wires; and it also contains a key and hook for undoing the plates if required.

Stöhrer's portable battery keeps in good condition for about three months, if it be daily used. It is rather less subject to polarisation than most of the other portable batteries. Occasionally, especially in hot weather, the addition of a little fresh water to the liquid in the cells is to be recommended, so as to replace the water which has been lost by evaporation. If the current do not appear to be perceptibly refreshed by the addition of water, a new charge must be put in, and the sulphate of zinc, which is found adhering to the plates, must be removed. If the battery be well treated, it ought to last for twenty years.

b. The *hospital battery* consists of thirty or forty pairs of plates, contained in an oak case (Fig. 10); the prices being £8 : 8 and £10 : 10. It is much heavier than the one just described, from which it also differs in some other particulars. The cells are not of vulcanite, but of glass, and are placed on a tray, which is divided into two portions, each one of which carries fifteen or twenty glasses. The tray is raised much in the same manner as in the portable battery, and fixed by a turn of the black rod. There are a sledge and a commutator. This latter differs from the one in the portable battery. It consists of a wooden roller carrying two bent springs, the anterior ends of which touch the edges of two copper bows. Opposite to these latter, there

Fig. 13.—Kidder's Twenty-cell Battery.

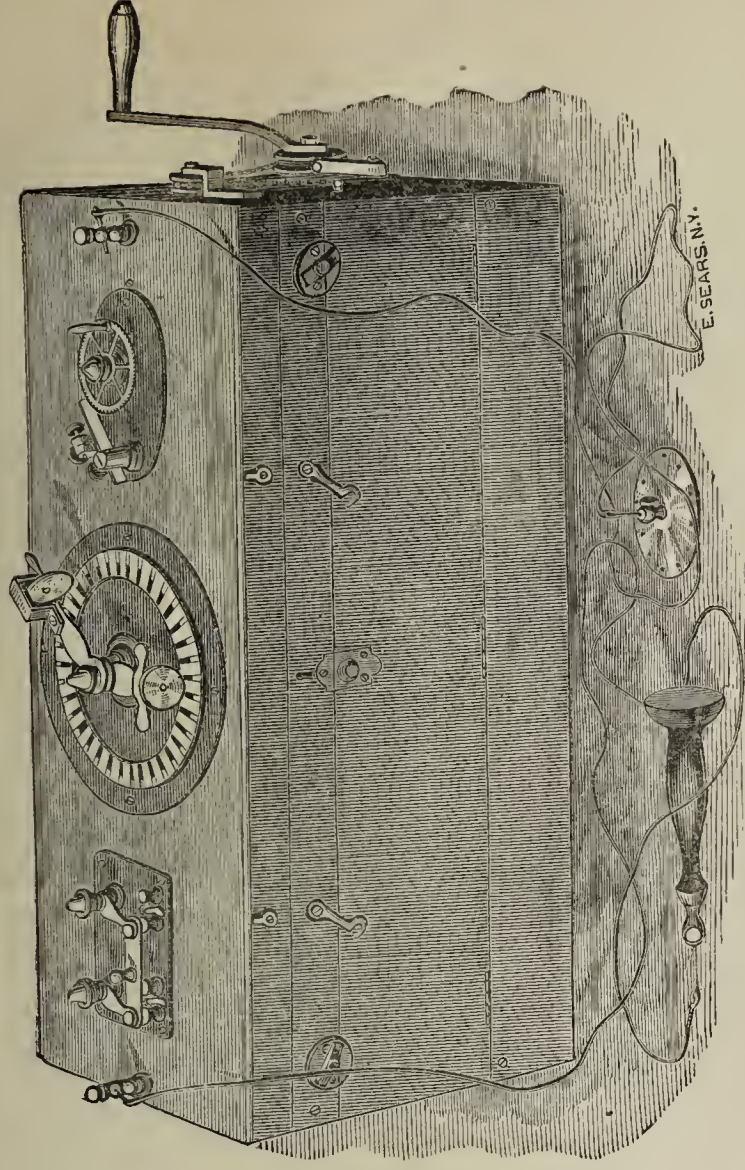


Fig. 14. Kidder's Thirty-six-cell Constant Battery.

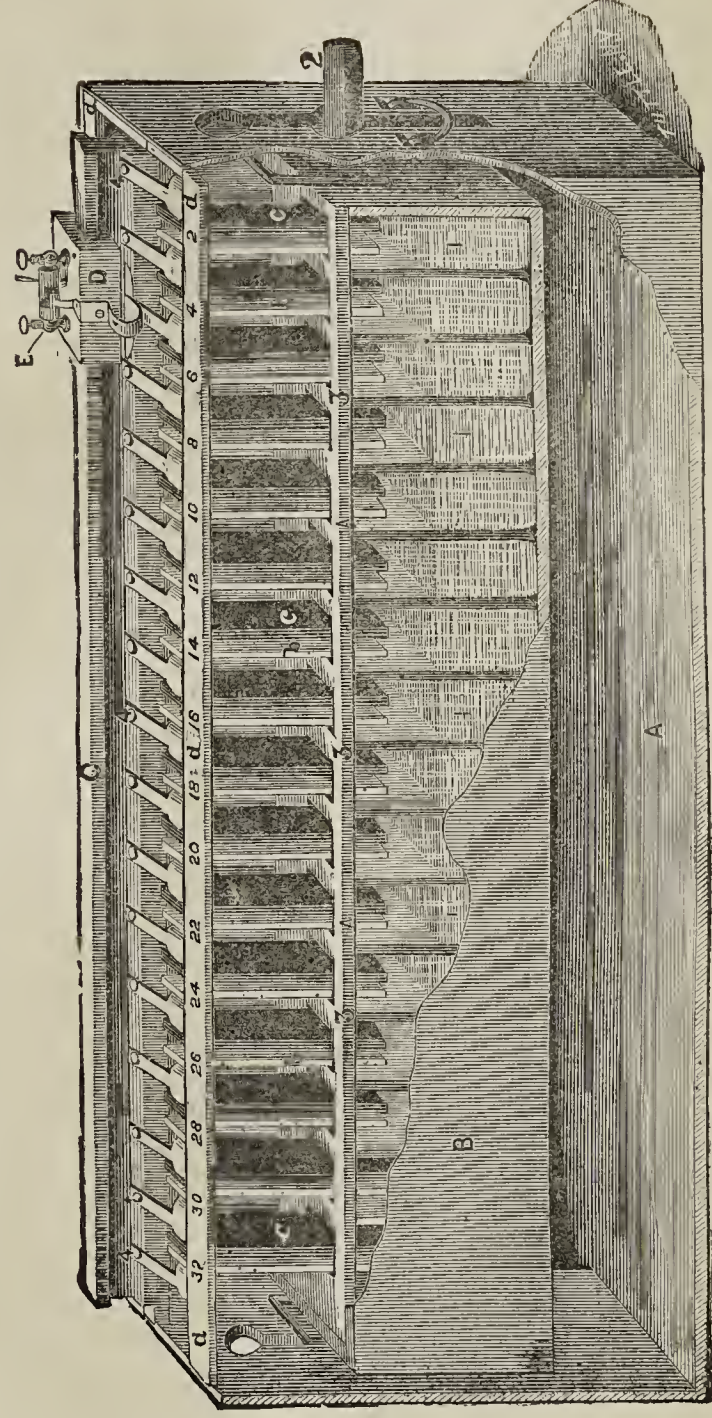


Fig. 11.—Constant Battery of the Galvano-Faradic Company in New York.

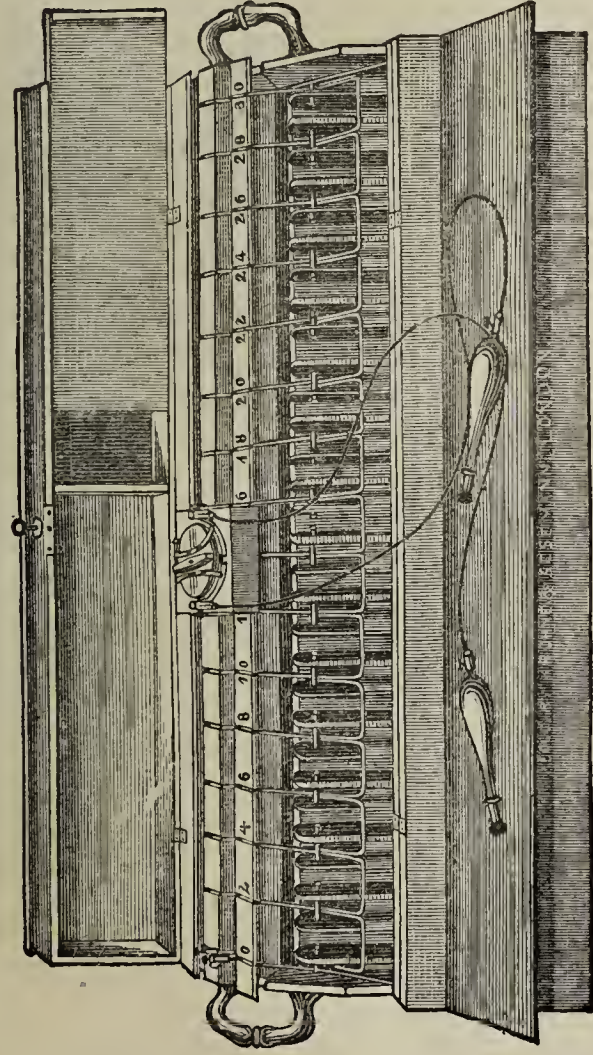


Fig. 10.—Stoehrer's Hospital Battery.

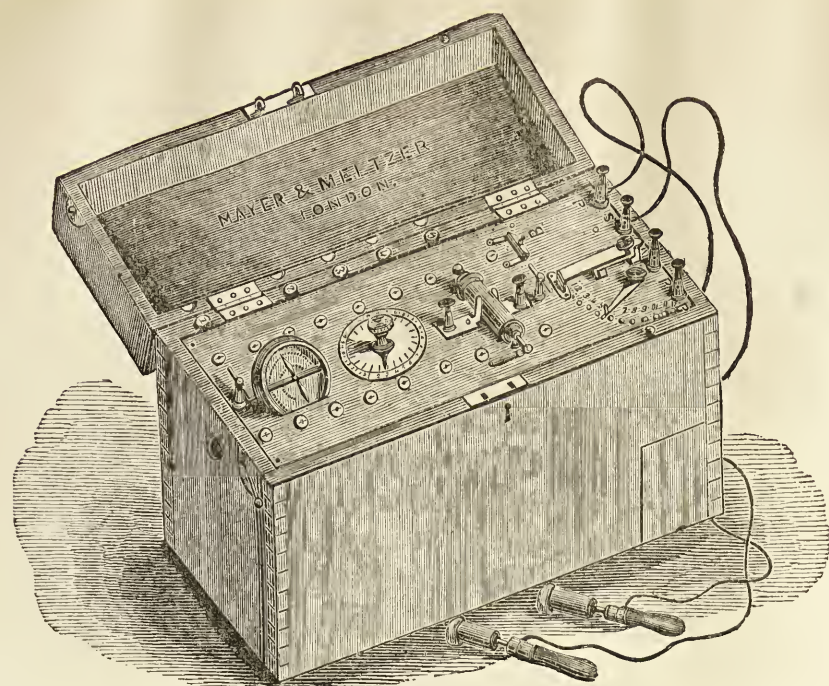


Fig. 8.—Mayer & Meltzer's combined Galvano-Faradic Machine.

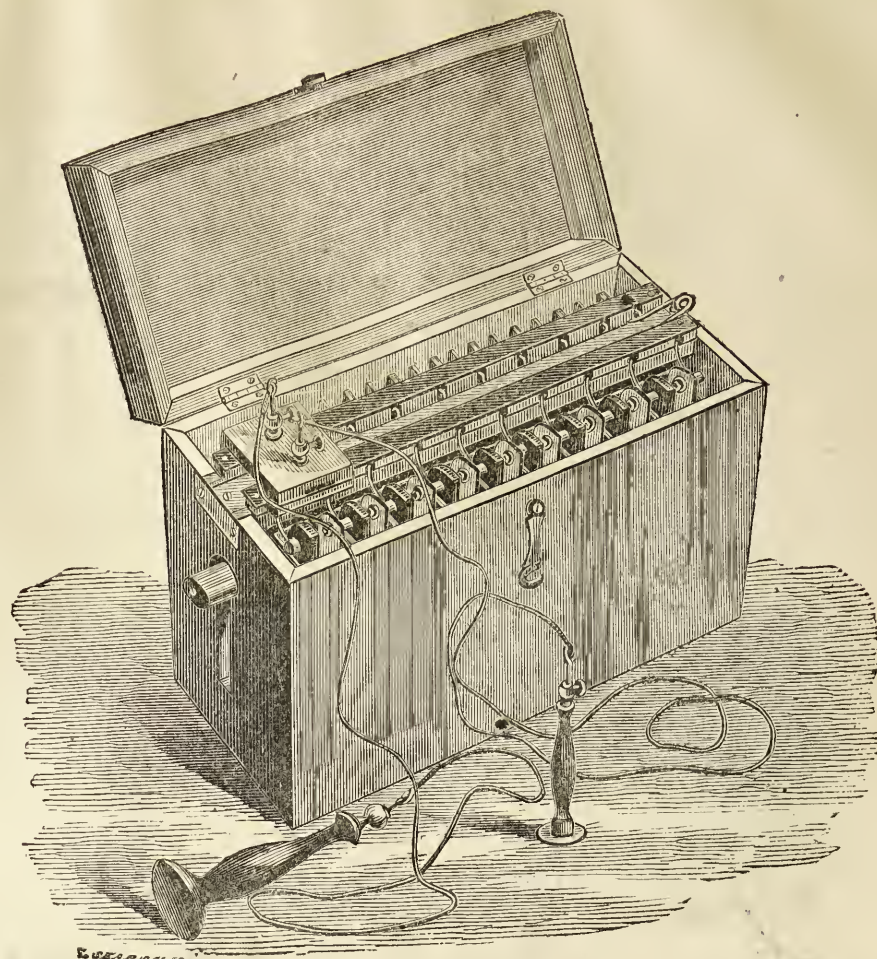


Fig. 12.—Kidder's Twelve-cell Battery.

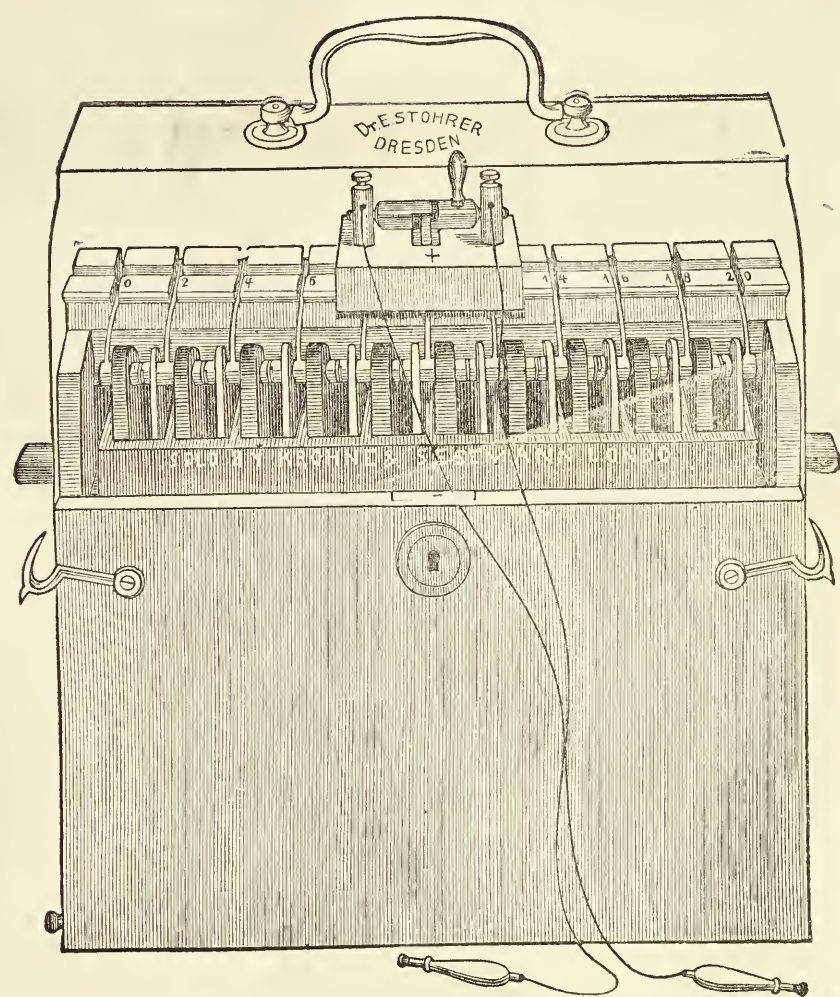


Fig. 9.—Stœhrer's Portable Battery.

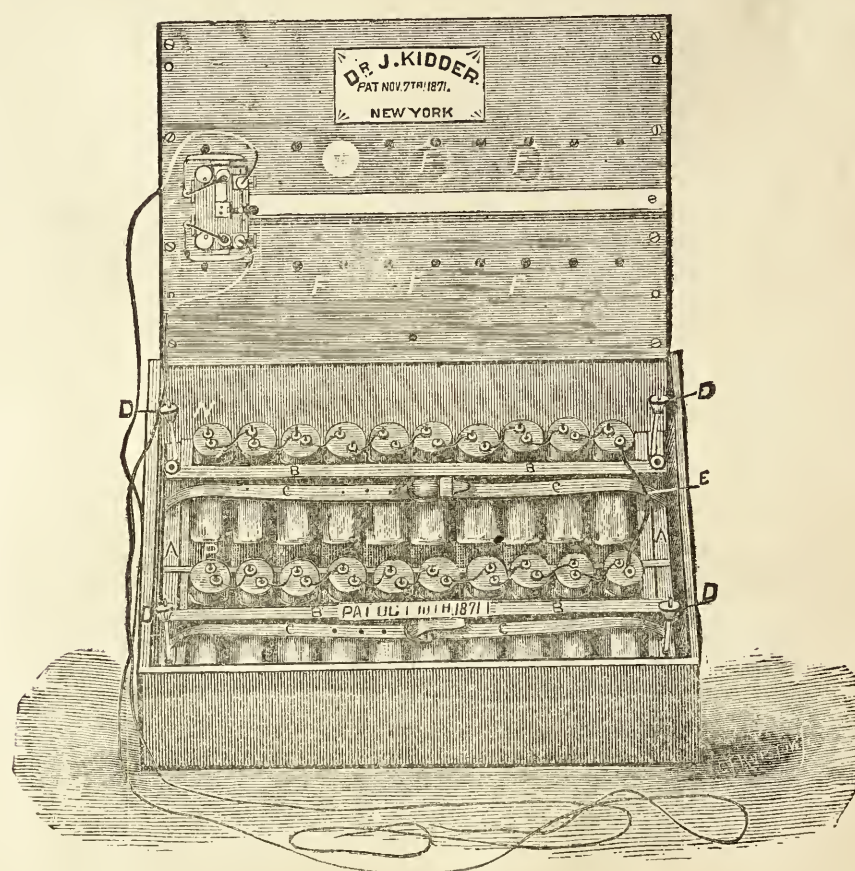


Fig. 13.—Kidder's Twenty-cell Battery.

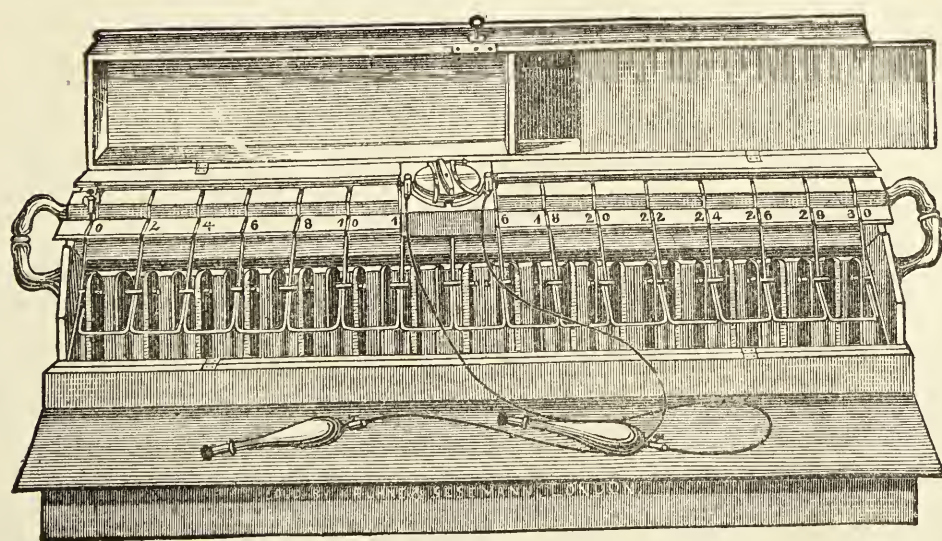


Fig. 10.—Stœhrer's Hospital Battery.

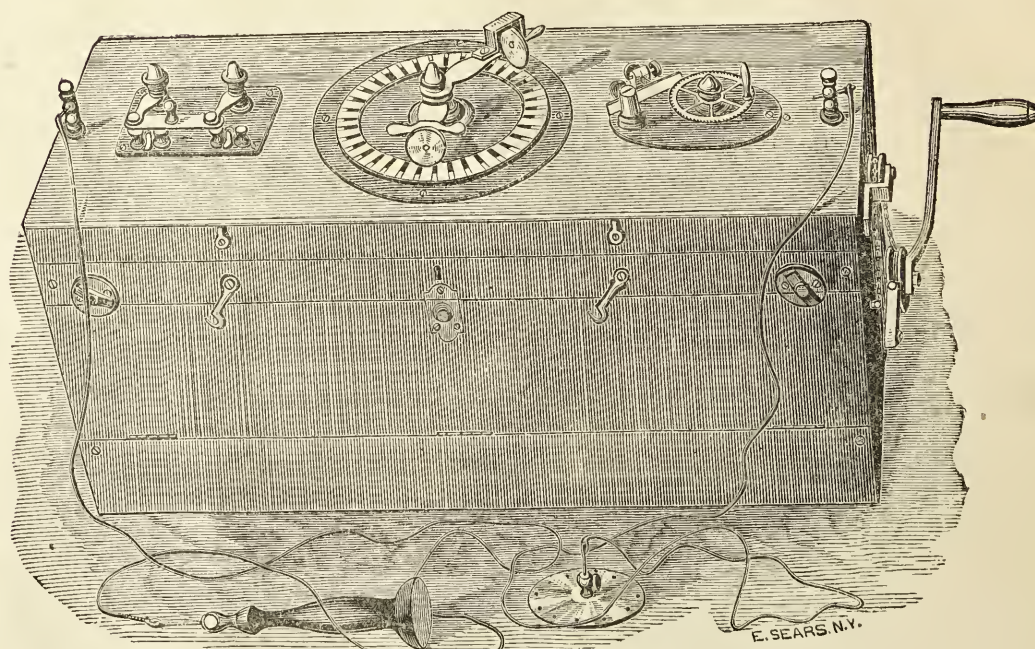


Fig. 14. Kidder's Thirty-six-cell Constant Battery.

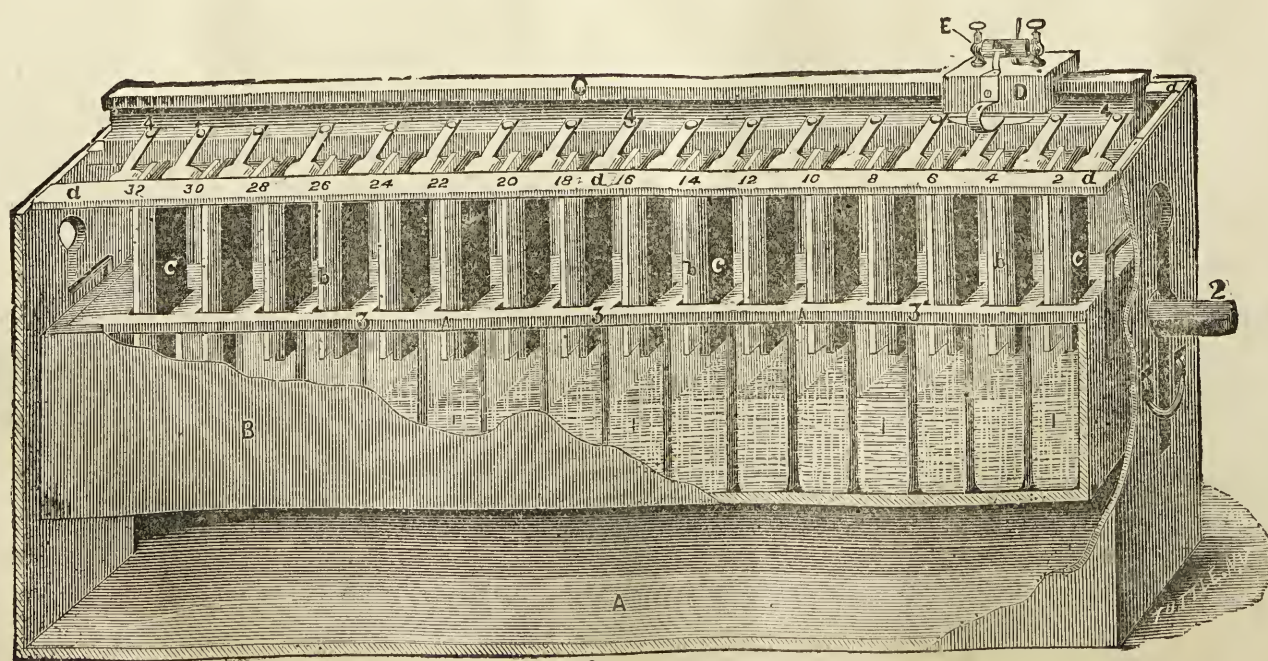


Fig. 11.—Constant Battery of the Galvano-Faradic Company in New York.

are three metallic knobs, which come in contact with the posterior ends of the bent springs of the roller when this is turned either to the right or to the left side. If the roller be placed perpendicularly, the springs and knobs do not touch, and the circuit is therefore broken. On the lower surface of the sledge, there are two metallic rails, which fit into the groove of the plate-carrier. The two external knobs of the commutator are connected with the anterior rail, and the central knob with the posterior rail. If the roller of the commutator be turned to the right, the right stud is negative, and the left positive; while, if it be turned to the left, the direction of the current is reversed.

c. The *electrolytic battery* differs from the hospital battery chiefly by the size of the plates and glasses, which is double that of the other; so that a correspondingly larger surface is immersed, whereby the chemical effects are proportionately increased. The action is further intensified by the addition of a somewhat concentrated solution of chromic acid to the ordinary charge of the battery. This solution should have a claret colour, and two drachms of it are sufficient for each cell. The electrolytic battery contains twenty pairs of plates, and costs £6.

Stöhrer's batteries will always command the respect of the profession, not only because they were the first which fulfilled the important desideratum of portability, but also on account of their sound workmanship. We must, however, not shut our eyes to the fact that they, as other portable batteries, are liable to polarisation; and, secondly, that the carbon used in them is fragile. The battery, therefore, requires very tender treatment, more especially as the black rod, which is projecting outside both ends of the battery, somewhat facilitates the reception of accidental injuries. This is not merely theory, but we speak from actual experience. Stöhrer's instruments would be much improved by using a harder kind of carbon, by introducing leverage inside the box, and by the addition of a galvanometer. In London, Stöhrer's batteries may be procured from Messrs. Krohne and Sese-mann, 8, Duke Street, Manchester Square, W.

Our American cousins have of late years been forward to emulate European manufacturers in the production of constant batteries, for which there appears to be an enormous demand on the other side of the Atlantic. Medical electricity seems to be altogether on a different footing in the United States from what it is as yet in the old conservative countries of Europe, Germany alone excepted. Not only is it far more extensively resorted to as a therapeutic agent than is the case in England, but there are an Electro-Therapeutical Society and a Galvano-Faradic Manufacturing Company established in New York. The constant batteries made by the latter seem to be very well constructed. Their thirty-two-cell machine (Fig. 11) is a modification of Stöhrer's, consisting of tin and carbon plates, and having an arrangement by which the cells containing the charge may be raised up to, or lowered from, the plates. The commutator, sledge, and other arrangements, are the same as in Stöhrer's batteries.

Dr. Jerome Kidder's batteries are, according to Dr. Beard of New York, who has used them extensively, very convenient for practice. They consist of carbon and zinc plates, with the usual charge. Dr. Kidder uses, instead of Stöhrer's sledge, what he calls a "circular current-selector" for increasing and diminishing the current without interrupting it. It is much of the same construction as Foveaux's (*vide* this Report, p. 145) and Mayer and Meltzer's dial. It consists of a circle with a vulcanite base, which carries small brass plates connected with the different cells of the battery, and separated from each other by pieces of ivory. (Fig. 12.) The circle carries two arms resting on wheels, and revolving on a pivot in the centre. One of these is short, and the other long; and, according as the long or the short arm is moved, the current is increased or diminished, without or with interrupting it. A commutator and a toothed wheel for the interruption of the current are added to the battery.

The annexed diagram, Fig. 12, shows a thirty-cell battery, which appears to be amply strong for the ordinary requirements of the practitioner. Dr. Kidder, however, likewise constructs twelve- and twenty-cell batteries, which are sufficient where the continuous current is used about the head, face, and neck. (Figs 13 and 14.)

TESTIMONIALS.—On March 22nd, Mr. J. Needham, the Demonstrator of Histology at the London Hospital Medical College, was presented by the class with a testimonial and an address. Besides having devoted much time and trouble to the discharge of his duty, he had prepared and presented to each member of the class a number of preparations of all the tissues and organs.—Mr. J. Farrar, of Borough-bridge was, on March 18th, presented by the amalgamated friendly societies of the town and district, and other friends, with a testimonial, on parchment, accompanied with a purse of gold, "as a mark of recognition of the satisfactory manner in which he had discharged his duties."

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 29TH, 1873.

MEDICAL EXAMINING BOARD IN ENGLAND.

THE Committee of Reference for an Examining Board in England have reported to the co-operating medical authorities on the subject of a scheme of examination to be adopted, and their report was laid before the recent meeting of the Royal College of Physicians. It runs as follows.

1. That the following be the number of examiners to be appointed on the several subjects of examination:—On Anatomy and Physiology, eight; on Chemistry, four; on Materia Medica, Medical Botany, and Pharmacy, four; on Medicine, eight; on Surgery, eight; on Midwifery, six.

2. That with reference to the examiners to be appointed on Forensic Medicine, it is inexpedient to appoint special examiners on that subject at present, but that questions on Forensic Medicine be included among the questions asked by the examiners on Chemistry, Medicine, Surgery, and Midwifery.

3. That the period at which the nomination of examiners will take place, the number of vacant examinerships on each subject, and the number of examiners on each subject who offer themselves for re-election, be annually made public by advertisement; and that a meeting of the Committee be held for the consideration of the qualifications of the several candidates for the examinerships, previous to the meeting for the nomination of examiners.

4. That a list, containing the name or names of examiners nominated by the Committee of Reference, for appointment by the co-operating medical authorities, be forwarded to each of those authorities immediately after the nomination.

5. That there be two examinations, each being partly written, partly oral, and partly practical.

6. That no candidate be examined by a teacher of his own school.

7. That at the written examinations not less than two examiners be present.

8. That the oral and practical examination of each candidate be conducted in the presence of two examiners.

9. That the subjects of the first examination be—Chemistry; Materia Medica, Medical Botany, and Pharmacy; Anatomy and Physiology.

10. That a candidate may be admitted to the examination on Chemistry, or to that on Materia Medica, Medical Botany, and Pharmacy, or to both of them, at any time within twelve months after his registration as a medical student; but that subsequently to that, the candidate be required to pass in all the subjects of the first examination at one time.

11. That the subjects of the pass examination be—The Principles and Practice of Medicine, including Medical Anatomy and Pathology; the Principles and Practice of Surgery, including Surgical Anatomy and Pathology; Midwifery, and Diseases peculiar to Women. And that the candidate be required to pass in all the subjects at one time.

12. That the members of the Committee of Reference act as "visitors of examinations."

13. That for each examination, whether "first" or "pass," three members of the Committee be appointed visitors, one or more of whom shall be present during at least a part of each division of the examination.

14. That there be a "visitors' book," in which any appointed visitor, or other member of the Committee of Reference, may enter such observations as he may think fit on any examination at which he has been present; and that this book be in the custody of the Registrar, or other appointed officer.

15. That on a day shortly before each examination in writing, a meeting of examiners be held, at which one or more members of the

Committee shall attend, and at which all the questions proposed to be set in writing shall be read for approval.

16. That the examination questions be printed or lithographed on the day preceding or on the morning of the examination, in the presence of some duly appointed official, in whose custody they shall be kept until delivered to the proper examiners.

17. That, as a general rule, the number of questions on each paper be six.

18. That the time allowed to answer the questions in each of the written examinations be three hours.

19. That, for the present, application be made to the authorities of the University of London for permission to hold the written examinations in the University building; and that the oral examinations on Chemistry, *Materia Medica*, Medical Botany, and Pharmacy be held at the College of Physicians; and the oral examinations on Anatomy and Physiology at the College of Surgeons.

20. That the oral and practical examination of each candidate on Chemistry occupy not less than one hour, and be conducted in a laboratory.

21. That the oral and practical examination of each candidate on *Materia Medica*, Medical Botany, and Pharmacy, and that on Anatomy and Physiology, occupy not less than twenty minutes each, exclusive of the time to be employed in naming specimens in writing.

22. That the oral and practical examination of each candidate on the Principles and Practice of Medicine, and that on the Principles and Practice of Surgery, occupy not less than forty minutes each.

23. That the oral examination of each candidate on Midwifery and the Diseases peculiar to Women occupy not less than thirty minutes.

24. That the oral and practical examinations on the Principles and Practice of Medicine be held at the College of Physicians; those on the Principles and Practice of Surgery at the College of Surgeons; and those on Midwifery and the Diseases peculiar to Women either at the College of Physicians or at the College of Surgeons.

25. That on the earliest convenient day after each examination, a meeting of examiners engaged in the examination be held for the purpose of deciding upon the passing or rejection of candidates, and that at this meeting one or more of the appointed visitors shall attend.

26. That the examiners make known the result of the examinations at the earliest convenient time.

27. That the Committee present annually to each of the co-operating medical authorities a report concerning the conduct of the examinations, including a statement of the names and places of study of all those who have passed any of the examinations during the preceding year, and of the number from each place of study of those who have passed, and of those who have failed to pass, any of the examinations during the same period.

28. That the regulations for the conjoint examinations be published at the earliest convenient time.

29. That arrangements be made for holding the first conjoint examination as soon as practicable after the 1st of October, 1873.

30. That all candidates for qualifications to be granted by any of the co-operating medical authorities, who shall commence their professional studies after the publication of the regulations for the conjoint examinations, be required to pass those examinations, and that candidates for any of those qualifications, who shall have commenced their professional studies before the publication of the regulations, be admitted to the conjoint examinations if they desire it.

31. The Committee, in concluding their report, beg leave to draw attention to Section 7 of the "Scheme," which is as follows:—"That one-fourth of the Committee of Reference go out of office annually, and that, after the first four years, no retiring member be re-eligible until after the expiration of one year." Although the period of the appointment of the present representatives on the Committee may have taken place at different dates, it seems desirable that in future there be a fixed and uniform date at which the retirement of members of the Committee should take place; it is therefore recommended that the day for the annual retirement of members of the Committee of Reference be the 25th of November.

32. The Committee desire also to state that the subject of the payments to examiners, and other expenses of the examinations, has been under the consideration of the Committee, and it has seemed to them advisable that the method of examinations recommended in this report should be submitted to the co-operating medical authorities before entering on the financial part of the Scheme, which will form the subject of a subsequent Report of the Committee.

In reference to this report, we may remark that the Fellows of the College of Physicians consider themselves far from well treated by the hurried manner in which it was brought up and

pushed on for immediate consideration, and carried in a small meeting.

The first clause of this report differs in an important respect from the scheme to which it relates. In that scheme, Forensic Medicine was treated as a separate subject, calling for separate examiners. It is not a little remarkable to observe that the Committee of Reference have not only gone beyond their powers by altering the scheme which they were requested to carry out, but that they have done so by deliberately suppressing an examinership which might fairly be considered as one of the most important in the list. The whole tendency of thought on the part of men not wholly given to narrow considerations of practice, is to perceive the gradually developing importance of the relations of medical men to public duties, the figure they cut in courts of law, and the precision and fulness of knowledge with which they fulfil their duties as forensic experts in the coroners' and other courts. This is a department of Public Medicine in which it must be confessed that the medical profession frequently suffers in public estimation by the ignorance and incompetence of its members. If the Committee of Reference felt inclined to exercise the originative power which they assume themselves to possess, although without any sufficient ground, they might have exercised it usefully in adding Hygiene to Forensic Medicine, as the Irish medical bodies have wisely done in their scheme. It is the duty of the Examining Boards to meet the national wants of a large number of medical officers of health by instituting fitting tests of knowledge of public medicine. Forensic Medicine is a subject of which they would have been wise to magnify rather than diminish the importance. In both cases, they would have been travelling beyond their powers; but in the one they would have done good, whereas now they have done harm. It is for the other co-operating authorities to show greater firmness and wisdom in checking the Committee of Reference than the College of Physicians has done. It will, we suggest, be the duty of independent bodies, such as the British Medical Association, to call the attention of the medical authorities and of the General Medical Council to the necessity of including an examination in Public Medicine among the tests for diplomas.

FLOWERS AND FEVERS.

It is always satisfactory to find by the light of science that our natural predilection for the beautiful, whether in form, colour, sound, touch, taste, or odour, has its origin in a true and natural instinct.

Our love of flowers is at once the purest and most natural; it is a child's love before his senses have been stimulated by the many artificial sensuous objects, which at a more advanced age tempt him in every direction. It is a love that remains pure, even throughout life, with a persistence which ought of itself to have taught us to regard this simple taste as one of high importance to our well-being.

It appears from the researches of Professor Paolo Mantegazza of Pavia (*Rendiconti del Reale Istituto Lombardo*, vol. iii, fasc. vi), that in some plants ozone is developed by the direct rays of the sun, whilst in others the action once commenced in solar light continues in darkness. Thus cherry-laurel, clove, lavender, mint, lemon, fennel, etc., are plants which develop ozone largely on exposure to the sun's rays; so also do the narcissus, heliotrope, hyacinth, and mignonette, as well as some perfumes similarly exposed, as eau-de-cologne, oil of bergamot, extract of millefleurs, essence of lavender, and some aromatic tinctures. He further points out that the oxidation of the essential oils, such as nutmeg, aniseed, thyme, peppermint, etc., under the influence of light and air, is a convenient source of ozone, as they, even in small quanti-

ties, ozonise much of the atmospheric oxygen. Dr. Mantegazza concludes that the ozonogenic properties of flowers reside in their essences, the most odoriferous yielding the largest amount of ozone; he, therefore, recommends the cultivation of herbs and odorous flowers in marshy districts and in places infested with animal emanations, and that persons living in such situations should perfume themselves with odoriferous essences. Dr. Cornelius Fox remarks also, in his recent and exhaustive work on ozone, that the cultivation of the sunflower in malarious districts has been especially urged, as it is said to possess the property of purifying air laden with marsh miasm and of exhaling ozonised oxygen.

Dr. Mantegazza demonstrates in his report on the action of essences and flowers in the production of atmospheric ozone, and their hygienic utility, which he recently presented to the Institute of Lombardy, that the disciples of Empedocles were not in error when they planted aromatic and balsamic herbs as preventives of pestilence.

Dr. Rumsey has also pointed out the record of the historian Herodian, who affirmed that in a plague, which devastated Italy in the second century, strangers crowding into Rome were directed by the physicians to retreat to Laurentum, now San Lorenzo, so named from the bowers of laurel or bay (*laurus nobilis*) which surrounded it, that by a cooler atmosphere and by the odour of laurel, they might escape the danger of infection. Herodian also mentions that fumigations with aromatics were recommended as a preventive of the plague.

Hecker, in his account of the epidemics of the middle ages, states that the medical faculty of Paris, the most celebrated of the fourteenth century, were commissioned to deliver their opinion of the causes of the black plague, and to furnish some appropriate regulations with regard to living during its prevalence; one of which consisted in a recommendation to avoid the air and to kindle large fires of vine-wood, green laurel, or other green wood; also to burn wormwood and chamomile in great quantity in the market-places, in other densely inhabited localities, and in the houses.

At the same period, and during the same plague, Gentilis of Foligno, the celebrated teacher in Perugia (who, by the bye, on the 18th June, 1348, fell a sacrifice to the plague in the faithful discharge of his duty), believing, as he did, in the pestilential constitution of the atmosphere, recommended that it should be purified by means of blazing fires of odoriferous wood in the vicinity of the healthy, as well as of the sick.

Hippocrates, whose name will ever remain associated with the great plague at Athens, is reported to have extinguished the epidemic there and in other places by kindling fires, like Acron of Agrigentum. We find Pliny seizing on the fact, and recording it, that both Empedocles and Hippocrates rendered assistance during epidemics by fumigations; and Francis Adams, the learned commentator on the works of the father of medicine and of Paulus Ægineta, also mentions that Simeon Seth proposed fumigations with frankincense.

With these historical records before us, we must confess that the hitherto much contemned ancient practice of fumigation has not received at the hands either of chemists or of physicians the careful study to which the high professional character of those who have recommended it entitle it.

We are too apt, as Sir Humphry Davy said, to sneer in the pride of our ignorance at what we either do not or will not understand. Before, therefore, sneering at the scent of flowers or the antiseptic products of their combustion, let us remember that the humble gardener's simple net protected his young plants from the frost, in spite of the mockery of the *savant*, who, however, was wise enough to ponder well on the conditions subserved by the simple appliance; the result of which was a great humiliation of his philosophical pride, compensated, however, by the rich reward of the discovery of the cause of dew and frost.

With this and many other examples before us, we think that the experiments of Meissner and others relative to the formation of certain antiseptic gases during the formation of cloud and smoke, whether they be allied to peroxide of hydrogen or any other powerful gas, deserve more than a passing comment. The modern chemical inquiry

certainly appears pertinent to the solution of the ancient practice, and perchance may be destined to explain the reason why, for many centuries, it has retained a firm hold on the minds of the wisest of our profession.

The popular notion that a pinch of snuff is a preventive against infection is scoffed at, not for any real reason, but simply because it is popular, therefore, a vulgar error; but Dr. J. C. Murray, in his amusing and interesting work "On Snuff-taking," regards it as a disinfectant, for the aroma of powdered tobacco develops ozone. We must remember that this takes place after the plant has undergone a process of fermentation previous to its being manufactured into snuff. Meissner asserts that antozone is the cause of the cloud in tobacco-smoke, the smoke of chimneys, and of gunpowder. The copious rains, says Dr. Cornelius Fox, which follow great battles, have been supposed to be due to some extent to this body, the decomposition of the cloud of antozone, water being either a cause or effect of the electrical excitement of the air. We have much to learn with regard to electricity and the important part it plays in the production of ozone both on sea and on land; we have also yet much to stimulate us to the investigation of this wonderful agent for the purposes of disinfecting water and food, as practised by the late lamented electrician, Andrew Crosse, who by a mode of electrification of great simplicity, not only purified water, but rendered it antiseptic, so that it had the power of restoring the most putrid substances to sweetness. Pieces of meat and skins of animals in a state of putridity have been immersed in electrified water, and in a few hours rendered inodorous. On one occasion Crosse kept a pair of soles under the electric action for three months, at the end of which time they were found perfectly fresh, although tasteless, on account of the electric action having deprived their meat of its oil. The question in Mr. Crosse's mind was whether ozone had anything to do with these effects; and he frequently suggested that electrified water might be drunk beneficially in typhus and other fevers, and also used for baths.

On reading an account of the water system in the province of Bombay, which Mr. Robert Rawlinson, C.B., Sanitary Commissioner to the British Government lately detailed in a letter to a daily contemporary, we naturally ask ourselves the question—Is there no way of insuring the purity of the drinking water, even when subject to such fatal pollution? Mr. Rawlinson tells us that the well-water was tainted to the extent of one-third of urine, and that in 1869 upwards of 1500 human carcasses were removed from tanks and wells supplying drinking water to the inhabitants and the troops! Mr. Crosse's apparatus consisted of two cylinders, of dissimilar metals (generally sheet-zinc and sheet-iron), placed in two porous earthenware tubes, open at the top and closed at the bottom. The metallic cylinders being connected together by a copper riband, the porous tubes, with the metals inverted in them, are filled with water and placed in the fluid required to be purified. The electrical action immediately commences, and the fluid not only becomes purified, but is rendered antiseptic in a few hours. Such is the brief description of Crosse's neglected invention.

Although we have apparently wandered from our original subject, the perfume of flowers and their antiseptic power against fevers, yet the reader will acknowledge that both the fumes from burning wood and the galvanic contrivance to purify water are linked with it by means of electricity, whether developed during the vital process of vegetation, the chemical action of fire on wood, or that of water on two metal cylinders, differing in their oxidisable properties. Again, the common foe, disease, against which they are all three arrayed, may serve as an apology for our digression.

To return, however, to flowers and sweet smelling herbs, we find Dr. Mantegazza urging the propriety not only of planting herbs having powerful odoriferous properties, but others, like the sun-flower, which, although possessing no particular perfume, are said to have extraordinary ozonigenous powers.

The floods of last year have left many a large tract of land ripe for the genesis of ague and other malarious fevers. If, therefore, there be protective virtue in the sweetest living gems of the earth, let their

culture be in every direction encouraged; let the garden-plot near the cottage of the agricultural labourer be filled with every simple herb or flower, that like mignonette, thyme, laurel, sunflower, and lavender, sheds its purifying odours around; let window-gardening be more than ever a favourite relaxation for the mewed up artisan of the town and city. Let experiments be made on all kinds of the poor cottagers' present pets; let us see what ozonigenous powers his favourites have, for instance, the scarlet "Tom Thumb" geranium, at once so gay and cheering.

In our cities let us emulate the citizens of Laurentum, and plant sweet bay along our embankments, in our parks and gardens, and even in our deserted churchyards and our fast filling cemeteries. Let us, however, in the meanwhile follow up the footsteps of nature in our chemical laboratories, and learn how to increase the store of our natural air and water-purifiers by a patient investigation of the properties of our indigenous flora in their relation to malarious emanations; ever remembering what the Broomfield philosopher has said that, it is better to follow *nature* blindfold than *art* with our eyes open; and taking comfort from the words of Juvenal,—

"Nunquam aliud Natura, aliud Sapientia dicit."

Two cases of hydrophobia, both mortal, have been certified by medical evidence and the verdict of a coroner's jury, at Manchester.

MR. SPENCER SMITH and Dr. Lawson have been re-elected Surgeon and Assistant-Physician respectively to St. Mary's Hospital.

THE title of Hofrath (Aulic Councillor) has been conferred on Professors Schroff and Ducheck, of the University of Vienna.

THE number of deaths from small-pox in Vienna during January was 327, and in February 231—a reduction of 96.

WE understand that the celebrated anatomist, Professor Hyrtl, will exhibit a series of his preparations in the International Exhibition at Vienna. Of two series which he exhibited at the London Exhibition in 1862 and the Paris Exhibition in 1867, one was bought by an American university.

IN view of the forthcoming International Exhibition in Vienna and of the probably large concourse of visitors, the Government of Lower Austria are taking measures to prevent overcrowding of the larger hospitals in the event of any serious outbreak of sickness. It is intended to form hospitals for the reception of both civil and military patients in the suburbs of Vienna; and negotiations for the establishment of one are in progress.

TYPHUS IN BERLIN.

THE number of cases of exanthematous typhus in Berlin has increased. On the 24th instant, there were 46 cases in the Charité Hospital under Dr. Zuelzer's care. Dr. Bock, assistant to Dr. Frerichs, has fallen a victim to an attack of the disease contracted in the zealous discharge of his duties. In order to guard against the spread of typhus and recurrent fever, the police authorities of Berlin have instructed practitioners to give notice of cases occurring in their practice.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

THE fifty-ninth annual meeting of the governors of this hospital was held on March 14th, under the presidency of the Lord Mayor. The number of in-patients under treatment during the past year had been 156, of whom 133 had been discharged cured or benefited, 12 had died, and 11 remained in the hospital. The number of out-patients had been 4,806. It was stated that the Committee had found the number of beds totally inadequate to meet the increasing number of deserving patients, and that they had therefore resolved to enlarge the hospital as soon as possible. For this object, they required £10,000. They had been able to set aside £1,000 from the year's income, they had received £1,000 as a donation, and for the rest they looked to the public and the supporters of the hospital.

THE TUBERCLE DEBATE.

THE following gentlemen have sent in their names to the Secretary of the Pathological Society as intending speakers at the adjourned debate on Tubercle; Dr. Lionel Beale, Dr. Moxon, Dr. Cayley, Dr. Green, Dr. Douglas Powell, Dr. Crisp, Dr. Payne, and Dr. Bastian. Microscopic specimens will be shown, and will be open for inspection one half-hour before the meeting. Drawings will also be exhibited. It is expected that the attendance will be as large as at the last meeting, when as many as a hundred and sixty-six members and visitors were present; forming, probably, the largest gathering of the kind in the history of the Society.

MR. RICHARD PARTRIDGE.

WE deeply regret to announce the death of Mr. Partridge, who was well known and highly regarded in our Association, as well as in the College of which he was a Fellow and past President. Mr. Partridge commenced his professional studies in Birmingham in 1821, and frequently renewed his professional connection with the town, his last visit being on the occasion of the annual meeting of the Association in August last. He was a pupil of Abernethy, and early became attached, first to Charing Cross Hospital, and then to King's College, where he held for many years the Professorship of Anatomy. He became a Councillor of the Royal College of Surgeons in 1842, and President in 1866. His term of Presidency was marked by the introduction of some useful reforms in the mode of examination of members. Mr. Partridge was a good anatomist, an accomplished draughtsman, an amusing lecturer, and a tolerable surgeon. He showed considerable acuteness and courage in the detection of the famous body-snatchers, and throughout life those qualities rarely failed him. He was an agreeable and genial companion; and, although on some great occasions he was hardly equal to the position to which an easy routine had raised him, he never failed to leave a pleasing impression as a man of kindly character, gentle gifts of mind, and gentlemanly thought. He had for many years held the position of Professor of Anatomy at the Royal Academy. This office had become vacant recently by a lapse of time, and several candidates were announced for it, under the impression that Mr. Partridge would not desire to continue any longer to hold it, he being much broken in health and advanced in years; but only last week he informed us, in a letter written in his usual bold firm hand, that "he intended to offer himself for re-election to the Academicians, in the hope that many years of past service would induce them to confer upon him that great honour."

OVERCROWDING IN LAMBETH.

AN important series of rules, having reference to overcrowding, was submitted to the Lambeth Vestry at their last meeting, and ordered to be sent to the Secretary of State for his approval. The following is an abstract. The medical officer shall keep a register of houses sublet in lodgings, with the cubical measurement of the several rooms; and shall deliver a ticket to the landlord's tenant stating the number of persons allowed to sleep in each room of such house. The minimum space for each inmate of a room used exclusively for sleeping shall not be less than 300 cubic feet; and, in case such room shall be used both for living and sleeping, the minimum space shall not be less than 350 cubic feet. No more than one married couple and their children under twelve years of age shall occupy the same sleeping-rooms; and, if a room be let to more than one family, it shall not be occupied by persons of both sexes unless they are children under twelve years of age. Rooms used as sculleries shall not be used as sleeping-rooms. The nuisance authority, through its officers, shall require such premises to be kept in a cleanly condition as regards floors and passages, and shall require the walls and ceilings to be limewashed at least once a year, or oftener if necessary. The medical officer, or the inspector of nuisances acting under his orders, may enter, at any time between ten and four, any house brought under the operation of the rules, on information that such rules have been infringed; and any person who shall obstruct

such officers shall be liable to a penalty not exceeding 40s. Whenever any person shall die in any house, occupied as aforesaid, from any infectious disease, the dead body shall be removed to some proper place away from home. The penalties for the infraction of any of the above regulations shall not exceed 40s. for any one offence, with an additional penalty not exceeding 20s. for every day during which there is a default in obeying such regulations.

THE CHOLERA IN BOHEMIA.

FROM some remarks lately made at the Medical Society of Prague by Dr. Joseph Halla, it appears that the first case of cholera in Prague during the recent epidemic appeared on November 16th. The importation of cholera patients into the city was prevented by sanitary regulations; nevertheless, the number of patients in the various cholera hospitals in Bohemia has been small; and this cannot well be explained by supposing that the people had been saturated with the disease (*durchseucht*), as a considerable time has elapsed since the last epidemic (1866). One remarkable circumstance in the history of the disease was the comparatively large number of cases that broke out in the hospital, notwithstanding that every care was taken for the disinfection of the wards and drains, and for the separation of the cholera cases from the other patients. Dr. Halla remarks also, that most of the deaths occurred in persons specially predisposed to disease. Many were the subjects of chronic alcoholism; others of various disorders, mostly chronic, of the digestive or urinary organs.

LONDON HOSPITAL.

AN influential meeting has been held at the Mansion House on behalf of the London Hospital, for which additional accommodation is urgently required, and also a better secured income. The Duke of Cambridge, in moving the first resolution, stated that the average number of patients in 1869 was 431, but latterly there had been as many 615. It was resolved to raise a special fund of £100,000, towards which contributions amounting to £37,000 were announced.

HOSPITAL FOR DISEASES OF THE SKIN.

THE thirty-second anniversary festival of the Hospital for Diseases of the Skin was held last week. The Lord Mayor presided, and in his speech paid a warm tribute to the memory of the late Mr. James Startin, the originator of the hospital, and its senior surgeon for more than thirty years. He stated that Mr. Startin had bequeathed £1,000 to the institution; but that, notwithstanding this bequest, the hospital stood in need of £1,500 to cover the expenses of its removal to Stamford Street, which has recently taken place. Donations to the amount of £1,600 were subscribed on the spot.

THE YELLOW FEVER.

A CENTRAL NEWS telegram says that a frightful outbreak of yellow fever among the English vessels at Rio Janeiro has been reported. Capt. Heslop, and nine of the crew of the brig *Cambois*; Captain Darling, of the brig *Elizabeth Henderson*; and the mate (Samuel Steward) and four of the crew of the barque *Norham*, of Blyth, have fallen victims to the disease. Numbers of the crews of the vessels have been removed to hospital.

THE PROVIDENT MOVEMENT.

THE provident movement continues to make steady progress. At the annual meeting of the Charity Organisation Society, which was held last week at Willis's Rooms—the Earl of Lichfield in the chair, Lord Shaftesbury and the Dean of Westminster being among the speakers—the following resolution was passed.

“That it is desirable to introduce the provident element as widely as possible into the administration of charity, so as to avoid danger to the future prosperity of the nation from the gradual undermining of the self-respect and independence of the people.”

The warm reception which this resolution met with indicated that the principle it embodied was approved by those who were present; and we cannot doubt that such an expression of opinion from an influential

society, which is rapidly gaining the confidence of the public, will have beneficial results. Meanwhile, we are glad to learn that the Royal Pimlico Dispensary, which for forty years has been a free institution, and which at a meeting held last July, under the presidency of the Marquis of Westminster, decided to adopt the provident principle, has during the six months which have since elapsed enrolled 1,731 members, and that the Committee express themselves as thoroughly satisfied with the working of the system. The Dispensary in connection with St. Paul's and St. Barnabas's, Pimlico, which was formerly free and partly provident, has lately laid aside its free branch and has become an entirely provident institution. At the manufacturing village of Mayfield, near Ashbourne, a provident dispensary has just been opened. From various parts of the metropolis as well as from the provinces we hear that the conversion of free into provident institutions is under consideration.

THE HABITUAL DRUNKARDS BILL.

THE Vigilance Association for the Defence of Personal Rights, of which Miss Elizabeth Wolstenholme is secretary, have addressed a memorial to the Home Secretary, calling attention to the Bill for the Better Care and Management of Habitual Drunkards, which is now before the House of Commons. In condemning most of the details of the measure, the Association express an opinion that the question proposed to be dealt with lies outside the just province of legislation, and add: “We do not believe that it is possible to check the spread of drunkenness by violent methods, such as this Bill proposes, whilst the inroads thus made upon personal rights introduce dangers of the most real and palpable kind. Less palpable, but no less real, is the injury to the moral sense of the people caused by legislation which aims only at attacking evil results, leaving the evil causes unchecked.”

SANITARY MEASURES IN DORSET.

LORD DIGBY, chairman of the recent conferences of rural and urban sanitary authorities of the county of Dorset, has received a letter from the Local Government Board in answer to the resolutions passed at the conference, as already reported in the *Times*. The Board concurs in the representations as to the importance of appointing efficient inspectors of nuisances. It is added, however, “They have arrived at the conclusion that it would, unless under very exceptional circumstances, be undesirable to appoint several medical officers of health within the jurisdiction of one sanitary authority.....The Board have very generally recommended the appointment of medical officers of health for large and combined areas; and they believe that in many localities the services of medical practitioners possessing special qualifications for the office might be best obtained by such an arrangement.” Several of the Unions in Dorset have already appointed inspectors of nuisances at salaries varying from £30 to £100 *per annum*; and the medical officers under the Poor-law have from 20 to 25 per cent. addition to their present salaries for the performance of the medical duties required by the Public Health Act; but, as will be seen by the above letter, the Local Government Board disapprove that course, and any appointments not sanctioned by that body will fail to secure the Government allowance of half the expenses granted otherwise.

HOSPITAL SUNDAY.

THE Bishop of London summoned the rural deans of the diocese last week to consider the difficulties which were felt by a large proportion of the London clergy in falling in with the proposal of the Mansion House Council for simultaneous collections on Sunday, June 15th. The result of this meeting was that the bishop invited the Lord Mayor to request a deputation of the Council to meet the rural deans at London House a few days ago. At this meeting a full discussion of the whole subject took place with a result highly satisfactory on both sides. While the bishop and clergy satisfied the deputation that they were warmly in favour of the general principle of the movement, and that their difficulties had chiefly arisen from want of information, and from the day fixed upon having been communicated to them too late to

admit of its general adoption this year, there seems to be good ground for hoping that in future years arrangements might be made which would secure a far more extensive concert in the movement. One of the principal points upon which information was asked by the clergy was how far the privilege heretofore accorded to them of giving admission tickets to patients would be affected by the proposed arrangements. It was explained that the Council had resolved that, so far as it rested with them, they would secure to the clergy, on behalf of their poor, privileges of a like kind to those which they now possess. Indeed, negotiations to this end were already on foot with every prospect of a successful issue.

DR. MURIE.

WE are glad to find that our notice, drawing attention to the insult offered to Dr. Murie in refusing him the office of Demonstrator of Anatomy at Charing Cross Hospital, has borne fruit; and that it is proposed to present him with a substantial memorial. A circular, of which the following is a copy, has been issued.

"An opinion having been expressed that it might not be inappropriate to present Dr. James Murie, formerly Prosecutor to the Zoological Society of London, with a substantial recognition of the services which he has rendered to science by his numerous memoirs printed in the *Proceedings* and *Transactions* of the Zoological Society and other scientific journals, we, the undersigned, have pleasure in acquiescing in that opinion, and in stating our belief that Dr. Murie's career has been a most meritorious one, very beneficial to science, and highly honourable to himself."

The circular is signed by Viscount Walden, F.R.S., President of the Zoological Society of London; Sir C. Lyell, Bart., LL.D.; Mr. C. Darwin, F.R.S.; Dr. J. D. Hooker, C.B., F.R.S.; Dr. Allen Thomson, F.R.S.; Dr. G. M. Humphry, F.R.S.; Mr. James Glaisher, F.R.S.; Dr. Sharpey, F.R.S.; Professor W. Turner; Dr. Lockhart Clarke, F.R.S.; Mr. W. K. Parker, F.R.S.; Dr. John Young, F.R.S.E.; Mr. G. Busk, F.R.S.; Mr. St. George Mivart, F.R.S.; Mr. Frank Buckland, F.Z.S.; Dr. William Aitken; and Dr. J. Bell Pettigrew, F.R.S. Professor Turner of the University of Edinburgh, and Dr. Bell Pettigrew of the Royal College of Surgeons of Edinburgh, have consented to receive subscriptions with a view to furthering the above object. Intending subscribers will oblige by communicating with either of those gentlemen.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A SPECIAL general meeting of the Poor-law Medical Officers' Association will be held at the Medical Club, 9, Spring Gardens, on Wednesday, April 9th, at 3 P.M. precisely; Dr. Lush, M.P., the President, in the Chair. The object of the meeting is to consider how far the present operation of the Sanitary Act of 1872 is in accordance with the interests and future prospects of the Poor-law Medical Service and of advantage to the public, and how far it realises the expectations held out by the Bill in such respects. It is expected that several members of Parliament who take great interest in this question will be present, and will address the meeting.

COSTLY WATER FITTINGS.

THE vestries and district boards of the metropolis are (writes a correspondent) protesting almost with one accord against the regulations which the water companies have made, and the Board of Trade have approved, in pursuance of the Act passed last session for insuring a constant water-supply; and the Metropolitan Board has expressed its determination to resist as far as possible the enforcement of the regulations. The various appeals addressed to that Board state that the fittings required are unnecessarily expensive to an absurd degree, and that the apparatus adopted is wanting both in efficiency and durability; that the water companies may and do require the provision of these fittings on the shallowest pretexts, notwithstanding the saving clause of the Act in favour of existing fittings, and that the cost involved is equal in many cases to the rent of the house for two years, and involves a cost to the house-owners of London of eleven millions sterling. The Metro-

politan Board have ascertained that the expense of providing the fittings required will amount to more than £10 for a small cottage, and to £60 and upwards for each of the large houses in the west-end of London; and they are in hopes of inducing the Government to appoint a commission on a subject which interests every householder in the metropolis.

CHOLERA IN EUROPE.

THE latest returns of cholera in the Austro-Hungarian empire state that during the week ending March 2nd, there were 8 new cases in Moravia, making, with 9 remaining from the previous week, 17; of these 9 recovered, 5 died, and 3 remained under treatment in one locality. In Silesia, during the second half of February, 45 new cases are added to the 14 remaining under treatment; of the 59, 25 recovered and 21 died. In Hungary, on February 15th, there were 572 patients remaining under treatment in 133 districts; to these, during the period from the above-mentioned date to March 8th, there were added 1,600 cases in 105 districts, making in all 2,172, of whom 1,101 recovered, 660 died. From the outbreak of the epidemic in Hungary up to March 1st, 25,153 cases of cholera occurred in 1,024 districts, with a population of 1,996,951; of the cases, 14,704 have recovered and 10,038 have died.

TESTIMONIAL TO MR. GRIFFITH OF WREXHAM.

AT a meeting of the North Wales Branch held last week, it was unanimously resolved to present Mr. T. Taylor Griffith, the honoured father of the profession in North Wales, with a photographic portrait of himself, as a mark of the high estimation and sincere regard in which he is held. The presentation is to be made at the next annual meeting of the Branch.

INTERNATIONAL MEDICAL CONGRESS IN VIENNA.

THE third international medical congress will be held in Vienna during the week from September 24th to October 1st, under the patronage of the Archduke Rainer. The following are the subjects proposed by the Executive Committee for discussion: 1. Vaccination; 2. Quarantine in its Relation to Cholera; 3. Prostitution; 4. The Sanitation of Towns; 5. Proposals for an International Pharmacopoeia; 6. Proposals for making Medical Education as uniform as possible in all countries, and for establishing reciprocal right of practice. The German language will be used in introducing the subjects; but the subsequent discussions may be in French, English, or Italian, as well as in German.

SCOTLAND.

DR. B. W. RICHARDSON of London has been nominated a second time as Assessor to the Council of St. Andrew's University. A contest will ensue, and will be decided by voting papers.

PAISLEY INFIRMARY.

NEARLY a fourth of the cases admitted into the Paisley Infirmary during the year 1872 were suffering from zymotic or preventable diseases, a very ugly story, and not to the credit of the authorities of that town. The fever cases have been fewer by 470 than during 1871. This, no doubt, is due to the decrease of the small-pox epidemic.

ROYAL INFIRMARY, EDINBURGH.

THE Committee of Subscribers of the Infirmary have arranged that the contributions for the maintenance of the Infirmary shall for this year be collected by deputations of the Committee, who during the present week will make a general visitation through the city. From the very large increase in the cost of providing necessaries and comforts for the patients, the ordinary expenditure has so far exceeded the ordinary revenue that, in order that the Infirmary be continued on its present footing, it is necessary that the subscriptions from Edinburgh be doubled in amount. As the benefits of the Royal Infirmary are directly or indirectly enjoyed by every member of the community, the Committee ask that all will bear a share in its support.

ANDERSON'S INSTITUTION, GLASGOW.

AT the quarterly meeting of the trustees of Anderson's Institution, held in Glasgow on Saturday—Dr. Weir presiding—it was stated that Mr. William Ewing had bestowed a yearly grant of £50 to the Ophthalmic Lectureship, on the condition that all medical students be admitted to the Ophthalmic classes at the rate of 5s. per session. It was announced that Dr. Wolfe had intimated his acceptance of this condition.

IRELAND.

ROYAL COLLEGE OF SURGEONS.

THE Council of this College have determined on examining for the future candidates in anatomy on the dead subject. That this method of examination is the fairest way of deciding whether a candidate has really dissected for himself, or merely acquired a theoretical knowledge of this important subject from books, there is little doubt. The next examination under this system will take place in April next.

SANITARY LECTURES.

THE fifth lecture on public health was delivered on the 22nd instant, by Dr. Grimshaw, on the subject of Zymotic and Preventable Diseases. The lecturer stated that the zymotic diseases which he would consider in this lecture were fevers, diarrhoea, scarlatina, small-pox, whooping-cough, cholera, measles, puerperal fever, croup, and diphtheria; and these diseases were to be looked upon from various points of view: first, from the damage they inflict; secondly, the conditions under which they spread; thirdly, the conditions under which they arise; and lastly, the means suggested for their control. Of 3,249,077 deaths which took place in the United Kingdom from 1865 to 1869 inclusive, 21.9 per cent. were caused by zymotic diseases. He observed that by far the most serious of the zymotics were those that were epidemic in Dublin—viz., fever and scarlatina. During the last nine years, fever has caused 3,506 deaths in Dublin, diarrhoea 2,576, scarlatina 2,407, and measles 1,124. It will thus be seen that fever is by far the most destructive of these zymotic diseases; and, however much it might be their duty to ward off cholera and small-pox from their shores, yet it was equally their duty, and far more important for their national prosperity and domestic comfort, that they should control these epidemic diseases, which never die out. The lecturer next directed attention to a want which, he said, exists to a lamentable extent in Dublin—namely, proper and easily expansible hospital accommodation for all forms of contagious disease; proper appliances for removing patients thither; proper means for disinfection, and for the separation of the sick and convalescent from the healthy. Dr. Grimshaw stated that the condition which appeared to be necessary to the production of typhus fever was overcrowding: the evidence was even still more conclusive, that enteric fever was the direct product of food, water, or air, contaminated by the presence of decomposing sewage matter, or by the miasma exhaled therefrom. Another and most important source of enteric fever was the milk-supply; for it had been conclusively shown that not only enteric fever, but small-pox, scarlatina, and even cholera, had been communicated to people through the medium of milk. Dr. Grimshaw concluded by recommending the following precautions for the prevention of disease. 1. In building new towns or villages, to select healthy sites. 2. Proper drainage, both house and general drainage. 3. To prevent new houses being constructed on unsanitary principles. 4. To prevent overcrowding of either houses or districts. 5. To diminish the effects of pauperism by well-regulated charities, and by a proper system of Poor-law relief. 6. The promotion of cleanliness, both by education and legal means. 7. The provision of proper accommodation for the sick in suitable hospitals, having capabilities of expansion during epidemic periods; proper conveyances for bringing patients to hospital; refuges for the healthy whilst their homes are being disinfected during epidemics; convalescent homes for the use of those recovering from zymotic disease; and an effective system of disinfection.

THE
GENERAL MEDICAL COUNCIL
ON
EDUCATION AND REGISTRATION.

SESSION, 1873.

Wednesday, March 26th.

DR. PAGET, the President, took the chair at 2 P.M. All the members of Council were present, with the exception of Dr. Allen Thomson, whose professorial duties detained him in Glasgow for a day or two.

New Member of Council.—Dr. T. T. Pyle, the newly elected representative of the University of Durham, was introduced by Dr. Acland, and took his seat.

President's Introductory Speech.—The PRESIDENT addressed the Council. He said:—

Within the last twelve months we have had to regret the retirement of Dr. Embleton, who was, I believe, one of the original members of the Medical Council. He was known to us as an amiable and honourable man, and an useful member of the Council; and as one who, while worthily representing his University, was never unmindful of his duties towards the profession in general.

During the last year, also, much has been done towards ensuring the correctness of the *Medical Register*, which, I hope, is now as correct as it can be made. This result has been obtained with great labour and much expense; and I must take this opportunity of saying—hoping that what I now say will be made known publicly through the press—that the members of the profession would do well to pay a little attention to this matter. The *Register*, of which two thousand copies are distributed to various public bodies and officers, is the only legal evidence that a man is a legally qualified practitioner. It is very advisable that the evidence should be always complete; but it becomes incomplete through the carelessness of men who omit to intimate their changes of residence to the Registrar. Members of the profession, when registered, give the address at which they happen to be residing at the time; many of them, however, especially the younger men, change their residence afterwards, but do not inform the Registrar of the change. The Registrar has no authority to make any change in the *Register* without the authority of the person concerned: but a registered practitioner may always secure a correct description at the mere cost of the trouble of writing a letter.

With regard to the finances, I am happy to be able to inform you that the receipts during the past year have been exceptionally large; but this is not to be expected to occur every year. The expenditure, also, has been exceptionally small. The inquiry into the details of expenditure which was made two years ago has had a good effect, the result being a good balance in hand instead of a deficiency; and, I think, the fears which were entertained some years ago may now be regarded as quite put aside.

In the last year, something has been done, and something, I fear, has been also left undone, in the matter of conjoint examinations, which the Council has endeavoured to establish, and the principle of which it has repeatedly affirmed during the last two or three years. In England, something has been done, and well done; and, as information on this special subject is not likely to come before you officially, I may as well mention that the Committee of Reference—composed of men engaged in active practice, whose time, if paid for, could only be purchased at a high price—has freely bestowed much time and labour on the subject. They have drawn up the detailed regulations of a scheme, which have received the approval of the Colleges of Physicians and Surgeons, and which will, I have reason to expect, be also approved by the Universities. Thus the scheme will soon be complete; and, I believe, it is intended that it shall come into operation at the beginning of October. I must now turn to things that have been left undone. Most of you will remember that, at the last session of the Council, it was stated that the University of London and the Society of Apothecaries found that they could not join in the scheme. You have also had copies of a letter from the Master of the Society of Apothecaries, which I received in December, and which I caused to be printed and distributed among you; and it has also appeared in some of the medical journals. Within the last few minutes, also, there has been put into my hands by the representative of the Society, another letter, dated March 24th, and written from the office of the Privy Council. I will ask Mr. Bradford if I may read it to the Council [Mr. Bradford assented]. It is as follows:

"Privy Council Office, March 24th, 1873.

"Sir,—I am directed by the Lord President of the Council to acknowledge the receipt of your letter of the 19th ultimo, requesting information as to a Government measure, which you believe to be in preparation, for further enabling the various licensing bodies of the medical profession to unite in conducting their examinations.

"I am to inform you that his lordship, as at present advised, has decided not to introduce any such measure to Parliament.

"It has seemed to his lordship that a measure of that merely permissive kind would not of itself secure a satisfactory improvement in the present system of medical qualifications; and I am to say that his lordship retains the opinions which he expressed in 1869 and 1870, in his correspondence with the General Medical Council, and on which he afterwards acted (with the full concurrence of that Council), in introducing the Medical Bill of 1870; viz., that any Bill to be introduced on the part of Her Majesty's Government for amendment of the Medical Acts, ought to be such as would cover all the ground where amendment of the Medical Acts is wanted, and as would therefore probably be, at least for some time, a settlement of that branch of legislation.

I am, sir, your obedient Servant,

"(Signed) JOHN SIMON.

"The Clerk to the Society of Apothecaries, etc."

I would suggest that this letter be placed in our minutes, so that it may be brought forward for discussion. But at present I must say that it appears to me that what the Medical Council is trying to do in the way of establishing conjoint examining boards meets, so far, the principle of the Government Bill of 1870; and, if blame is to be attached anywhere for failing to carry out so important a measure, it should be laid in the right place—not in the wrong one, as it would be if laid on the Medical Council. At the session of Council last year, we understand that difficulties in the way of joining a scheme of conjoint examination existed on the part of the Apothecaries' Society and of the University of London. In regard to the latter body, the difficulty was, I may say, so subtle, so minute, that for two years it had escaped the notice of the Senate, which includes among its members two cabinet ministers, the *élite* of the profession, and five members of the Council itself—all unanimously of opinion that the removal of the difficulty would tend to the good both of the profession and of the public.

From Scotland, we have unfortunately a marked illustration of things left undone. Although in Scotland there is a great difference of opinion, it is only reasonable to make a decided exception in favour of the University of Aberdeen, which has expressed a strong opinion in favour of the formation of conjoint boards.

In Ireland, three of the most important bodies—the Colleges of Physicians and of Surgeons and the University of Dublin—have combined and agreed on a scheme, which in one respect is superior to that of England, as it includes a provision for the regulation of general education. The absence of the two other bodies in Ireland is to be regretted; but, when we notice the plain statement which the Apothecaries' Hall of Ireland has made in favour of such a scheme, we must see that the difficulty which prevents them from joining that now proposed is one of detail, and we may hope that it will be overcome. I must also mention that, although the Queen's University will not join the scheme, they have expressed an opinion in favour of reducing the number of examinations. Indeed, they go further than the other bodies; they object that, as the scheme is voluntary, it is not likely to be permanent, and they desire that a combination of the examining bodies should be made binding by legislative enactment.

All that we are trying to do in the formation of conjoint examining boards is only piecemeal legislation; but the powers given to the Medical Council by the Act of 1858 are of the smallest possible kind. The improvement must be made by the bodies named in Schedule A. But the power which is given to the Medical Council by the Act is not the only power which we possess. There is a still greater power to assist us in doing what we think to be right to the profession and advantageous to the public—the power of discussion, both in the Council room and publicly. Sooner or later, that which we are endeavouring to do will be done; and this is the power under which it will be done. The opinions expressed here, if right in principle, will be followed up by the profession and the public. Whatever is done, I hope it will be done without injury to the honour and dignity of the profession, or to that principle of self government of which it is justly and worthily jealous.

The Business and Finance Committees were appointed; Mr. Bradford replacing Dr. Embleton in the former.

Conjoint Examinations.—A list of communications from various examining bodies was read. The communications, which had already been placed in the hands of the members of Council, were ordered to be inserted on the minutes.

Dr. ACLAND said that the proceedings which had taken place with respect to the Apothecaries' Society affected the other bodies concerned in the joint scheme. A year ago, he had stated in the Convocation of the University of Oxford that the University of London would endeavour to join the scheme; and the Oxford University in consequence consented to give up its privileges and take part in the formation of a joint board. Afterwards he had to explain that the University of London had found that there was a difficulty; and now it appeared, from the letter which had been read, that the Government would not assist the London University, and did not intend to do so. The situation was a very grave one. Trusting to the success of the endeavours made by the University and the Apothecaries' Society to join in the scheme, the Medical Council had been working at the formation of joint boards, and now, it seemed it was to be defeated by the President of the Privy Council.

Dr. STORRAR gave an account of the proceedings which had taken place with regard to the University of London. On discovering last year the difficulty under which they laboured, the Senate had asked the Solicitor General and the Attorney-General how it could be removed. The only plan which was said to be practicable, was to obtain a short Act of Parliament. The Senate of the University accordingly had a Bill drawn up, not merely giving itself the power sought for, but enabling any of the licensing bodies in the kingdom to join in the formation of conjoint boards if they desired to do so; and communications with the Home Office were entered into. The Senate understood through a member of that department of the Government that a Bill of the kind would be introduced. Nothing, however, was done; and some time afterwards Dr. Storrar learned that the Privy Council had asserted their right to deal with the subject. Thus the matter was passed from the Home Office to the Privy Council—and there suspended. Mr. Forster, the Vice-President of the Council, had told him (Dr. Storrar) that, although the Government did not introduce a Bill of the kind referred to, they might support it if introduced by a private member. He also said that, under the present plan of numerous examining boards, there was a full supply of practitioners; while, if combinations were made, it might occur that the standard of education might be raised so as to diminish the supply, unless the Privy Council could exercise a control in the matter. Dr. Storrar recapitulated the circumstances under which the Bill of 1870 was introduced, and pointed out that it had been at the instance of the President of Council that provision was made in it for the formation of conjoint boards. Now, however, when, after the dropping of the Bill, the corporate bodies had become so convinced of the importance of combination that they had endeavoured to form conjoint boards, the Government would not assist them to remove the difficulties in their way.

Dr. RISDON BENNETT could confirm the greater part of Dr. Storrar's observations. The Council was placed in a serious position; he did not, however, think that the Council should regard the matter as incapable of being carried forward. It would be premature to assume that the letter which had been read put a stop to the whole proceeding.

Dr. ACLAND said that the letter could not possibly be regarded as an ultimatum as regarded conjoint schemes, if the Medical Council were to do any work at all.

Sir W. GULL had been astonished at the letter of the President of the Privy Council. He could confirm Dr. Storrar's statement as to the University of London. Promise of aid had been given; and now he was astonished to hear that the Privy Council advocated the doctrine of *non possumus*. He thought that the President of the Medical Council should endeavour to obtain direct information on the subject.

It was unanimously resolved that the letter referred to in the President's address should be entered on the minutes.

Sir W. GULL moved, Mr. HARGRAVE seconded, and it was resolved—

"That to-morrow the first business of the Council be to consider the correspondence between the Lord President of the Council and the Society of Apothecaries."

Sir R. CHRISTISON moved, and Sir W. GULL seconded—

"That the President of this Council be requested to communicate with the Lord President of the Privy Council, in order that at its meeting to-morrow this Council may be supplied with authentic information as to the intentions of the Government."

Dr. ALEXANDER WOOD proposed as an amendment, and Dr. ANDREW WOOD seconded—

"That this Council consider it premature to open any communication with Her Majesty's Government until the Council has had time to consider the letters already before it."

After a discussion, in which Dr. Quain, Dr. Acland, Dr. Fleming, Dr. Risdon Bennett, and Dr. Humphry took part, the amendment was carried.

Midwifery Diplomas.—A communication from the Queen's University of Ireland, asking that the diplomas in midwifery granted by it should be registered, was, on the proposal of Dr. STORRAR, referred to the opinion of counsel.

Change of Name: Application for Restoration to Register.—The Registrar read a memorial from Mr. James Cooper Pigg, M.R.C.S.E., and L.S.A., praying that he might be restored to the Register, his name having been erased under the 14th section of the Medical Act. The memorial was accompanied by a deed, showing that he had changed his name to James Cooper Cooper. The Registrar was directed to restore the name on receiving sufficient evidence of identity.

On Thursday, the Council was occupied with the discussion of a motion proposed by Sir WILLIAM GULL, that the President and four other members of the Council should form a deputation to the Government with reference to the subject treated of in the letter to the Apothecaries' Society; and of an amendment in opposition, proposed by Dr. ALEXANDER WOOD. At six o'clock the debate was adjourned.

ANÆSTHETICS.

A NEW ETHER INHALER.

MR. G. EVERITT NORTON, Chloroformist to the Middlesex Hospital, described in the JOURNAL of December 7th, 1872, an inhaler which had been used by him for ether-inhalation. Although it answered very well, it had one drawback—there was no convenient means of ascertaining when all the ether had evaporated. For more than two months Mr. Norton has used an improved inhaler, of which the following is a short description.

The apparatus consists of an ordinary Wolf's bottle, capable of containing a pint of ether, having on its upper surface three openings, through the left hand one of which a tube, graduated so as to indicate the amount of anæsthetic the patient has taken, passes down into the ether. The upper end of this is guarded by a valve, through which the patient inhales the air. The centre one is only used when it is wished to give the ether in the form of a spray, on Richardson's principle, in mouth and similar operations. In the right hand opening a long elastic tube is fixed, with a face-piece like Snow's: through this tube the patient inhales the air impregnated with ether. The tube is furnished with an expiratory valve, to which is attached a second tube, through which the expired ether is passed on to the ground. Much unpleasantness to those around is thus avoided. In front of the face-piece is a revolving shutter, which allows the patient to inhale pure air when desirable. The bottle stands in a bath surrounded with warm water, at a temperature of 70 deg. Fahr.; and by that means the patient inhales an uniform mixture of ether and air, of probably about 60 per cent. of the former. The bottle is half filled with ether, and the inspiratory tube is pushed down to the surface of the anæsthetic; but if it be wished to give the patient a stronger dose, the tube is pushed into the fluid. Suspended in the bottle is a flannel bag, intended to promote the surface of evaporation of the ether.

Mr. Norton has found that the average time required to bring a patient under the influence of ether with this apparatus is, in the case of an adult, four minutes; in that of a child, from one to two minutes. The amount of ether used varies. In a case of ovariectomy, the patient was kept under the influence of ether three-quarters of an hour, and only three-and-a-half ounces of ether were used; whereas in a similar operation, ether was kept up for one hour and forty minutes, and only five ounces of ether were used. On the other hand, in a strong muscular man who was a hard drinker, two-and-a-half ounces were used in twelve minutes: the operation was for hæmorrhoids. The average amount used is two ounces for the first quarter of an hour, after which the proportion gradually lessens. There is generally very little struggling, and sickness is exceptional.

METHYLENE ETHER.

MR. LAWSON TAIT, of Birmingham, writes to us:

The narration of the ten cases in Mr. Bader's practice where methylene ether was used as an anæsthetic, militates so much against my own experience of its use, that I can only explain the facts by the supposition that some of the ordinary rules for the administration of anæsthetics have been outraged. I have now administered the new anæsthetic a very large number of times, and have only once had to witness any struggling; rarely has there been any excitement at all. In three or four cases there has been vomiting, but in none has it been of that continuous kind often seen after chloroform, and which is the dread of

the gynæcologist. These assertions I am prepared to confirm by the evidence of many with whom I have been associated in consultation in cases where the methylene ether has been given.

One detail in the administration of this anæsthetic I have found of great consequence. It is, that it should be given through a single layer of a towel, dropped on the outside, and that the dropping should be slow and continuous; that is, that the patient should not breathe at one time a strong vapour, and at another little more than pure air. The mixture of ether-vapour and air should be continuously as equable as possible.

One rule laid down most stringently by the great master of anæsthetics, and one of the most important, is that which is most studiously avoided, especially in hospital practice. I refer to Simpson's rule that absolute silence should be maintained in a room during the administration of an anæsthetic. There should be no talking, no walking, no clanging of doors and instruments, until complete unconsciousness has been arrived at for the patient. Not a sound should be heard in the room, save the gently repeated request of the administrator to the patient to keep the eyes shut and take long breaths. Instead of this, how often do we hear garrulous bystanders, loquacious operators, or officious nurses, suggesting to the patient, in the last moments of his consciousness, ideas which often run into action and produce the excitement and struggling for which the innocent anæsthetic is most wrongfully blamed. No one can appreciate the importance of absolute silence on the part of the bystanders during the administration of an anæsthetic, unless he has suffered personally from their thoughtlessness, as I have, while being put under its influence.

If methylene ether be used according to Simpson's rules and in Simpson's simple way, with the slight addition I have suggested, it will be found by far the best anæsthetic yet introduced to our notice. I repeat this after a trial of nearly four months, and after a number of cases that must now be somewhere about eighty.

ANÆSTHETICS AND INHALERS.

DR. SKINNER, of Liverpool, writes as follows.

If there be one evil more crying, more disgusting than another, in the practice of inducing anæsthesia, it is the use of inhalers. So long as we are only experimenting upon the lower animals, there can be no reasonable objection to their use; but when we come to administer chloroform, ether, or any such agent, to ourselves, I for one throw out a decided protest against being required to inhale through any instrument which has been used for a similar purpose, by another man, woman, or child. There is not one inhaler, my own excepted, where every patient is not made to breathe through the same mouthpiece, tube, and chamber. There is not one mouthpiece which is not made to fit every person, bearded or not bearded. Sweet seventeen is made to follow a bearded devotee to Bacchus, saturated with the smoke of cigars and the exhalations of cognac; or another whose nasal and pulmonary mucous membrane, leave alone the cutaneous surroundings of the mouth and nares, may be exhalant of all odours but those of purity and innocence, and when looked into may be found sensible to sight as well as smell. I repeat, the same mouthpiece and apparatus are applied indiscriminately to all, and without anything being interposed. In consequence, the mouthpiece in time becomes loaded with grease, and filthy enough to upset any one's digestion and sleep for a considerable time to come. The reasons why the filthiness of the practice has hitherto been overlooked are, that the patients are in general so absorbed in the newness of the step they are about to undergo, or so dread the being anæsthetised, or the inhaler otherwise is made so externally inviting in appearance, especially if new, that it is never detected or complained of. Besides, the smell of the anæsthetic so soon kills the smell of the inhaler, and the sensitivity of the party inhaling, that it is lost sight of.

Ignorance of the disgusting nature of the practice does not in the least rob it of its repulsiveness and effects. Only fancy inhaling through the same apparatus just used by a patient suffering from ozæna, specific or non-specific, or from some one of the countless chronic, constitutional, and contagious (?) diseased conditions of the oral, naso-pharyngeal, and pulmonary mucous membranes. We surely do not require to be informed, at the present day, that we exhale something more than carbonic acid and water; but it would appear that the inventors of the endless number of inhalers for the purpose of administering anæsthetics really believe that we exhale nothing more.

Speak of refinement! we turn up our noses if we have not a clean table-napkin every day, if our knife, fork, spoon, and plate, be not cleaned or changed after every dish, or course, at dinner; if we have not separate finger-glasses and the like; but when we come to inhalation—although we all have, thank heaven, been provided with separate

lungs and air-passages—after twenty-five years' experience of medication by inhalation, we remain the merest barbarians, everyone breathing after his neighbour, and through the same instrument. Mark the word, breathing! These remarks do not apply to such inhalers as those which are extemporised out of a bedroom towel, lint, flannel, sponge, and the like, all of which are readily renewable, or easily washed clean. My own apparatus is simple, and being supplied with two or more flannel covers, there is no excuse for using it to two persons in succession without a perfectly clean inhaler each time. In conclusion, although I have no belief that ether will ever supplant chloroform in this country, yet, for the benefit of those of my *confrères* who have come to the conclusion that ether is safer and better, and also because it sometimes occurs to me that some patients will take ether when they will not take chloroform (thanks to the present and oft-repeated raids upon the agent, with the same old, oft-repeated arguments), and lastly, because I believe that there are certain nervously constituted individuals, and patients with decidedly weak circulations, to whom it is safer to administer ether than chloroform, I have adapted my chloroform-inhaler to suit etherisation as well, and I am happy to add that it has proved to be all I could desire. I shall soon give a detailed account of it, and state where it can be procured.

It is to be hoped, that the broad hint which I have here given about the repulsiveness and disgusting nature of the practice of permitting more than one patient to breathe through the same instrument, will be taken in the spirit in which it is meant, and be acted upon without requiring repetition. If I have used strong language, or dwelt upon the subject, it is simply because I feel deeply the necessity there is for speaking plainly and impressively, in consequence of the length of time the practice has stood without rebuke, and because of the large amount of money invested in the same, both elements rendering the practice all the more difficult to alter or eradicate.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held on Wednesday, the 9th day of April next, at the Office of the Association, 37, Great Queen Street, London, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, 28th March, 1873.

WEST SOMERSET BRANCH.

THE spring meeting is appointed to be held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 3rd, at 5.15 P.M.

The following question will be discussed after dinner:—"What is the best plan of preventing the spread of infectious and contagious diseases, having special reference to Dr. Budd's mode of treatment by camphorated oil and baths?"

Gentlemen who intend to be present at dinner, or who may have communications for the meeting, are requested to send notice thereof to the Secretary.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, March 11th, 1873.

METROPOLITAN COUNTIES BRANCH: ORDINARY MEETING.

AN ordinary meeting of the Metropolitan Counties Branch was held at 11, Chandos Street, Cavendish Square, on Wednesday, March 12th, at 8 P.M.; Sir WILLIAM FERGUSSON, Bart., President, in the Chair.

Instruction, Examination, and Registration of Midwives.—Dr. J. H. AVELING read a paper on this subject. It was published at page 308 of the JOURNAL for March 22nd.

The PRESIDENT thanked Dr. Aveling in the name of the meeting for his paper. The subject was one of much importance; and he was specially interested in hearing opinions on it, as he would have to deal with it in another place.—Dr. BARNES said that the subject was one which required a good deal of ventilation. There was no ground to fear that midwives would supplant medical men; for the medical profession would have the supremacy. At the Royal Maternity Charity, the midwives, as a rule, handed down their calling from generation to generation; and in some cases the women supported their husbands. To come to the real point, there must be midwives; no power on earth could abolish them. The general practitioner could not attend to all the cases of labour, both because of the amount of work, and because of

the limitation of the supply of practitioners through the stringent regulations of the examining boards. And if midwives must be tolerated, they must also be properly instructed, registered, and supervised. The late J. G. Crosse of Norwich said that midwives must be educated better and abused less. With regard to their education, it would not do to at once import the practice of foreign countries. The practice in Germany was based on the establishment of lying-in hospitals on a large scale, in which instruction was given up to a certain point. Domestic teaching in midwifery was what was wanted; though elementary midwifery was best taught in a hospital. He did not think that the machinery existed here for making large schools of midwifery; nor was it desirable that it should. As it was, the midwives were taught in the lying-in hospitals at the expense of the lives of the inmates. Lying-in hospitals must exist to a certain extent, and should be utilised; but their utility was limited. The plan followed at the Royal Maternity Charity, by which midwives were gradually instructed and tested by Dr. Hall Davis, might be extended. In this way a very efficient class was obtained, capable of managing ordinary labour, and knowing when to call in the aid of an obstetrician. Similar institutions should, he thought, be formed in all large towns. A diploma and some form of registration were necessary consequents on instruction. The initiative in the matter lay with the Medical Council, or the bodies connected with it. The corporations were to blame for not forcing the subject on the Council.—Mr. LORD said that his opinion would not be in accordance with that of others; but he thought that it was a mistake to bring the subject before the Branch. He did not think that so many women were attended by midwives as was supposed. There existed in every town a club or provident dispensary, where competent assistance might be obtained from members of the medical profession. He foresaw that if midwives were encouraged, the profits of the hard-working practitioners would be diminished. It was suggested to establish an army of midwives. Little by little their influence would be felt; and they would displace the medical practitioner. He could not believe that so much mischief was to be attributed to the existing midwives. If this great army of midwives were distributed through England, that would take place which he had observed in Spain; the regular practice of midwifery being taken from the general practitioners, who were called in in severe cases, they lost their familiarity with the practice. He thought that the members of the British Medical Association should not be foremost in the discussion of the subject now brought forward.—Mr. P. H. HOLLAND thought the question was one which the Branch could very rightly discuss; and he thanked the Council for having caused it to be brought forward. He knew that in Manchester fifty per cent. of labours were attended by women. Some of these midwives were pretty well taught; they could manage ordinary labours, and knew when to send for medical officers in cases of difficulty. But the practice was not confined to these trained midwives; there was a large number of ignorant women hanging on and professing to be hospital midwives. The midwives should be instructed. If every one could be made rich enough to pay a doctor, it would be well; but, as the matter stood, many went to midwives. He had suggested that the licence should be annual; but Dr. Aveling's proposal of constant supervision was better. He proposed the following resolution. "That the Council be requested to appoint a Midwifery Committee to inquire into and report upon the best means of instructing, licensing, registering, and controlling midwives."—Dr. EDMUNDS seconded the motion. He did not think that the medical profession feared the competition of women. Dr. William Farr had stated that he believed that a great majority of the poor of this country were without skilled attendance in their labours. The Female College did not exact a preliminary education, except from those who applied for certificates of special proficiency. The Committee had abstained from granting diplomas, in order to obey the law; and it was hoped that some steps would be taken for recognising the position of ladies educated in the college. Some of them were employed in the lying-in hospitals at Manchester and elsewhere. He thought that midwives of an useful kind were wanted.—Dr. TILT was much indebted to Mr. Lord for the candid expression of his opinion. He had made it plain that a certain number of the medical profession would say that, by training midwives, the bread would be snatched out of the mouths of medical men. He thought that the adoption of such measures as had been proposed would tend to raise the standard of our profession. A young practitioner might very well for a limited time attend labours for nothing or for a few shillings; but that men should settle down for life to practise cheap midwifery, was not calculated to be creditable. We must have educated midwives; it was absurd to say that a supply could be found in other countries, and not in England.—Dr. DRYSDALE said that in France the practice of midwifery was more satisfactory than in England. At the Maternité in Paris, from fifty to seventy

respectable females studied all the medical sciences and had lectures every day. He objected to the supervision proposed by Dr. Aveling; the women should make their own reputation.—Dr. FOTHERGILL had no objection to midwives, and would like to see them better educated; but he had never yet found a woman who had confidence in women in cases of emergency. He did not see how midwifery could be separated from general practice; and he agreed with Mr. Lord as to the danger of losing skill in practice.—Dr. HARRIS (of Madras) had been concerned in the education of midwives in India. He had seen many cases in which women were brought into the lying-in hospital in Madras, in consequence of the treatment which they received at the hands of the uneducated native midwives. In Madras, about twenty years ago, a class was instituted, of women who could read and write; they were taught at the bedside, and occasionally by lectures and examinations, and had opportunities of conducting labours. If, after some months, they were found on examination to be qualified, they were sent out to practise among the natives.—Dr. SHRIMPTON said that the education of midwives was well carried out in Paris. But here we must make use of the materials at hand, and have regard to the domestic tendencies of the English.—Dr. SNOW BECK would be glad if some practical result were arrived at. He did not think that a well educated body of midwives would encroach on the medical profession. The education should be given where every facility was afforded; viz., in lying-in institutions.—Dr. AVELING, in reply, said that he did not propose to form an army of midwives; it existed already, but it required to be regulated. He maintained that the midwives must be supervised in the same way as asylums and factories were supervised.

The proposal for the appointment of a Committee was then put to the vote and carried.

In connection with this discussion, we have been requested to publish the following letter.

24, Harley Street, Cavendish Square, March 15th, 1873.

My dear Dr. Aveling,—It was my intention to have made some remarks after your excellent paper, read at the last Metropolitan Branch meeting of the British Medical Association, on Midwives and their Instruction, proposed to be rendered compulsory by Legislative enactment; but I was urgently required elsewhere.

My opinion is quite in accordance with yours, that our poorer sisters are in large numbers sadly neglected, through their attendance in their confinements by incompetent self-styled midwives; the result of which is, that the mortality produced or injuries left by their rashness on the one hand, or by passiveness on the other hand, are frightful to contemplate. Having been engaged as Physician and Lecturer to the Royal Maternity Charity for thirty years past, I have been able to observe, and with great satisfaction, the good effects of teaching candidates carefully in all the duties of a midwife, ere they are appointed. By order of the Committee of that Charity, I have had from time to time, as vacancies have occurred, to deliver lectures in order to keep up our stock of midwives (at present forty-one in number). The respectability of the candidates is first guaranteed by sureties satisfactory to the Committee. I then give them two courses of lectures, between which they attend cases, of which they deliver to me reports in tabular form. At the end of the instruction, I submit them to examination, when those only I accept whose answers are satisfactory. In some years, I have had to reject two, three, or four out of twelve candidates. In this way we secure intelligent women, in whom we can repose trust for the safe delivery of our poor patients, and the certainty of their appealing in due time in all necessary cases to the physicians, or their district auxiliary surgeons. Our annual deliveries amount to upwards of 3,000 cases, all attended at the patients' homes, with the small mortality very rarely indeed exceeding 1 in 400 from all causes. In 1872, our deliveries were 3,666; our deaths 4, or 1 in 916, including one from phthisis. Such results speak well for the kind of attendance given to the poor lying-in women of this Charity, and furnish a strong contrast to the results of midwifery attendance by uninstructed women.

As a specimen of such women, I may mention one instance of a middle-aged person, who came to my class for instruction, she having for some years practised midwifery after receiving, as she said, a few lessons. I found her wholly incapable of receiving instruction, and advised her, therefore, to change her occupation. She then said she had learnt from me sufficient to convince her that she must have sacrificed many lives; and she declared her intention for the future of relinquishing midwifery practice entirely. I am aware that some other institutions, as various hospitals, have on a smaller scale done good work in education of midwives, and also the recently organised school of midwifery in Great Portland Street. From these sources, as well as where we could spare from our supernumeraries, various country districts have been supplied with properly educated midwives. Nevertheless, many union patients and poor populations are still miser-

ably and cruelly neglected in the hour of their greatest trial; and some church lying-in charities have, although unknowingly, I believe, provided themselves with uneducated midwives. Two such women were rejected at a recent examination by the Obstetrical Society's Examining Board.

That your praiseworthy movement, fully endorsed by the profession, may, in the interest of humanity, meet with the entire success which it deserves, is the earnest wish of,

Yours very sincerely,

J. HALL DAVIS.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT MEETING.

THE third meeting of the session 1872-73 was held at Gravesend on March 11th; JOHN CHRISTOPHER ARMSTRONG, Esq., in the Chair.

New Member.—Alfred Shewen, M.B., of Gravesend, was elected.

Communications.—1. *Starvation.*—Dr. CLAPTON of St. Thomas's Hospital read a paper on starvation, in which he showed that there were positive signs discoverable without information from the patient or friends. The tongue presented peculiar appearances, and the temperature was high.

2. *Cardiac Disturbance and Enlarged Liver.*—Mr. J. C. ARMSTRONG narrated a case of paroxysmal galloping heart and enormous tumefaction of the liver, terminating in ten days by a faecal evacuation of black colour. There were four attacks—viz., April and June 1869, September 1870, and July 1872. The last attack terminated in death on 7th August, probably owing to an intercurrent diphtheric affection. The disease was considered to be a functional affection of the ganglionic centres, probably an unusual manifestation of malaria.

3. *Pulmonary Embolism after Parturition.*—Dr. J. V. BELL narrated a case of pulmonary embolism occurring eight weeks after childbirth. The lady had suffered from oedema of the left lower extremity throughout gestation. The seizure consisted of collapse, extreme anxiety, imminent suffocation, and rapid feeble action of the heart (130-180). On the fifth day the pulse fell to 120, and a loud systolic murmur was detected to the right side of the heart's apex. The murmur gradually diminished, and ceased after a duration of fourteen days, whilst the pulse had fallen to 100. About this time oedema of the right upper extremity occurred, but did not last longer than a fortnight. The patient ultimately recovered. The case was considered to be one of phlegmasia alba dolens of the left lower extremity, followed by pulmonary embolism and venous embolism of the right upper extremity. The treatment consisted in the administration of brandy, ether, digitalis, and Virginian prune, with a beef-tea diet.

Dinner.—The members and visitors dined at the Old Falcon Hotel.

OBITUARY.

BENJAMIN HOBSON, M.B., M.R.C.P.

DR. HOBSON died, after a very brief illness, on the 16th of February, aged fifty-seven years. Having chosen medicine for his profession, he went through the usual course of study at University College, London, with great success. After taking his degree as M.B. of the University of London, in 1839, he went to China as a medical missionary, in connection with the London Missionary Society. He first had charge of a missionary hospital at Macao, afterwards at Hongkong, when that place became a British colony, and eventually at Canton, at each of which hospitals healing and Christian teaching were uniformly combined. At Canton, he succeeded in establishing a hospital in the face of the greatest difficulties and opposition, arising from the prejudices of the Chinese against foreigners. By slow degrees confidence was gained, opposition ceased, and patients came in large numbers, many from considerable distances round, whither the fame of the foreign doctor had reached.

The hospital at Canton was in full activity from 1848 till the close of 1856, when it was abruptly vacated in consequence of the rupture between the Chinese and British authorities. The report for that year shows that the average number of in-patients was 50, whilst the aggregate attendance was over 24,000. Nearly all the work of the hospital was attended to by Dr. Hobson himself, with little or no aid, except latterly, when a young Chinese, his pupil, was able to act as an assistant, and a medical friend, practising in Canton, kindly gave assistance by performing surgical operations.

Dr. Hobson prepared several medical works in Chinese. The first was on Physiology and General Anatomy, published in 1851. It contained numerous illustrations, taken from English works, done by the

aid of Chinese artists on the spot. The illustrations of this work were reproduced on eight scrolls by Yeh Suy-ung, father of the Governor-General of the province of Canton, with an introduction by himself, of which the following is a translation.

"A western writer, Hobson, has published a treatise on Physiology, with illustrations, in which the subject is thoroughly elucidated. He first gives a general description of the entire body, and afterwards treats of its various parts separately. The illustrative figures are 271 in number, they were lithographed at the free hospital at Kam-li-fau, in Canton. These I have arranged after the originals, on eight scrolls, which may be hung side by side, and so be conveniently studied, and they will be very suitable for presents. To persons desirous of acquiring the healing art they will give a complete insight into the internal and external structure of the body, and the principles of its organisation, and possess them of the means to obtain a true diagnosis of diseases. They are properly characterised in the following terms.

"The myriad processes of life are here displayed, and the human frame is opened to view. The internal and external organs are distinguished and accurately delineated. From the form the nature is demonstrated: what appears anomalous is shown to be well-ordered. It is the first time that we have beheld such productions. Our science indeed cannot compete with that of the philanthropic author.

"By Yeh Suy-ung, from the palace of the Governor-General of the Two Kwang Provinces, in the eighth autumnal month of the third year of Hien-fung."

The *China Mail* of May 11, 1854 (published at Hongkong), has this reference to the work on physiology.

"This work of Dr. Hobson's has probably excited a deeper interest among the Chinese literati than anything that has ever issued from foreigners. When first issued, in 1851, it was so eagerly sought after that a reprint of it was made for sale by Pwan-tsze-shing, a wealthy and influential Chinese of Canton. We regard with great interest the circulation of books of this character among the Chinese."

A copy of this work is in the library of the British Museum.

A Treatise on Surgery was published a few years afterwards. It contained 400 illustrations from the standard surgical works at that time. This was followed by a work on Midwifery, and Infantile Diseases. The fourth work was on the Principles and Practice of Medicine, with a Digest of the *British Pharmacopœia*. To aid the better understanding of the views put forth in these treatises, the chief properties of light, heat, electricity, air and water, were explained, and attached to a volume previously published on Astronomy and Natural History. These five books were not translations of any one English work in particular, but were rather selections from many on the same subjects, and adapted to use.

Not only have the above works been extremely well received by the Chinese, and circulated through the empire (especially that on physiology and general anatomy), but the whole of them have been reprinted in Japan, in fourteen thin octavo volumes.

Failing health obliged Dr. Hobson to return to England at the close of 1858. After a short rest he commenced practice, first at Clifton, and soon afterwards at Cheltenham. But twenty years of laborious work in the East had, it appears, weakened his constitution, and early in 1864 he had an attack of facial paralysis, and from that time, although he appeared to have greatly recovered from its effects, he was quite unable to resume practice. His transparency of character and kindness of heart won the esteem and love of those who knew him. It was hoped he would live for many years, but a severe attack of bronchitis unexpectedly terminated his life.

JOHN DEANE BAKER, M.R.C.S.Eng., L.S.A.

MR. BAKER was born in Somersetshire, where he received his early education. He afterwards studied at University College. After obtaining his diploma, he was appointed to the office of house-surgeon at the Leeds House of Recovery, and subsequently settled at Wragby, in Lincolnshire, where he continued to reside until his death. He held the appointments of Medical Officer of the Wragby District of the Horncastle Union, and of the Hainton District of the Louth Union, until the time of his death, which occurred on March 19th, in consequence of a fall from his horse while discharging his professional duties. His age was 45.

A. D. N. MUNRO, M.D.

At the early age of thirty, this rising practitioner has been taken away. After graduating in 1864, at Edinburgh, with considerable honour, he settled down to the hard work of country practice in Letham, Fifeshire, where he soon gained widespread respect and esteem. An opening

occurring in Cupar, the county town, he removed thither, and rapidly extended his connection, until he had established a very thriving practice. When all things seemed at their brightest he was seized with pneumonia, which implicated the whole of the left lung, and for five months he suffered from hydrothorax and empyema. Pericarditis supervened, and he died on March 15th.

HENRY EAMES, M.D., DUBLIN.

WE regret to hear that Dr. Eames died on Monday, March 24th, at his residence, in Dublin, from typhus fever, at the early age of thirty-one. Dr. Eames was physician to Mercer's Hospital, and lecturer on the practice of physic, at the Ledwich School of Medicine and Surgery. Among his contributions to medical science may be mentioned a paper on "Phosphorus in Skin Affections," which was published some time ago, in the *Dublin Journal of Medicine*, and created a good deal of attention at the time. Dr. Eames' death is regretted by a large circle of professional friends.

R. DOWSE, Esq., INSPECTOR-GENERAL OF ARMY HOSPITALS.

MR. DOWSE died at his residence in Plymouth, on March 21st, aged 79. He entered the army in 1814 as Assistant-Surgeon, and served at the surrender of Martinique and Gaudaloupe in 1815; also in the Ionian Islands during an epidemic of plague in 1826. He was promoted to be Surgeon in 1836, Deputy Inspector-General in 1855, Inspector-General in 1857, and was granted the reward for distinguished services in 1871. Mr. Dowse was a native of Ireland, and uncle of the Right Hon. Baron Dowse, late M.P. for Londonderry.

WILLIAM HARVEY, Esq., ISLINGTON.

MR. WILLIAM HARVEY died on March 18th, at his residence, Lonsdale Square, Islington. During a period of fifty-seven years he had practised as a surgeon in the north of London, and was at the time of his death Chairman of the Islington Board of Guardians, a position which he had held from the formation of the Board. He filled, at various times, all the parochial offices; was a member of the vestry from its formation; was one of the first *ex officio* members of the Metropolitan Asylums Board, nominated by the Poor-law Board; and was a prominent member of the Burial Board, and of the Clouesley Estates Committee. During many years he was an active supporter of the Islington Literary and Scientific Institution, in the management of which he took great interest. He was well known as an occasional lecturer, and as an able speaker on the leading subjects of the day, and was a frequent contributor to periodical literature. Under the signature of "Aleph," he wrote a large number of interesting papers on men and manners of the past, which appeared in the columns of the *City Press*, where they attracted a considerable amount of attention. It is understood that he has left a large number of manuscripts in the hands of his executor, Mr. W. H. Collingridge.

GEORGE GILBERT BROWN, M.D., INSPECTOR-GENERAL OF HOSPITALS.

WE regret to have to announce the death of this esteemed gentleman at Aberdeen. Dr. Brown died on March 15th, at the age of 73. In 1825, Dr. Brown became an Assistant-Surgeon in the East India Company's Service; in 1838, he was promoted to the rank of Surgeon. Dr. Brown served in the campaigns of Gwalior and the Punjab. He was present with the army of Gwalior at the battle of Maharajpore in 1843, for which he received a medal. In 1846, he was present at the battle of Sobraon, with the army of the Sutlej. On this occasion he also received a medal. He was with the army of the Punjab at the battles of Chillianwallah and Goojerat, for which he received a medal and two clasps. After serving till 1855, and spending his furlough at home, he finally completed a most useful Indian career of thirty-five years, and retired from the service in 1860, with the rank of Inspector-General of Hospitals. He settled in Aberdeen, his old home, and warmly and vigorously took an interest in the social and professional welfare of his native city. He secured the deep respect of the medical profession in the town, and was elected President of the Medico-Chirurgical Society, to the duties of which he very successfully brought his ripe and useful experience. He was a true friend, straightforward and genial.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

HUNSLET.—The rural sanitary authority of the Hunslet Union have unanimously elected Mr. Nowell, of Woodlesford, surgeon, to be the medical officer of health to their district, comprising the townships of Middleton, Oulton-with-Woodlesford, Templenwasm, and Thorpe Stapleton. They have also elected Mr. W. Whitehead, of Oulton, to be the inspector of nuisances for the same district.

BOLTON.—Mr. Gregory, of Bolton, has been appointed Medical Officer of Health for the Rural Sanitary District of Bolton-le-Moors. The district is large and scattered, being of about 23,000 statute acres, with 16,000 inhabitants, and of a rateable value of £80,000. The salary is only £100 per annum, half to be paid by the Local Government Board. The appointment of medical officer to the urban district was eagerly contested, although the salary offered was only £200. The population is nearly 90,000, and the rateable value of property £270,000. Government aid was declined. Eleven candidates sent in testimonials; three local men, however, namely, Dr. Livy, Mr. R. Patrick, and Mr. F. Waterhouse, were selected, and requested to appear before the sanitary committee of the council, who subjected each to an examination as to his knowledge and views of sanitary matters. After this, Dr. Livy was appointed, winning the day by a majority of one. It is earnestly to be hoped, that a borough which can afford to spend £150,000 on a townhall, will give a better salary for the onerous duties required. From Dr. Ballard's report of the state of the town a few months ago, the amount of work to be done must be enormous, and although it is not required that the medical officer should give up private practice, every moment of his time must be occupied by his public duties, if they are to be done at all efficiently.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—March 24th.

THE LOCAL GOVERNMENT BOARD.—Mr. Corrance asked the President of the Local Government Board, in consequence of a letter recently issued from the Local Government Board respecting the appointment of inspectors and health-officers, whether it was the intention of the Local Government Board to issue any general instructions to the local authorities concerning their appointments, indicating with greater precision the intention of the Local Government Board to disallow subventions or to prohibit certain appointments?—Mr. Stansfeld did not think it desirable to issue any particular instructions more precise than those which had been already issued on the subject of inspectors and health-officers. Their instructions were to consider each case on its own merits, and to spare neither time nor expense in order to arrive at a proper conclusion. If the honourable gentleman wished, the instructions issued would be produced.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following members were elected Fellows of the College, at a meeting of the Council, on March 13th.

Damant, Thomas William, L.S.A., Fakenham, Norfolk: diploma of membership dated June 1842.
Davies, William Joseph, L.S.A., Newport, Monmouthshire: November 1839.
Mathias, John Edward, Southport, Lancashire: May 1838.
Morris, John, L.S.A., Hereford: March 1837.
Rendle, William, L.S.A., Forest Hill: March 1838.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 20th, 1873.

Couldrey, James, Abingdon, Berkshire
Fincmore, James Harman, Plymouth, Devon
Kay, Hildreth, Upton Place, Commercial Road
Ley, John William, Lacey Street, Bow
Parry, Thomas Sharp, Mold, Flintshire

The following gentleman also on the same day passed his primary professional examination.

Clift, Martin Luther, St. Bartholomew's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ABERFOYLE, Perthshire—Parochial Medical Officer: £90 per annum. Applications to H. R. B. Peile, Esq., Catter House, Drymen, by Glasgow.
ABINGDON, Bradfield, Cookham, Easthampstead, Hungerford, Newbury, Wallingford, and Windsor Rural Sanitary District, and Abingdon, Maidenhead, Newbury, Speenhamland, and Wallingford Urban Sanitary Districts, combined—Medical Officer of Health: £750 per annum. Applications to J. S. Bowles, Esq., Milton Hill, Stevenston.
ABINGDON UNION—Medical Officer and Public Vaccinator for District No. 5: £100 per annum.
BELPER RURAL SANITARY DISTRICT—Two Medical Officers of Health: £150 per annum each.
BRACKLEY, Brixworth, Daventry, Hardingstone, Kettering, Market Harborough, Newport Pagnell, Northampton, Oundle, Potterspury, Thrapstone, Wellingborough, Towcester, and Uppingham Rural Sanitary Districts, and Daventry, Northampton, and Oundle Urban Sanitary Districts, combined—Medical Officer of Health: £800 per annum. Applications to W. Tomalin, Esq., Northampton.
CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.
CHESTERFIELD RURAL SANITARY DISTRICT—Medical Officer of Health: £550 per annum. Applications to George Haslehurst, Esq.
CLITHEROE UNION, Lancashire—Medical Officer for the new Workhouse and Infirmary: £20 per annum.
COCKERMOUTH RURAL, and Cockermouth, Keswick, and Workington Urban Sanitary Districts—Medical Officer of Health: £400 per annum.
COLCHESTER URBAN SANITARY DISTRICT—Medical Officer of Health: £150 per annum.
CRIECH, Fifehire—Parochial Medical Officer and Public Vaccinator.
DONEGAL COUNTY LUNATIC ASYLUM, Letterkenny—Physician: £100 per annum. Applications to Charles J. McMullen, Esq.
EAST PRESTON UNION, Sussex—Medical Officer for District No. 2B.
EDINBURGH VETERINARY COLLEGE—Professor of Anatomy. Applications to Alex. Harris, Esq., City Chambers, Edinburgh.
FROME RURAL AND URBAN SANITARY DISTRICTS, combined—Medical Officer of Health: £200 per annum.
GALWAY UNION—Apothecary to the Workhouse and the Galway Dispensary: £70 and £30 per annum, and furnished apartments. Applications to Thomas Stack, Esq., Galway.
HARTLEPOOL UNION—Medical Officer and Public Vaccinator for the Greatham District: £30 per annum.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Two Resident Clinical Assistants.
KANTURK UNION, co. Cork—Apothecary to the Newmarket Dispensary: £40 per annum. Applications to G. Smith, Esq., The Cottage, Newmarket, co. Cork.
KELLS UNION, co. Meath—Medical Officer to the Workhouse and Fever Infirmary: £110 per annum.
KING'S COLLEGE, London—Professor of Anatomy.
LEEDS—Public Analyst: £100 per annum. Applications to C. A. Curwood Esq., Town Clerk.
LONDON FEVER HOSPITAL—Resident Medical Officer: £200 per annum, residence, coal, gas, and attendance.
MANCHESTER ROYAL EYE HOSPITAL—House-Surgeon and Secretary: £50 per annum, to commence, board, lodging, and washing.
MIDDLESEX COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £150 per annum, board and residence. Applications to R. W. Partridge, Esq.
NOTTINGHAM DISPENSARY—Assistant Resident Surgeon: £140 per annum, furnished apartments, coal, and gas.
OWENS COLLEGE, Manchester—Practical Brackenbury Professorship of Physiology and Histology. Applications to J. G. Greenwood, Esq.
RADCLIFFE INFIRMARY, Oxford—Resident Dispenser: £80 per annum, board and washing.
ROYAL ACADEMY—Professor of Anatomy.
ST. HELENS (Lancashire) URBAN SANITARY DISTRICT—Medical Officer of Health: £200 for 12 months. Applications to H. Pilkington, Esq.
ST. MARY'S HOSPITAL, Quay Street, Manchester—Honorary Surgeon.
SALFORD URBAN SANITARY DISTRICT—Medical Officer of Health.
SUNDERLAND GENERAL INFIRMARY AND DISPENSARY—Junior House-Surgeon: £80 per annum, board, lodging, and washing.
SUSSEX COUNTY HOSPITAL, Brighton—Physician.
TYRRE, Parish of—Medical Officer for the New Pitsligo District.
WELLINGTON (Salop) URBAN SANITARY DISTRICT—Medical Officer of Health.
WESTMINSTER HOSPITAL—Surgeon.—Assistant-Surgeon.
WEST SUSSEX, etc., INFIRMARY, Chichester—House-Surgeon: £80 per annum, board, lodging, and washing.
WISBECH RURAL SANITARY DISTRICT—Medical Officer of Health: £160 per annum.
WOODBIDGE UNION, Suffolk—Medical Officer for District No. 4: £78 p. a.
WOOLWICH UNION—Medical Officer to the Workhouse.
WORCESTER AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Medical Officer: £170 per annum, and residence. Applications to C. J. Richards, Esq., 5, Lansdowne Villas, Lansdowne Road, Worcester.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

FERGUSON, Daniel William, Esq., appointed Medical Officer, Public Vaccinator, and Registrar of Births and Deaths for the Newport District of the Howden Union, Yorkshire.
HAWKES, John, M.D., F.Z.S., Assistant Resident Physician to the Middlesex County Asylum at Hanwell, appointed Resident Medical Superintendent of Westbrooke House Asylum, Alton, Hants.

BIRTHS, MARRIAGES, AND DEATHS.

DEATHS.

Dix, Richard, Esq., Surgeon to the Derby Infirmary, at Long Buckby, Northamptonshire, on March 9th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAYSt. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Farquharson, "On an Epidemic of Roseola or Spurious Measles"; Dr. Broadbent, "Cases"; Mr. Bryant, "Cases"; Mr. Maunder will show Cases of Excision; and other Communications.

TUESDAY.—Pathological Society of London, 8 P.M. Dr. Tilbury Fox: Parasitic Sycosis of the Chin—a living subject. Discussion on the Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lungs. Specimens and Drawings of Tubercle will be exhibited by Dr. Moxon, Dr. Cayley, Dr. Lionel Beale, Dr. Bastian, Dr. Powell, Dr. Payne, Dr. Henry Green, Dr. Crisp, etc. The Microscopical Specimens will be open for inspection for half-an-hour before the meeting.

WEDNESDAY.—Obstetrical Society of London. 7.30 P.M.: Meeting of Council. 8 P.M.: Dr. Tilt, "On the Progress of Pelvic Pathology during the last Twenty-five Years"; Dr. Wiltshire, "On the common Skin-Diseases of Children"; and papers by Dr. Bantock and Mr. Roper.

THURSDAY.—Harveian Society of London, 8 P.M. Dr. Thomas Morton, "On Cases of Puerperal Septicæmia treated by Elimination."—Hunterian Society, 8 P.M. Dr. Clapton, "On the Action of Tea and Allied Substances, and on the effect of Tea-tasting"; Mr. Hovell will exhibit an improved Tracheotome; Mr. Toulmin, "A Tumour of the Pericardium ulcerating into the Aorta"; Mr. Bryant, "Case of Complete Occlusion of the Rectum."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

THE RECENT ARMY MEDICAL WARRANT.

SIR,—In an able article on the above, in your esteemed paper of March 15th, is the following sentence. "It is true that the option of claiming half-pay after twenty years has been made absolute, instead of depending on the decision of a Medical Board."

Now, I think you will find that, under the old Warrant, medical officers, of twenty years' service, could have made the same claims for half-pay. Medical officers of the relative rank of captain, after fifteen years' service, had 17s. 6d. a day under the old Warrant. Under the new Warrant, they have only 15s. a day. Forage, under the old Warrant, was granted to medical officers of the relative rank of major and upwards. Under the new Warrant, "forage shall be granted to officers of the Army Medical Department for such number of horses as are necessarily kept by them for duty." Allowance for forage for duty horses is no boon, but a right. Under the old Warrant, two medical officers did duty with a regiment, and could thus relieve one another, and consult on professional matters. Under the new Warrant, I fear, all this will be changed.

March 18th, 1873.

I am, etc.,
RAMBLER.

*** We are indebted to "Rambler" for reminding us that the absolute right to retire after twenty years' service was granted by the Supplementary Warrant of 1867. Shorn of this novelty, Mr. Cardwell's new scheme literally does nothing to stimulate promotion, unless his confident statement in the House, and the withdrawal of the extra 2s. 6d. a day after fifteen years' service, indicate some future regulations to insure seniority after that period. It is true, that the redistribution of medical officers is causing wide-spread dissatisfaction throughout the service; but the general hospital system has been shown by recent events to be so absolutely necessary in war time, that its adoption during peace is clearly demanded—in part, at least—by the progress of the age.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

THE WEST INDIES AS A FIELD FOR PRACTICE.

SIR,—Will you kindly permit me to ask whether any of my medical brethren will do me the favour of informing me what would be the prospects of a medical man seeking a practice or appointment in the West Indies? and also, what would be the proper steps to take in order to hear of or to obtain such?

March 1873.

I am, etc.,

M.D. CANTAB.

EQUINE CALCULI.—The *Aberdeen Daily Free Press* relates the particulars of a case of equine calculus. The animal, a carter's horse, 14 or 15 years of age, had evidently been a severe sufferer from stone, if that complaint had not been the cause of death. The number of completely formed stones found in the bladder, apart from what might be called mere "grounds", was one hundred and four. The largest of them weighed about half an ounce; and the weight of the whole quantity was three-quarters of a pound avoirdupois.

FAMILY HISTORY.

SIR,—Family history being often of great use and interest to the practitioner, and perhaps hardly less so to the patient, I would suggest the desirability of parents keeping a family register, in which they should enter everything relating to the health of their children—such as weight, colour of hair and eyes at birth; the course, duration, and peculiarities of the exanthemata and other diseases as they occurred. By some such plan, family history, now often inaccurate, might become a definite and reliable aid in diagnosis; the frequency of the exanthemata recurring in the same individual and other interesting points would be better understood; and, in course of time, a large addition would accrue to the laws of disease; whilst, if a note were taken of concurrent diseases of the lower animals, some light might be thrown upon the subject of comparative medicine.

I am, etc.,

Southam, March 3rd, 1873.

WALTER LATTEY.

ERYSIPELAS, ETC., AFTER VACCINATION.

SIR,—The suggestion of your correspondent the public vaccinator for Lanchester, that "all accidents occurring in vaccination should be recorded," however desirable, is probably quite impracticable; and, as nothing is so misleading as imperfect statistical records, the attempt to carry out the plan would probably do more harm than good. All experienced vaccinators are aware that erysipelas and pyæmia, in some rare exceptional cases, follow vaccination, just as occasionally happens after operations of the most trivial character, or as the result of a scratch of a pin or other slight injury. It is to be feared that sometimes these unfortunate accidents may have resulted from a want of due care. I have known blood-poisoning to be caused by using moist lymph stored in one of those most objectionable bottles with a tongue-like stopper on which the lymph is deposited, and frequently, especially in hot weather, as in the instance in question, becomes decomposed and produces all the effects of an animal poison.

I am, etc.,

A. B. STEELE,

Member of the National Vaccine Establishment.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, March 22nd; The Manchester Guardian, March 26th; The Aberdeen Daily Free Press, March 22nd; The Bath Express, March 22nd; The Birmingham Daily Post, March 24th; The Constitution, or Cork Advertiser, March 21st; The Newcastle Daily Journal; The Eastern Morning News and Hull Advertiser; The North of England Advertiser; The Bedfordshire Times; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. C. B. Radcliffe, London; Dr. R. Livcing, London; Dr. T. Skinner, Liverpool; Mr. Haviland, London; Mr. T. H. Bartlett, Birmingham; Dr. George Johnson, London; Dr. Thomas Jones, London; Mr. Richard Davy, London; A Correspondent; Mr. J. W. Langmore, London; Dr. Smart, Penge; Our Dublin Correspondent; Dr. Althaus, London; Dr. J. W. Moore, Dublin; The Secretary of the Pathological Society; Dr. F. J. Brown, Rochester; Dr. Harris, Redruth; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. W. Fairlie Clarke, London; Dr. Bagshawe, St. Leonard's; Dr. W. Garstang, Blackburn; Medicus Rusticus; The Secretary of the Harveian Society; Dr. R. Barnes, London; The Secretary of the Hunterian Society; Mr. Waren Tay, London; Dr. Morell Mackenzie, London; Our Paris Correspondent; T. T. B.; Dr. McCrea, Belfast; Dr. Ransome, Manchester; An Associate; Mr. Eassie, London; Dr. Procter, York; Mr. F. W. Dix, Long Buckby; Mr. E. T. Payne, Bath; Mr. W. Lattey, Southam; Mr. Lawson Tait, Birmingham; Mr. J. S. Wilkinson, London; Dr. W. A. Hollis, London; Mr. J. Higham Hill, London; Mr. E. D. Tomlinson, Curragh; Mr. F. Warner, Guildford; Mr. Oglesby, Leeds; Mr. J. Hawkes, Hanwell; The Secretary of the Obstetrical Society; Dr. Ogston, Aberdeen; Dr. Bryan, Northampton; Mr. D. Kent Jones, Beaumaris; Mr. Wolff, London; Dr. De la Cour, London; Mr. O. K. Jones, Beaumaris; Mr. J. Hinton, Warminster; Dr. Sansom, London; Dr. Myrtle, Harrogate; Surgeon-Major Black, Cheltenham; Mr. J. H. Gornall, Warrington; Dr. J. S. Holden, Sudbury; etc.

CROONIAN LECTURES ON MIND, BRAIN, AND SPINAL CORD, IN CERTAIN MORBID CONDITIONS.

Delivered at the Royal College of Physicians, March 1873.

By C. B. RADCLIFFE, M.D., F.R.C.P.,

Physician to the Westminster Hospital, and to the National Hospital for the Paralysed and Epileptic: etc.

LECTURE II.

IN the last lecture, I was venturesome enough to attack the materialistic view of mind which is at present so much in vogue, and to maintain that mind had its foundation, not in matter merely, nor yet in spirit merely, but in something, common to both, which might be matter at one time and spirit at another, so that, in reality, matter might be regarded as convertible into spirit, and spirit into matter. I attempted, I fear, more than I could hope to accomplish in any case—more than could be accomplished in the short space of an hour, certainly. In my present lecture I am far less ambitious, my object being simply to deal cursorily with two practical subjects, which, though not wholly disconnected, have no necessary connexion with each other. What I now propose to do, indeed, is simply to say as much as I can in the time,—first, upon *incipient insanity*,—and, secondly, upon a disorder, half-nervous, half-mental, to which I propose to give the name of *neuriosis*—a disorder underlying hysteria, hypochondriasis, and certain other affections akin to them.

CONCERNING INCIPIENT INSANITY.

Very loose notions are abroad respecting the symptoms of insanity. Too often, if not overlooked altogether, all symptoms are practically disregarded except the one which alone is recognised by the law of the land—namely, *delusion*. Practically, also, delusion is regarded, *not* as many-sided, *not* as having *often* to do with certain very definite and very different morbid mental conditions other than intellectual, but simply as some undefined, unintelligible derangement of the reason. But this is a view which cannot be defended, and which must be set aside before it is possible to arrive at any clear notions respecting the symptoms of incipient insanity.

If a visit be paid to a lunatic asylum, with a view, not to group the inmates in accordance with this or that classification of cases of insanity—no easy task, by the way, for the groups interblend in every direction—but simply to gain such a knowledge of the symptoms of actual insanity as may aid in the detection of the symptoms of incipient insanity, the most prominent of these symptoms are, not delusion only, but *self-conceit*, *misanthropy*, *distrust*, *uncontrollable impulsiveness*, *melancholy*, a *biased and prejudiced reason*, a *disordered fancy*, *delirious excitement*, and the states to which the names of dementia and general paralysis are given. Or, rather, the list may be simplified by disregarding the two sets of symptoms last named, the truth being that dementia and general paralysis are states which may be regarded as endings of insanity rather than as accompaniments—states, too, which have no special connexion with insanity, inasmuch as they may have their origin in other disorders as well. And, further, on looking into the matter a little more closely, the symptom of delusion is found to present certain varieties, each of which would seem to be inseparably associated with, and in some measure dependent upon, a definite morbid mental condition other than simply intellectual. This, at least, is the conclusion at which, in making this survey, I find myself forced to arrive; and thus, as it seems to me, a direct way of arriving at a knowledge of the symptoms of incipient insanity will be to take in turn each of the symptoms of actual insanity, and look into its early history as far as need be.

Intense self-conceit, with or without delusion, is undoubtedly a prominent symptom in very many lunatics. Unless too demented to think at all, or too crazy to think connectedly, the lunatic is sure to display this feeling in some unmistakeable way, very frequently in an arrogant manner, which is almost characteristic of his disorder, not unfrequently in words or deeds which cannot be misunderstood. Along with this intense self-conceit there may be, or there may not be, some actual delusion, the facts, as gathered from the history of very many cases, seeming to show that there is no delusion at first. And when delusion is actually present, this state of things would seem to be exaggerated rather than altered. The patient has come to believe himself to be

wiser, richer, stronger, than he really is. In spite of the most glaring contradiction in fact, apparently by the starving of reason arising from the mere overgrowth of the feeling of self-conceit, he may come to believe himself to be the wisest, or the richest, or the strongest, of men. All this may be without any wavering in the mind as to who is who. The lunatic, lost in self-conceit, may have delusions as to what is his, but he knows all the while who he is; *ego* is still *ego*. But the delusion may strike deeper still, and the very idea of personal identity may be destroyed, *ego* becoming *alter*, by an *alteration* which, as it would seem, may still have its rise in the exaggeration, carried now to the fullest degree, of that inordinate self-esteem of which I am speaking; for in this case the change is into some one who is the reverse of insignificant—very frequently into Napoleon I, or Lucifer, or the Psalmist king, or even Christ the Saviour. In these cases, where intense self-conceit is associated with one or other of the delusions of which I have been speaking, the rule would seem to be that the delusion was not present at first. I know of no exception to this rule. And thus I would venture to look upon intense self-conceit, without delusion, as marking a state of mind in which delusion may readily find entrance—as being, it may be, a symptom of incipient insanity.

Misanthropy, more or less marked in degree, with or without delusion, is another prominent symptom in very many cases of insanity. If the lunatic do not actually hate the people about him, he dislikes them; and if his hatred or dislike be turned in any one direction more especially, it is sure to be against those who have the greatest claim upon his affection. His whole moral nature in this respect is thoroughly perverted and warped, and he is very likely to suppose that others have the same feelings towards him that he has towards them. Sooner or later he is almost sure to do this, and, by doing it, to become subject to a delusion which may be said to arise naturally out of his misanthropical state of mind, just as the delusions which have been mentioned in connexion with intense self-conceit may be supposed to have their origin in that particular state of mind. At first, however, there would seem to be no delusion along with the misanthropy; and, therefore, it is no unfair inference from the facts that misanthropy may indicate a state of mind tending towards insanity—a state which may easily change into insanity by becoming complicated with some kindred delusion. Thus regarded, indeed, misanthropy without delusion, may have to be reckoned among the symptoms of incipient insanity.

In very many lunatics, also, there is a most suspicious disposition, sometimes with, sometimes without, delusion. Very often, indeed, it would seem as if a suspicious disposition, not at all remarkable to begin with, had developed by a natural process of growth into an actual delusion, what was a mere vague feeling of distrust at first, leading only to the half-formed notion that others were more ready to do them harm than good, becoming in the end, by being indulged in, a firm conviction that others were committed to an actual conspiracy to poison them, or do them some other grievous injury. That this is the history of this the commonest of all the delusions, I am satisfied; and this being the case, I consider myself at liberty to put distrust without delusion along with intense self-conceit without delusion, and misanthropy without delusion, among the symptoms of incipient insanity.

In very many lunatics, also, especially in those who are most misanthropical, there is a manifest want of self-control and voluntary power generally, with or without delusion. The want of self-control may express itself at any moment in violent words and deeds—in violent deeds, perhaps, rather than in violent words. In the worst cases, even without delusion, this want of self-control may burst out in the most atrocious acts at any moment, even in homicide or rape. If there be this impulsiveness, without delusion, it is customary to speak, with Prichard, of the case as one of moral insanity, and it is perhaps right so to speak; still, it is certain that moral insanity is not so much a form of insanity in this sense, as that in cases of insanity generally, want of self-control is a marked feature of the disorder, and the cases of moral insanity so-called are only cases in which this want is more marked than usual. And not less certain is it that this want of self-control is a fundamental symptom in insanity, which, in point of time, takes precedence of delusion, “Closely scanning the symptoms”, says Dr. Maudsley, “it is seen that the affective disorder (this want of self-control) is the fundamental fact; that in the great majority of cases it precedes intellectual disorder; that it coexists with the latter during its course; and that it frequently disappears for a time after this has appeared. Esquirol rightly declared ‘moral insanity to be the proper characteristic of mental derangement’; and added, ‘there are madmen in whom it is difficult to find any trace of hallucination, but there are none in whom the passions and moral affections are not perverted and destroyed’. And this experience is in entire accord with that of every observer of insanity.” And with these remarks of Dr. Maudsley I entirely concur. Want of self-control is, I am sure, a symptom in all

cases of insanity, which, in this order of development, takes precedence of delusion. Whether extreme want of self-control, without delusion, is sufficient of itself to constitute insanity, is another question, and one which I am not called upon to answer. What I have to do, indeed, is simply this—to point out the relationship existing between the symptoms in question and the other symptoms of insanity, and to insist upon the necessity for regarding want of self-control, without delusion, as a very prominent symptom in incipient insanity. Along with this want of self-control, there is also very frequently a want of voluntary power generally. The lunatic, as a rule, is led by his feelings and thoughts, and is strangely incapable of exercising his will effectually. Sometimes—in certain directions at least—his will seems to be altogether powerless. I know, for instance, a melancholic patient, in whom I can find no delusion, who believes firmly that he would be well if only he could pray, and whose one desire is to pray, but who never can pray unless some one will come to his rescue and pray with him. In this latter case he prays at once, being readily led in this matter as in all others; and, in short, the only marked mental defect, besides the melancholy, which I can find in him, is this strange want of voluntary power. Cases, too, are common enough in which, apparently for the same reason and no other, it is impossible, although earnestly desiring to do it, to look into a book: and so also are cases in which this inability to act spontaneously is associated with actual delusion, the patient in the end coming to believe that his will is actually and literally spell-bound. In the end, I say, for in many of these cases, if not in all, the actual delusion would not seem to have been present from the very beginning of the disorder: and thus, as with want of self-control, so with want of voluntary power generally, there would seem to be an earlier stage without delusion, as well as a later stage with delusion—a conclusion which is tantamount to saying that want of self-control and of voluntary power generally, without delusion, may be one of the symptoms of incipient insanity.

That state of mind to which is given the name of melancholy is so common among lunatics, that melancholy and insanity have been used as mutually convertible terms. The anatomy of melancholy, to go no further, is a treatise on insanity. In some cases, of course, this state of mind is not so obvious as in others, and it may be difficult to detect it if the patient be reticent. In the more aggravated cases there is no such difficulty, the patient often sitting hour after hour, or day after day, motionless, with clasped hands and woe-begone features, or else, driven past endurance by feelings of anguish and despair, continually moving about, moaning, or wailing, wringing his hands, praying for death, or even seeking it, too often successfully, at his own hands. As a rule, this state of mind would seem to be the very reverse of that which shows itself in inordinate self-esteem, the patient often believing himself to be thoroughly bad and wicked in every way, with a dreadful doom in store for him, both here and hereafter. And the more marked delusions in association with melancholy are in conformity with this idea. I know, for example, a miserable man, long a victim to deep melancholy without delusion, whose delusion now is that he is a murderer, condemned and left for immediate execution, who will not look out of window lest he should see the gallows, and who, whenever the handle of his door turns, expects the executioner, and the cases are legion of those who think that they have committed unpardonable sin, for which their inevitable doom is everlasting destruction. It would also seem that this terrible self-depreciation may lead to another kind of delusion, the very opposite of that to which inordinate self-esteem would seem to lead in some cases—namely, to a loss of personal identity, in which the idea of self is lost, as it is lost, in lycanthropy. At all events, I know of one case in which there were true fits of lycanthropy, or rather cynanthropy, where the settled melancholy, which was the predominant state between the fits, had its origin in what may be spoken of as the *worm-doctrine* of human nature, and in the miserable forebodings as to the future to which it led. But be the relation of this or any form of delusion to melancholy what it may, the fact remain, not only that melancholy is a morbid feature in insanity, but that melancholy, more or less deep, without delusion, must have assigned to it a very prominent position among the symptoms of incipient insanity.

In very many lunatics, perhaps in all, the reason is biassed and prejudiced in the most unmistakable manner. The mere fact of delusion is a sufficient proof that it is so, and this is not the only proof. The whole facts of the case, indeed, are calculated to show that there is a radical defect in the reason—that this faculty is warped, not only in one particular direction, but in other directions as well. I very much question, indeed, whether the use of the term *monomania*, as implying that the reason acts correctly in all directions except that of some single delusion, is defensible: at all events, the facts would certainly justify the conclusion that, even in the cases which most deserve to be brought

into the category of monomania, there is a strongly biassed and prejudiced state of mind quite apart from the particular delusion. In listening to a story, for instance, only half of what is said is received, and it is perfectly useless to take steps to secure a hearing for the other half. And in reading it is the same: thus nothing is more common than for a melancholy patient to be able to find nothing in the Bible but what confirms his gloomy forebodings. As it seems to me, indeed, the facts show most unequivocally not only that the reason is warped, but that a common way for delusion to enter the mind is by this particular way, the delusion being probably nothing more than the natural consequence of the warped reason being allowed to perplex itself for too long a time in any particular line of thought. How often, for example, has the delusion of being eternally lost entered into a gloomy unbalanced mind by dwelling too long and too exclusively upon the intellectual conception of sin! How often have men gone mad in other ways by “too much learning”? Nor is it difficult to understand how, by being continually nursed in a mind strongly disposed to take a wrong view of everything, a thought, not at first a delusion, may become a delusion. The case is plain enough: there is good reason to believe that the reason is gravely warped in many, if not in all, lunatics, and that very often, to say the least, this state precedes the development of delusion in any form; and thus the natural inference must be, that among the symptoms of incipient insanity may be reckoned this one in particular—namely, a strangely biassed and prejudiced state of the reason, without delusion.

In not a few lunatics, also, there are illusions and hallucinations which point to fancy disordered in the direction of the senses. I know, for example, a lunatic painter who believes himself to be Apollo, and who, before becoming possessed by this *idée fixe*, had *illusions* in which he saw all the gods of Olympus in the clouds, and heard them speaking to him in every sound that then fell upon his ears. These illusions, which passed away when the delusion of which I have spoken became firmly fixed in the mind, were never more than half-delusions. The patient had them when left to himself: he might always be reasoned out of them. He was, in fact, half sceptical as to their reality at all times. And this would always seem to be the case with illusion. There is some *external* impression upon one or other of the senses, special or general, which is misread; and the mind is never absolutely confident about the reading. If, indeed, the mind were confident, the illusion would be, no longer an illusion, but a delusion. I also know a lunatic, now believing that he has committed the unpardonable sin, who, before becoming deluded in this manner, had occasional *hallucinations*, in which he saw the arch-tempter, and heard him speak as well, when there was absolutely nothing either to see or hear. He had an hallucination—that is to say, his eyes and ears (any other of his senses, special or general, might have led to the same blunder, *hallux*, whence hallucination) misled him, not by misreading an actual *external* impression made upon them, as in illusion, but by acting independently of such impression. As with the former patient, so also with this, it was always possible to shake faith in the reality of the hallucination—to make it appear more or less as a dream; and this, moreover, would appear to be the case with all hallucinations, that the mind is not so thoroughly convinced as it is in the case of delusion. Moreover, so far as I can make out, these illusions and hallucinations not unfrequently precede the development of actual delusions; and, in short, there is, as it would seem, abundant reason for thinking that an irregular fancy, showing itself in illusions and hallucinations, may be considered as a symptom of incipient insanity.

And, lastly, insanity may declare itself in delirious excitement, the patient—as the case may be—becoming sleepless, restless, indifferent to hunger and thirst, talking incessantly, precipitately, indistinctly, in an altered and harsh voice, it may be, without any thread of thought upon which to string his words, jabbering, that is to say, or talking gibberish; or else pacing or dancing about, laughing, singing, declaiming, shouting, howling, gesticulating wildly; or else, tearing off his clothes in shreds, and destroying everything upon which he can lay his hands; or else, rushing with tiger-like fierceness upon any one who comes within reach; or else, filthy beyond measure, passing his excrements anywhere, and often smearing himself all over with them; or else, utterly gluttonous, gorging upon anything, even upon the foulest offal by preference; or else, utterly lost to all sense of shame, abandoning himself to practices too loathsome to be named; or else, instead of the animal part of his nature being thus rampant, exhibiting the most terrible contempt of the flesh, refusing food because he will not pander to his appetite for it, or even cutting off his right hand or plucking out his right eye, because he thinks that these members have been, or will be, the means of making him offend against some supreme moral law. In this sad case, everything in the shape of thought or feeling is, as a rule, all but lost in a state of tempestuous chaos. There are, of course,

infinite varieties in the manifestations of raving madness, as well as in the ways in which the disorder may begin and end. The delirious state may be gradually developed upon, or suddenly burst out in, any variety of insanity; it may follow immediately upon an epileptiform seizure in a person whose mind to all appearance is sound; it may be suddenly developed without any such seizure, and this again and again, with comparatively sudden recoveries, and with almost perfect lucid intervals, as in *relapsing mania*—a disorder, by the way, which, in all probability, has an epileptiform basis, the fit of raving being the true counterpart of the fit of convulsion: usually, however, it is preceded, if not by actual insanity in one or other of its definite forms, by one or other of those forms of mental disorder which have been instanced as pointing towards insanity—as being, in short, signs of incipient insanity. Nor are the endings of raving madness less varied than the beginnings; for among them must be reckoned, not recovery only, but also each and all of the many forms of complications of insanity or chronic mania, melancholy, dementia, general paralysis, and the rest. Always, as it would seem, the mental power is more or less damaged by an attack of maniacal raving; too often there is that tendency to return which is exhibited in the most marked degree in relapsing mania. I am not sure, however, that some consolation is not to be found in this very tendency. I cannot but think that there may be what may be spoken of as an epileptiform basis, not only in cases of relapsing mania, but in every case of mania. I cannot but hope that these bouts of mania may often come and go as an ordinary epileptiform attack may come and go, often too, with as little damage to the mind; and, also, that they will yield more readily to treatment when this epileptiform basis is more clearly recognised in practice. I am also very much disposed to think that the delirious excitement of actual insanity is not altogether peculiar to the fully developed disorder—that, in short, a tendency to it must be reckoned as one of the many symptoms of incipient insanity. At all events, there can be no doubt that in not a few cases in which insanity has declared itself in delirious excitement, this state has been preceded by strange talkativeness, uncontrollable fidgetiness and restlessness, violent outbursts of temper, fits of lightheadedness, or in some other way more or less analogous to these.

There are, no doubt, many variations and many combinations in the symptoms of incipient insanity. Sometimes one or two of the symptoms only are present, to the exclusion of the rest. If all are present—an almost inconceivable case—then there would be—a state of intense self-conceit, without actual delusion; a state of moroseness and misanthropy, without actual delusion; a state marked by great mistrust and suspicion, without actual delusion; a state of uncontrollable impulsiveness, without actual delusion; a state of melancholy, without actual delusion; a warped state of the intellect, without actual delusion, irregularity of fancy, showing itself in illusions and hallucinations; and, lastly, a tendency to delirious excitement. In actual insanity, one or more of these several morbid mental conditions is always present, the change which has happened consisting only in the addition of some actual delusion, which delusion very often, to say the least, may be looked upon as the natural result of the exaggeration of the morbid mental condition most closely associated with it.

Nor are these remarks without a very definite practical bearing. On the contrary, if the view here taken be the true view, it may be hoped that, by its adoption, insanity may become at once a little more intelligible, a little more preventable, and a little more manageable when actually developed.

In the rough sketch which has been made it appears that delusion is not an indefinite disorder of the intellect and fancy, coming on no one knows how, without warning of any kind, but a very definite disorder, taking many shapes, each of them associated with some morbid mental condition from which it cannot be disassociated, and often receiving this shape, as it would seem, as a natural consequence of the mind having been allowed to go wrong in the direction of some particular morbid mental condition—intense self-conceit, misanthropy, melancholy, or other. Nothing is more certain than this—that, by indulging in a perverse way of feeling or thinking, sooner or later the reason and will are mastered by this feeling or thought, and that, when this point is arrived at, the feelings and thoughts and actions, as a matter of course, become more or less irrational and involuntary. Arrived at this point, indeed, any delusion, any fancy, may easily take undisputed possession of the mind. And thus the delusion, instead of being something almost unintelligible, becomes little more than a natural consequence of the unresisted continuance of the particular morbid mental condition with which it is associated and from which it cannot be disassociated.

If the mind be allowed to rest too long in any of the morbid mental conditions which are constantly associated with delusion, the

will and reason are deposed, and feeling is enthroned in their stead. This is all; for when feeling is raised above will and reason, the result of necessity is not only disorder, but delusion. And thus insanity becomes somewhat more intelligible, inasmuch as it reduces itself to little more than the natural consequence of the mind having been allowed to go wrong in the direction of some perverse feeling, until a point is arrived at in which the will and reason have no longer any control over it; an end in which—for all the unchecked evidences of the mere feelings are delusive—delusion, in one form or another, is the inevitable result.

And if delusion take these different forms, and is brought about in these different ways, it is plain that there are several very definite indications of treatment which may be followed out in a very hopeful spirit. The case is not one in which delusion is no one knows what, coming about no one knows how, in which the physician is left in a state of uncertainty as to what ought to be done to prevent it or to cure it. The case is definite enough. There are several morbid mental conditions—as intense self-conceit, misanthropy, melancholy, uncontrollable impulsiveness, and the rest—preceding insanity, continuing when insanity is actually developed, and each of them leading naturally to some delusion which is the conclusive evidence of insanity. There is, in fact, a definite morbid mental condition other than delusion to be dealt with. By dealing with it, delusion is to be prevented; nay more, by dealing with it, delusion is to be counteracted and conquered. It is as much a duty to deal seriously with this morbid mental condition as it is with the actual delusion, for delusion is the natural consequence sooner or later of leaving it to itself. Every effort must be made to teach the patient that he is responsible for his feelings and thoughts as well as for his actions; that he can and must master them; and that, if he does not try, his will and reason may soon become too powerless to prevent his feelings and thoughts and actions from becoming involuntary and irrational as in insanity. He must be helped and made to try to do all this in every possible way. A proper mental discipline must be enforced, upon the details of which I cannot and need not enter. Nor is a different course to be followed when matters have gone further wrong, and there is actual delusion. Certainly all is not done in this case when the lunatic is provided with a comfortable home, and when every conceivable care is taken of his body. All this is wanted, and more also—much more, if what I have said about mind be true. What is wanted is, that medical and clerical aid should be brought into closer conjunction than they are at present, with clearer notions, in both physician and clergyman, as to the autocracy of mind. What is wanted is the co-operation of educated persons, similarly enlightened as to mind, who will, as a labour of love, tend upon the lunatic, giving him the helping hand which now, in so many instances, they are giving to the ordinary sick. What is wanted, also, are more carefully trained ordinary attendants. With respect to the ordinary nursing of the insane, indeed, a great revolution is necessary, akin to that which is being brought about in ordinary nursing by Miss Nightingale, by the Misses Merryweather, and by their fellow-philanthropists. But it is more than time that I should pass on to the next subject with which I have to do, and I pass on accordingly, leaving the amplification of these hints for another occasion, if such may ever arise.

CONCERNING NEURIASIS.

The subjects of the condition to which I venture to give the name of *neuriasis* are spoken of as hysterical, hypochondriacal, or nervous. They have, in fact, that constitution or temperament which Whytt, following in the steps of Sydenham, showed to be a common basis in the states of disorder called hysteria and hypochondriasis, the *diathesis spasmodica* of Willis, the *état nerveux* of certain modern French writers. For the most part, they are easily tired, easily become faint for want of food, are easily overcome by sleep. For the most part, they are more the slaves of involuntary irrational impulse, more wanting in composure, than is consistent with a well balanced state of mind. They are more frequently women than man; they are never the robust and strong-minded of either sex. In them, all the feminine qualities of body and mind predominate over the masculine.

Regarding the subject a little more closely, it is possible to detect in neuriasis certain peculiarities of body and certain peculiarities of mind which are more or less constant; and what I have now to do is to try and justify this statement by taking each of these peculiarities in turn. I begin with the peculiarities which have to do with the body, and then pass to those which relate to the mind—passing from one to the other in a roundabout way; for it matters little what course be pursued, provided the survey be moderately complete before it comes to an end.

Under or after strong emotion or excitement, may be noticed first of all the sign which Sydenham regarded as pathognomonic of hysteria and hypochondriasis—a proneness to pass, under any emotion or ex-

citement, or after it, large quantities of pale, limpid, neutral urine. Often, too, apart from such emotion or excitement, there is an irresistible *besoin d'uriner*. To call such feeling into existence, it is enough for the thoughts to take this direction at an inconvenient moment, as in a railway train in motion, or in company where the want must be hidden. Such is this weakness at times, that the attention is alive to scarcely anything else; and never is it other than a prominent torment—a torment so prominent as to deserve to be mentioned first, as it is here, in describing the physical peculiarities of neuriasis.

After this peculiarity of neuriasis, that which next deserves to be mentioned is an extraordinary proneness to abdominal flatulence—*pneumatose intestinale*. Air is suddenly poured out into the alimentary canal in the most extraordinary way, whether digestion be going on or not, with what may seem to be a cause or without it; and, being there, it makes itself known by painful distension of the stomach and bowels, by noisy rumblings, or in more Homeric ways.

The case is analogous to that which has just been described as affecting the kidneys and bladder; and the trouble and annoyance caused are of the same kind, and scarcely less in degree, especially when, as often happens, this pressure of the air gives rise to distressing breathlessness by interfering with the action of the diaphragm. With such frequent and urgent uneasiness in the abdomen as this, there is, indeed, little wonder that the term hypochondriacal should have come into use, and continued in use, as the name for one of the varieties of the disorder which I am proposing to call neuriasis.

A third bodily peculiarity in neuriasis is a proneness to break down in laughing or crying. There is what is commonly spoken of as an hysterical disposition in this respect. Not only does the laugh or tear come too readily, but, when it comes, it is very likely to be at the wrong moment—the laugh being where the tear should be, the tear in the place of the laugh. It has little or nothing to do, in fact, with an excessively sympathetic disposition or an over-sensitive nature. Any slight commotion in the system, however brought about, may show itself in this way; and, in short, it is the exception rather than the rule for the patient to be able to tell why he laughed or why he cried.

Along with this undue proneness to laughing and crying, there must also be mentioned another peculiarity, to which, in its more marked form, the name of *globus* is given—a choking feeling in the throat, as if from a ball there, which prevents swallowing, and leads to constant efforts at gulping. This feeling is closely connected with the bouts of laughing and crying, being rarely absent if they are present; and also with the fits of abdominal flatulence—with the latter, perhaps, more particularly. Often it is, as it were, part and parcel of the rumblings which form so conspicuous a feature of this flatulence, there being first the rumbling in the bowels, and then a mounting of this sensation by way of the epigastrium to the throat, where it takes the form of globus. But, as Dr. Reynolds points out, it is a mistake to suppose that the throat-trouble to which the name of globus is given has always this commencement in the abdomen. Often, indeed, the feeling of choking, of which globus is one of the forms, is manifestly confined to the throat; and not unfrequently the abdominal symptoms may as manifestly follow upon the throat-trouble, the globus disappearing as the flatulent rumblings make themselves felt and heard.

Another peculiarity not unfrequently met with in neuriasis is a very disagreeable superabundance of saliva. This is mentioned in their article on *Etat Nerveux* by MM. Sandras and Bourguignon; and the fact, for fact it is most assuredly, must not be lost sight of. The cause would appear to be a difficulty of swallowing dependent upon the spasmodic state of the fauces and throat, which shows itself, when more fully called into action, in the choking feeling called globus, in the bouts of laughing and crying, and in various other ways. The saliva, which is always being formed in large quantities, does not find its way into the stomach by insensible acts of swallowing, as it ought to do; and hence the overflow. But, be the explanation what it may, the fact remains, that along with the other peculiarities which have been mentioned—proneness to pass large quantities of pale, limpid, neutral urine, with urgent *besoin d'uriner*, proneness to abdominal flatulence, proneness to tears and laughter, proneness to choking feelings of one kind or another—this also must be mentioned, namely, a disagreeable superabundance of saliva.

Constipation also would seem to have a claim to a place in the list of the bodily peculiarities of neuriasis, though not, perhaps, to any very prominent place. In cases of hysteria and hypochondriasis, so called, it is but seldom that the bowels will act without help; and what is true of these cases would seem to be more or less true in all cases of the kind. In a word, constipation is so generally a marked peculiarity in neuriasis as to deserve, to say the least, this passing notice in the present place.

Tenderness, with more or less uneasiness or actual pain, apart

from pressure, in one or other part of the abdomen, is another bodily peculiarity in neuriasis which must not be overlooked, which cannot well be overlooked. Often it is in the pit of the stomach, or under the ribs at a point in a line descending from the left nipple, or in both these places at the same time. Not unfrequently it is at the same time in another and third place—namely, over the spine, as spinal tenderness, at a point corresponding more or less nearly to the spinal insertion of the nerves which supply the two other painful parts which have been indicated—a threefold arrangement of tender or painful places, which Briquet regards as characteristic of the so-called hysterical condition—the *trépied hystérique*, the tripod, that is to say, on which the diagnosis of hysteria may be made to rest firmly. And certainly this opinion has much to recommend it in fact. At the same time, it is not to be doubted that there are many cases of so-called hysteria in which all that can be affirmed is, that this tenderness, with or without more or less uneasiness or actual pain apart from pressure, is in one or other part of the abdomen or dorso-lumbar region of the spine, without any such particular threefold localisation as that to which Briquet refers. Often, indeed, all that can be said is, that there is *shifting* tenderness or uneasiness or pain in the abdomen. Most certainly it is so in the so-called cases of hypochondriasis; and what is true of these cases would seem to be scarcely less true of cases of so-called hysteria—of cases of neuriasis generally, in fact. In a word, all that can be safely affirmed with respect to the peculiarity in question is, that it is abdominal, without being more specially localised—localised sufficiently to have helped by its localisation to suggest the terms hypochondriacal and hysterical as fitting names for it: nothing more.

A marked disposition to spasm, in one or other form, is another bodily peculiarity in the condition under consideration. In its simplest form, this may be no more than intestinal gripings or common cramps in the limbs; in its most marked manifestation, it may amount to that general convulsion of all the muscular system to which the name of hysterical is given. This condition is most marked in hysteria so-called, least marked in hypochondriasis so-called. In some cases, it is impossible to overlook it; in others, it may be somewhat difficult to detect it; but in all cases it exists as much more than a mere latent potentiality. So marked, indeed, is this disposition to spasm in the great mass of cases of neuriasis, that there is no difficulty in understanding why Willis should have chosen the name *diathesis spasmodica* for that common basis which he saw clearly enough to exist in the several nervous cases of which those called hysterical and hypochondriacal are varieties.

And, last of all, a disposition to *periodicity* must have a place among these bodily peculiarities of neuriasis. The fact is not to be denied. In all cases, certain phenomena—pain, spasm, feverish and congestive movements of the circulation, and the rest—are apt to appear and disappear more or less, after the manner of an ague. There seems to be some undue delicacy or mobility by which the frame is more readily swayed than it ought to be by such opposing influences as heat and cold, day and night, feeding and fasting, and the like. But, be this as it may, the fact remains, that a disposition to periodicity, in one form or another, must be reckoned upon as one among the many bodily peculiarities of neuriasis; and this alone, not the explanation of the fact, is that which concerns me here.

Nor are the mental peculiarities of the condition under consideration inconspicuous and uncharacteristic. On the contrary, it is in these very peculiarities, rather than in the bodily, that the distinctive features of neuriasis are to be traced most readily.

Among these mental peculiarities, that which is certainly not the least distinctive is undue self-sensitiveness. This may show itself in extreme conceit, in most distressing diffidence, or in many other ways. Self cannot be forgotten; only self can be talked about. The state of mind in this respect is indeed one which, to say the least, often implies a dangerous proximity to the intense self-conceit of the lunatic.

Another mental peculiarity is a dominant craving for sympathy. Undue self-sensitiveness instinctively seeks relief in this way. The good opinion of others cannot be dispensed with; it is the very breath of life. If this be withheld, all is withheld that is regarded as worth having; and so day after day passes in miserable disappointment. This good opinion of others is precisely that which of all things is most difficult to get, especially when wanted. As a rule, too, quick and perverse likes and dislikes go hand in hand with this undue self-sensitiveness and overpowering craving for sympathy. There is a want of equipoise; and a mere trifle serves to make the feelings overbalance in one direction or the other—as often in the wrong direction as in the right.

Another mental peculiarity in neuriasis—the complement, perhaps, of the last—is feebleness of will. "What I would not, that I do; what I would, that I do not," is the confession too often made, and too truly made, in deeds at least, if not in words. The mental cha-

character is marked by fickleness, impulsiveness, irresolution, want of composure, unrest, and other unmistakable signs of a radical feebleness of will—by wilfulness, it may be, for wilfulness in nine cases out of ten means the reverse of fulness of will—will overridden by some feeling or fancy—waywardness—an involuntary rather than a voluntary state of mind.

Another marked mental peculiarity in neuriasis, more marked, perhaps, than any of those which have been already noticed, is fancifulness. Due care is not taken in forming firm foundations in fact. Conclusions are jumped to hastily. The dominant faculty is, not reason, but imagination; and the fancies formed are too often undistinguishable from true delusions. A pain or uneasy feeling, for example, is supposed to point to some disease; and soon the reason refuses to be convinced that the disease is not present. This is the characteristic misdirection of the imagination in the so-called hypochondriac. What is at first a mere fancy, in the end becomes a delusion, by the removal or burial of the landmarks which mark the line where soundness of mind becomes conterminous with unsoundness. As a rule, however, the change does not go so far as this in neuriasis. Fancies of all kinds are continually crowding in upon the mind; but they can be ejected by a combined effort of will and reason, though not always without very great effort. What is wanted is not so much the capacity to reason soundly, as the ability to do so without help. What is wanting is intellectual independency, rather than intellectual clearness; and for the most part the fancy will walk steadily enough, if she can but lean upon the arm of a good counsellor.

Along with this fancifulness, and in a sense a part of it, may be noticed also a marked disposition to imitativeness. There is a curious readiness to copy the thoughts, words, and acts of others—a readiness which would seem to imply a certain want of originality in character. There is the gift which, if sufficiently under control, makes the actor. And herein may often arise much confusion; for what at first may be simply acting, may afterwards be more than this, the actor being carried away by his part, and unable to become himself again, in consequence of not being sufficiently on his guard against the danger of a fancy becoming a fixed delusion if it be given way to too much. The attempt to deceive, persisted in too long, may easily lead to the deceiver himself being deceived, as is shown in a hundred different ways in the history of the condition of hysteria so called.

Unbalanced spirits may be also mentioned as another of the mental peculiarities of neuriasis. The mental state in this respect is the reverse to that which is called composure. The spirits, judging them by any common standard, are always higher than they ought to be, or lower—the latter more frequently than the former. In neuriasis, indeed, as in mental unsoundness proper, a disposition to melancholy would seem to be more common than a disposition to the contrary state of levity—so common as to have led many to speak of hypochondriasis as a variety of melancholia. Moreover, it is in cases like these that the patient can so well understand what Jeremy Taylor means when he speaks of men being “desperate by too quick a sense of constant infelicity.”

Last of all, there is often to be noticed, among the mental peculiarities under consideration, a comparatively feeble sense of moral obligation. In not a few cases, no doubt, exception may very justly be taken to a statement like this. In not a few cases, without question, there is rather a morbid regard for truth and a tenderness of conscience by which the most trifling exaggeration or wrongdoing is made to become a positive torment. But more frequently by far there is a state of things in every way opposed to this—a state marked, if not by a habit of actual lying, by the most extraordinary disposition to exaggeration, and a moral deafness which makes it difficult to hear even the loudest calls of conscience. It is notoriously difficult to get the truth out of a so-called hysterical patient, and it really seems as if she could not help exaggerating and misrepresenting; and, though not so notorious a fact, a fact it is nevertheless, that she is more apt to excuse than to condemn herself when in the wrong. And what is true of this case is, so far as my experience goes, not less true in the great majority of cases of neuriasis—is so true, indeed, as to leave no doubt as to the propriety of placing this feeble sense of moral obligation among the other mental peculiarities of neuriasis.

And thus—to recapitulate briefly the heads of what has been said respecting the physical and mental peculiarities of neuriasis—among the former will have to be placed,—proneness to pass large quantities of pale, limpid, neutral urine, under any emotion or excitement, or after it, with a frequent irresistible *besoin d'uriner*; proneness to abdominal flatulence, *pneumatose intestinale*; proneness to fits of laughing and crying, without sufficient reason for them; proneness to globus; proneness to overflow of saliva; proneness to constipation; together with tenderness on pressure, with more or less uneasi-

ness or actual pain apart from pressure, in one or other part of the abdomen, or under the left nipple, or somewhere in the course of the spine; with a marked disposition to spasm; and with as marked a disposition to periodicity in one form or another:—and among the latter, or mental peculiarities,—undue self-sensitiveness; overpowering craving for sympathy; quick and perverse likes and dislikes; feebleness of will, showing itself in impulsiveness and in many other different ways; fancifulness; imitativeness; unbalanced spirits, the inclination being commonly towards despondency; and, lastly, a comparatively feeble sense of moral obligation.

Few in the present day will be prepared to contend that the womb has any special connexion with hysteria, or the liver or any other abdominal viscus with hypochondriasis; or to doubt the correctness of the view which regards both hysteria and hypochondriasis as disorders, closely allied, of the nervous system. Still it may be doubted whether, practically at least, this latter view is as clearly realised as it ought to be—whether the words hysteria and hypochondriasis do not still retain a good deal of their old meaning, and not unfrequently mislead effectually in practice. At all events, hysteria and hypochondriasis can be no fitting names for that general derangement of mind and body of which I have been speaking. Another name is evidently desirable, which will point away from the womb, or liver, or other abdominal viscus, to the nervous system; and hence my excuse for proposing the term *neuriasis*. I hope, however, that a time will come before long—the time is not yet ripe, I allow—when it will be possible to get a step further than this, and choose a name which will include the *mental* as well as the *nervous* half of the disorder in question; for I cannot but think that the *nervous* trouble is the effect rather than the cause of the *mental* trouble. Nay, I am even sanguine enough to hope that eventually, by the institution of a sound discipline, in which the mind is taught—chiefly through the influence of wise mothers acting upon it in the morning of life—to know and exercise its high powers of subjecting the feelings and thoughts, as well as the actions, to sound reason and will, that mankind may be delivered, not only from the evils of neuriasis, but even from the still graver evils of actual insanity.

THE ANATOMICAL RELATIONS OF PULMONARY PHTHISIS TO TUBERCLE IN THE LUNG.

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THE question which has been ably discussed by Dr. Wilson Fox is one of so important a nature, and at the same time one concerning which so much difference of opinion has always existed, that it would seem most useful for the different speakers in this debate to set forth as concisely as possible the views which they themselves entertain upon the general question, without entering too much into matters of mere detail. I shall therefore follow the example of Dr. Wilson Fox, and endeavour, as briefly as the complexity of the subject will allow, to set forth the nature of my views concerning the relation of “Tubercle” to Pulmonary Phthisis, with no more reference to the opinions of others than is necessary for my own exposition. And if these views are found to differ, in some respects, very much from those which Dr. Fox has expressed, I feel sure that he will, nevertheless, be one of the first to recognise the desirability of looking at the question from all sides.

I may, however, state at the commencement, that any discordancies which may appear between my own opinions and those of others, will not be so much differences with regard to facts, as differences concerning the interpretation and mutual relation of facts, about the reality of which we are all more or less agreed.

It seems to me, in the first place, quite impossible adequately to consider the question of the nature of tubercle, and its connection with pulmonary phthisis, wholly without reference to the relations of such a product to chronic inflammatory changes, to scrofulous changes, to the new growths known as lymphomata, and to those met with in leucocythæmia and other morbid conditions. It appears to me also highly inexpedient to consider the lung-affection alone, and wholly apart from the light which may be thrown upon the question before us by a brief consideration of parallel morbid changes in other organs. It is the treating of the question in this isolated manner which, as it seems to me, alone makes it possible to consider as legitimate, or expedient, views which may tend to introduce much needless confusion into pathological science.

Taking up the involved question as to the nature of tubercle at that stage in its history to which it had been brought by the labours of

Addison, Reinhardt, Virchow, and others who had preceded them, we find that it presents itself somewhat in this fashion. The notion that caseation, or cheesy degeneration, constituted the essence of tubercle, was thrown aside as one which a larger and more minute experience could in no way sanction. The characteristics relied upon by Laennec and others had been shown to be almost wholly valueless as characteristics of any special and peculiar something which it had become the fashion to name tubercle. The masses previously so named were shown to be in the main mere products of chronic inflammation in different tissues and organs. And inasmuch as such products, both in their incipient and in their advanced stages, were specially abundant in the lungs of persons dying from pulmonary phthisis, this affection became one of which tubercle could no longer be considered as the pathological essence. It was now known that epithelial impactions from overgrowths in the bronchial tubes, and fibroid indurating infiltrations of a chronic inflammatory nature, were in the main the special tissue changes which subsequently gave rise to the various lesions of chronic phthisis. The word "tubercle" having been thus restricted in its meaning, what remained to which the name could be applied? Only one product, which Laennec had been in the habit of regarding as an early condition of a deposit destined subsequently to undergo the caseation supposed to be characteristic of tubercle. It is true that Laennec's central idea had been shown to be erroneous, it may be true also that the body upon which the name of tubercle was now to fall had originally been described by Bayle as a non-tubercular substance.* This product was the "grey granulation," a body now known to have a constant and invariable structure, in the main resembling that of lymphatic gland-tissue. It was, and is, the anatomical mark of an obscure general affection, having no necessary connection with phthisis in the strict sense of the term—that is, as an ulcerative lung-disease; it was a product prone to occur in more or less abundance within the cranium, within the chest, and within the abdomen of persons suffering from what we now term Acute Tuberculosis. But if this obscure and protean febrile affection, in which grey granulations are found disseminated through the organs, has no necessary relation to phthisis, on what pretence can it be called by its present name, and what possible reason could be assigned for giving to the grey granulation the mere name of tubercle, when the essential meaning of the term—that of a caseating product productive of phthisis—had previously been so different? To which questions it seems only possible to return the following replies. In the first place, we must assume a deeply-rooted reluctance wholly to cast aside the word "tubercle," a word which, up to this period, had borne such an important connection in men's minds with phthisis—although phthisis had now been fully shown to be a non-tubercular affection in the past sense of that term. And, secondly, because there was a very flimsy justification for such a course. Although this obscure febrile affection, Acute Tuberculosis, is one which may occur quite independently of any traces of phthisis, still it has a special aptitude also to occur as an intercurrent affection in the course of chronic phthisis. Grey granulations are therefore to be met with at times in the lungs of those suffering from phthisis. For this reason, and because they were bodies possessing the knotty or granular characters which were originally implied by the term tubercle—because, in addition, they everywhere possessed a constant structure, Virchow and others were content to let the name "tubercle" rest with them, although it must have been fully recognised at the time that such bodies had no necessary connection whatsoever with pulmonary phthisis as a chronic destructive lung-disease.

A few years ago this point of view was very widely accepted by pathologists in many parts of Europe. In the time of Laennec, pulmonary phthisis, in its common forms, meant tubercular disease of the lung, and tubercle was regarded as a "specific" product. Forty years later, the common varieties of pulmonary phthisis were regarded as due almost solely to various forms of chronic inflammatory changes in the lung; tubercle was regarded as a mere occasional and quasi-accidental complication; both phthisis and tubercle were robbed of their so-called "specific" attributes. This was the kind of view into which I finally drifted about the year 1866, recognising, however, fully, that the word "tubercle" had attained a thoroughly artificial meaning, wholly different from its original signification, and that the preservation of the name was one of questionable expediency.

Now, however, we see a powerful reaction setting in, and a marked tendency to restore to some of the old "infiltrations" the name of tubercle, so as at the same time to make phthisis again an essentially tubercular affection. What wranglings and never-ending disputations the very prospect opens up! What, it may be asked, is the meaning of the new

point of view? We must endeavour to answer this question first, before attempting to come to an opinion upon the desirability of reverting to what one might almost venture to call an old and worn out doctrine.

The reasons which have been most influential are, I think, not difficult to find. Most valuable investigations have of late years been made, both here and abroad, upon the so-called "Artificial Production of Tubercle"; and many of those who had carried them on had adopted the views of Virchow concerning the limitations to be attached to the word tubercle. Now the Rodent animals, and guinea-pigs especially, are in more ways than one very peculiar creatures; so peculiar, as it seems to me, that it is not altogether safe to pass judgment offhand concerning the similarity of certain processes which may be set up in them, to those which are known to occur in the human subject. We now know that this artificial so-called tubercular affection may be initiated in guinea-pigs by the mere introduction of an ordinary irritant into and beneath the skin of the animal. Whether tubercular or not, therefore, the affection established is one which, in the old sense of the term, can have nothing very "specific" about it. The growths set up by local irritation gradually spread to lymphatic glands, and subsequently internal organs, such as lungs, liver, spleen, etc., also become affected. Such growths were at first believed by Villemin to be tubercular, simply because they had followed the inoculation of "tubercle" beneath the skin of the animal, and because such a result was deemed harmonious with the supposed specific nature of the inoculating substance. But when it was clearly shown that ordinary chronic inflammatory products—even that the introduction of a mere seton beneath the skin—might give rise to similar morbid conditions and products in guinea-pigs, this reason became no longer of any avail. Something was, however, to be said, in favour of the lesions being tubercular, owing to the nature of the growths themselves. They had, in the main, the characteristic lymphoid or adenoid structure, which the grey granulation of acute tuberculosis possesses. But was this similarity sufficient to make it absolutely necessary to consider that the condition frequently established in the Rodentia was tuberculosis, and that the lesions were tubercular? This is a most important question for pathological science, and one which, as it seems to me, was never very adequately considered by those who were themselves engaged in these most interesting and important investigations.

I cannot too strongly draw attention to this stage of the argument. Here was a generalised affection set up in guinea-pigs, marked by new growths in the lungs and other organs, which presented the microscopical characters of lymphatic tissue. Was the histological constitution of the growths alone sufficient to justify us in calling these products tubercular? This question, thus nakedly put, would, I believe, have been unequivocally answered in the negative by many pathologists. None of the modern pathologists who had accepted the views of Virchow have ever pretended that the grey granulation had any characteristics specific and peculiar to itself. It was always recognised to be of the lymphoid type, and it was always admitted that growths in no way distinguishable from it histologically were to be met with in the organs of persons suffering from leucocythæmia and other allied affections. Growths of the lymphatic gland type—but to which no one thought of attaching the name tubercle—were in these affections more or less disseminated through different organs and parts of the body. Obviously, therefore, mere histological structure alone could give us no right to look upon the new growths in guinea-pigs as tubercular. As I have before endeavoured to point out, it was the grey granulation of Acute Tuberculosis which pathologists had arbitrarily agreed, in default of other products, to regard as the only true tubercle. If, therefore, this body were admitted to have no specific structure, if other products histologically similar were not named tubercle, then it becomes clear that the notion of tubercle was arbitrarily centered, not so much in the histological characters of any individual product, as in its structure combined with its mode of occurrence in individual organs and throughout the body—it had become centered, in fact, in the grey granulation as the sole specific and invariable mark of that general constitutional affection known as Acute Tuberculosis, rather than in any mere form and histological characters of the grey granulation itself.

Thus, the real question to be considered came to be, whether the general affection set up in the Rodent animals was or was not identical with the febrile affection in man which, in the strict acceptance of the term, goes by the name of Acute Tuberculosis.

I know not whether the question was ever argued out in this manner by others. It was obvious, however, that the majority of pathologists were quite willing to call these growths in the Rodent animals tubercle, and the general condition itself tuberculosis. To this view, I was never able to give in my adhesion. My difficulty arose from the fact that I was unable to see a real identity, such as appears to some, be-

* On re-reading Bayle's four cases of uncomplicated "Granular Phthisis", I have become convinced that M. Thaon is right, and that these could not have been cases of what we now understand as Acute Tuberculosis.

tween Acute Tuberculosis as it occurs in man and the affection which could be easily established in the Rodentia. The mode of origin; the comparatively slow and gradual spread of the guinea-pig affection from organ to organ; the almost invariable absence of growths in the brain or meninges; the mode in which lungs, liver, and spleen were affected—the wide spread infiltrations and the greatly increased bulk of the latter organs—were all in striking contrast with acute tuberculosis as it occurs in the human subject. For in this latter affection we find an obscure origin, and the more or less sudden outbreak of an acute febrile malady which almost invariably leaves some marks upon the meninges, and in which the strictly essential anatomical lesions were minute granulations, either separate or aggregated, scattered through organs of almost normal size. With such differences staring us in the face, and with the patent, though by no means insignificant fact, that the means which sufficed for inciting the affection in question in the Rodentia, were wholly incapable of setting up Acute Tuberculosis in man, it has always seemed to me to be very difficult to come legitimately to the conclusion that the two affections were similar, and therefore equally difficult to come to the conclusion that the products found in the Rodent animals have any real right to be considered as tubercle. My interest in these investigations and notions concerning their importance are, however, not in the least diminished merely because I do not feel justified in applying a particular name to the morbid conditions or products themselves.

These doubts, however, which I still very strongly entertain, concerning the propriety and legitimacy of the present generally received views as to the name which should be attached to the affection in the Rodent animals, have not been shared by others. Foreign investigators, as well as Dr. Wilson Fox, Dr. Burdon Sanderson, and others in this country, have not hesitated to look upon the condition as tuberculosis, and upon the products as tubercular. Nay, more, Dr. Sanderson stated nearly four years ago, in a communication which appeared in the *Edinburgh Medical Journal* for 1869, that the occurrence of "infiltration", in which large patches of lymphoid new growth appeared in the liver or other organs of the guinea-pig, should suffice to open our eyes with regard to the different forms in which tubercle might manifest itself in the human subject. This, if I might venture to say so, was the insertion of the thin edge of the wedge which Dr. Fox has now, with so much vigour, endeavoured to drive home. Already there was the dawning notion that infiltrations and chronic inflammations were again to have their day as tubercular products. I mentally shuddered at the chaos into which—I say it with all respect—it seemed to me we should again be introduced, and I was by no means comforted by the fact that new doctrines of "infection" were to be introduced with the view of explaining multiple morbid processes in general. In Dr. Sanderson's opinion, tubercles are adenoid bodies (or lymphoid patches) enlarged; and, for the establishment of phthisis three things are necessary: (1), a constitutional predisposition; (2), a local irritation leading to an increased growth of pre-existing lymphoid structures; and (3), a process of infection, by means of which the morbid growths extend to adjacent or related parts. Concerning this process of infection Dr. Sanderson says: "The word designates the fact that, wherever a chronic induration, *due to overcrowded corpusculature*, exists in any organ, it is apt to give rise to similar processes elsewhere." Dr. Sanderson would apply these views even to the mode of extension of "the so-called infiltrated forms of induration" met with in ordinary cases of phthisis. Here, then, the tendency was strongly manifested to consider that all infiltrating fibroid indurations which were marked by an "overcrowded corpusculature," might spread by a process of infection, and the logical outcome of the views stated was, that such infiltrating indurations were tubercular in nature. The transition to such a belief is all the more easy because, as I have before insisted (*Path. Trans.*, 1868, p. 54)—in anticipation of what has followed—rapidly advancing fibroid over-growths in their early stages are as notable for their number of corpuscles as the most typical lymphoid tissue. The two differ in fact merely in the degree of perfection of their intercorpuscular stroma, although almost all transitions are to be met between the two. That difficulties may sometimes exist in distinguishing between such products seems also to be the opinion of Dr. Wilson Fox, since he says, "The reticulum under a microscope with high powers is to be found in almost all forms of tuberculosis except in the most recent granulations, and there nuclei and small cells crowd upon one another, forming a dense mass, and no reticulum can be seen."

The views which Dr. Wilson Fox has now so ably expounded will thus be found essentially similar to those which were more or less explicitly stated by Dr. Sanderson, and I cannot doubt that he also has been largely influenced by considerations similar to those which have found favour with Dr. Sanderson. It is true Dr. Fox claims to have an additional warrant for his views, by reason of the fact that, in the lungs

of children dying from Acute Tuberculosis, infiltrating corpuscular lesions are to be met with in addition to grey granulations in different stages. Such a fact, however, as it seems to me, can have no real title to induce us to modify our views, when we recollect that the restricted signification of the term tubercle, adopted by Virchow and others, was confessedly arbitrary, and necessitated by the complete overthrow of the old doctrines as to the nature of tubercle. Almost all forms of phthisis had previously been regarded as tubercular, under the belief that a "specific" and peculiar product was almost invariably present. Afterwards it had been shown that the substance previously supposed to be specific had nothing peculiar about it, and was the result of common inflammation in various forms, and that none of such products were worthy of the name tubercle—although, as a mere concession, pathologists were willing to allow this name to be retained by a product (the grey granulation) which was an occasional accompaniment of phthisis. It is literally true, therefore, that in the minds of those who had accepted this position, "tubercle had come to be a mere accidental complication of phthisis, and in no respect its chief anatomical distinction." And as it seems to me the fact that an arbitrary signification of the term had been consented to as a mere compromise, and simply with the view of retaining the old name for something—even when its original meaning had been entirely taken from it—is lost sight of by Dr. Wilson Fox, when he now comes forward and urges us to accept a new signification of the term merely because, in Acute Tuberculosis as it occurs in children, pathological products other than the grey granulation are apt to be found, although such extra products are confessedly not necessary elements of the disease. It seems, moreover, to me, almost wholly beside the question to say, as an additional reason for the adoption of the new views, that "proof is also wanting that tubercle in the lung can appear in no other form than the isolated grey granulation." No proof was even attempted to be given: we must again urge the fact, that the restriction in the use of the term was from the first confessedly though advisedly arbitrary.

The products which Dr. Wilson Fox and Dr. Burdon Sanderson would now have us include under the name tubercle were, therefore, amongst those which, amidst the shipwreck of the old term, were deliberately cast aside. They were known and recognised as products of an irritative or chronic inflammatory overgrowth, under the names of interstitial pneumonia and fibroid indurations. Such products, not only in the lung, but also in other organs, are, as is well known, very largely, and often almost exclusively, made up of minute corpuscular elements similar to those occurring in lymphoid tissues. And if in some cases these overgrowths, or portions of them, as they occur in the lungs or other organs in man, have a still more exact resemblance to lymphoid tissue, the reason of this has now been made perfectly clear and simple to us, owing to the important discovery by Dr. Burdon Sanderson that very minute patches of lymphoid tissue are normally present in the peribronchial tissue of the lung, and upon the walls of the vessels in other organs. This being the case, what could we expect but that under the influence of such disturbing or irritative influences as lead to the overgrowth of the connective tissue-elements in any region of the lung, these intimately intermixed patches of lymphoid tissue should also undergo an irritative increase or hyperplasia. But, in the face of all that has been said, is this a justification for calling such bodies tubercles? Certainly not; no more than the possession of a similar histological structure was a sufficient warrant for immediately calling the morbid products met with in the guinea-pigs tubercle. If we are now to suppose that tubercle can be described broadly as "an adenoid body enlarged", or as a "lymphatic overgrowth produced by irritation", what are we to say of the lymphatic overgrowths which occur in the liver in leucocythemia? Are they also tubercles? Again, what are we to say of a mere irritated and enlarged lymphatic gland? Is this a tubercle? Or is the body no longer tubercle when it attains a certain size? Everywhere, as it seems to me, such views as have now been advocated land us in nothing but confusion. If the word tubercle is to be retained at all, we cannot start beyond the narrow circle of the limited and confessedly arbitrary signification given to it by Virchow and others, without plunging ourselves into a mere whirl of inconsistencies and contradictions.

Let it not be supposed, however, that I am in favour of retaining the word—even with the limited signification given to it by Virchow. No; it seems to me, for many reasons, by far more expedient to renounce its use altogether. To this opinion I have come slowly and deliberately, after an experience of several years in teaching the present doctrines. Year by year I have been more and more impressed with the altogether gratuitous and unnecessary difficulties besetting the path of any teacher who endeavours to explain to students what is and what is not tubercle, and why any given product is or is not honoured by such a name.

The principal difficulties seem to me to be of this nature. First, there is the fact that in ordinary chronic phthisis some of the lesions are most prone to appear in the form of granulations either simple or aggregated, although such granulations have nothing whatever to do with Acute Tuberculosis in the strict sense of that term, and therefore have no right to the name tubercle. Such granulations may be softer than the ordinary grey granulation, owing to their containing a larger proportion of epithelial elements or of their derivatives; others may be harder and more pigmented; whilst others still may, both in naked eye characters and in microscopical appearance, be almost indistinguishable from the grey granulations of acute tuberculosis. And yet there is oftentimes not the slightest suspicion that Acute Tuberculosis has existed—far from it, growths of this kind are occasionally to be met with in such a mere local, though chronic, disease as Cirrhosis of the lung. In one of the most typical cases of this affection—where the opposite lung was healthy and where no granulations were to be found in other organs—the part in which the fibroid consolidation was still advancing was thickly studded with minute granulations, having microscopical characters closely resembling those found in Acute Tuberculosis. Again, take the affection commonly known as “tubercular peritonitis,” but which I prefer to call Granular Peritonitis. Here the parietal and visceral peritoneum is more or less densely overgrown with granulations, presenting a truly lymphoid structure. Yet such an affection has, as I believe, no necessary connection whatsoever with Acute Tuberculosis. If we would be consistent, therefore, we must say that the products are not tubercular. Occasionally, such growths in the peritoneum and omentum are more lawless still: the reticulum is not developed; we have nothing but a prodigious overgrowth of minute corpuscular elements, so exuberant, however, that the growth may win for itself the more dignified appellation of “cancer.” Again, the correlation between lymphoid overgrowths and mere ordinary irritative overgrowths of connective tissue elements is most close. In the five or six cases in which I have made an examination of persons dying from well marked granular peritonitis, I have found the liver similarly and very characteristically altered. The organ has been more or less enlarged, pale in colour, and minutely mottled both on its external surface and on sections. What appeared to be minute, pale, and yellowish granulations, were thickly sown through a basis-substance, much of which had a more or less pellucid appearance. On microscopical examination, the pale and yellowish areas were found to correspond to islets of liver-cells more or less distended with fat, or simply granular and bile-stained, these areas being imbedded in an enormous new growth of tissue which had replaced the proper liver-substance. The new growth consisted, in part, of distinct fibre-tissue; in part, of a mere nuclear overgrowth, amongst which there was no definite reticulum; and in part, though in much smaller quantity, of more distinct patches of characteristic lymphoid tissue. On the other hand, kidneys, spleen, lungs, brain, and meninges have been entirely free from any characteristic or constant changes. There has been no evidence, therefore, of the existence of Acute Tuberculosis.

What I have already said may suffice to indicate a few of the difficulties besetting the path of the teacher, who, seeing the destructive snares which lie in wait for him if he venture beyond the narrow circle of a confessedly arbitrary definition of tubercle, tries what he can do to keep within these narrow and monotonous limits.

Attempt to step beyond these bounds, and see what follows. In answer to the question, what is tubercle? let one who is disposed to be adventurous, reply in the terms of Dr. Fox and Dr. Sanderson—that it is a new growth, lymphoid in nature, and resulting from a hyperplasia of a pre-existing nidus. Before he could maintain such a position, he should at least be fully prepared to answer various queries, some of the principal of which would be of this nature. What is scrofula, what is the nature of a scrofulous growth, and how is it distinguished from tubercle? What is the nature of a leucocythæmic growth in the liver, and how would you distinguish it from tubercle in the same situation? What is a lymphoma, and how would you distinguish an infiltrating growth of this type in the walls of the intestine or in the kidney from tubercle? Are there any transitions between growths which you are in the habit of calling tubercle, and those which may result from a mere irritative overgrowth of connective tissue? If there be, do you think you could always distinguish between such products; and if so, upon what differential characteristics would you rely? Do you consider that such a discrimination is easy, and likely to be made successfully by ordinary observers? If not, would not much confusion inevitably result between so-called tubercular and mere chronic inflammatory affections of organs? In the face of a questioner who had the power to exact a stern consistency, I strongly suspect that the champion seeking to establish wider limits for tubercle, would have to retreat to his narrower fold.

On the other hand, let him attempt to remain there in peace, and see what follows. Some ingenuous student, seeking for light and information, asks—What is tubercle? and he receives for his answer the statement that the term is now limited to a grey granulation, having a lymphoid structure, which occurs more or less disseminated throughout the head, chest, and abdomen in the affection known as Acute Tuberculosis. You show him such granulations, and make him familiar with the appearance of sections of them under the microscope. Subsequently, at an necropsy on a case of chronic phthisis, he sees bodies which have a close resemblance to grey granulations in the lung, and he asks you whether they are not tubercle. Whilst you may state that there are bodies to be found in the lungs in these cases which, though not really tubercle, present the naked-eye appearances of such a growth, and that there are others exhibiting even a still further correspondence of microscopical characters, which also have no title to such a name—still you could not positively tell such a student that the bodies in question were not tubercle. Why not? Because, as you would have to admit, chronic phthisis is a condition of things in which, as before stated, there is a tendency for Acute Tuberculosis to supervene. How could you say, therefore, that the bodies about which you were asked were not tubercle until you had disproved the possibility of the coexistence of acute tuberculosis? You would have at least to examine the brain and meninges, and also to examine the liver, spleen, and kidneys before you could even return a provisional reply. And if mere naked-eye inspection failed to reveal any trace of grey granulations in these various situations, you would, if pushed, still have to admit the possibility of the earlier evolution of grey granulations in the lung, though others in an incipient condition (not easily detectable without the aid of the microscope) might be present around the vessels of the meninges, or in the liver, spleen, kidneys, etc. Now this is a very roundabout process to have to go through when you are asked whether one of the granulations of chronic phthisis is or is not tubercle. The difficulties, again, are almost similar with regard to Granular Peritonitis. Here is an affection which has been invariably known as “tubercular peritonitis”; it is characterised by what appear to be the most typical grey granulations, and in this view you are confirmed by a microscopical examination. The puzzled student asks you why the growth is not tubercle; and if you would show him that you are consistent, and not merely perverse, long and involved explanations are needed. The old views concerning tubercle, their overthrow, and the new position taken up, must be explained. Then you have to tell him that, although such typical granulations are present, yet this granular peritonitis has no necessary connection with the febrile affection known as Acute Tuberculosis. And if you yourself might be somewhat disposed to relent in this case, still reflection upon all the dangers which beset your path outside the narrow confines of your present tubercle area, have convinced you that you cannot make one concession without being called upon to make others—without, in fact, taking up the very untenable position which requires you to answer all the more or less insoluble problems to which I have before alluded.

On all sides, therefore, the preservation of the word “tubercle” is a course beset with difficulties. At present, we are confused, hedged in, or hampered in a manner which is altogether ludicrous. Nobody knows what another means when he makes use of the word tubercle. We cannot explain our views on the subject without entering into tedious statements concerning conflicting views. No position that we have as yet taken up is natural or strictly defensible; and if we attempt to make it less objectionable, we shall probably only succeed in delivering ourselves over to still more fatal inconsistencies. All this worry and trouble is taken about a word which can never be of any use as a mental symbol for many generations—about a word, too, which even now we can perfectly well do without.

The facts themselves lose none of their significance because we cease to make use of a word which, amidst all the contrariety of opinion concerning it, has practically ceased to have any meaning. On the contrary, cease to make use of such a term, and these facts come out into the light of day, freed from the dense cloud of controversy and discussion by which their real significance had previously been obscured. A few words will suffice to indicate the views which, as it seems to me, would be more or less generally accepted if we consented to sink the use of the term “tubercle” altogether, and with it all the blinding notions concerning the “specificity” of phthisis, which are almost inseparable from its use.

The principal affections of which we have been speaking would be thus characterised and related to one another.

1. The disease now known as Acute Tuberculosis might the more completely, to eradicate the old idea, be spoken of as Granulæ—that is, we might adopt the name which has already been given to it by M. Empis, one of the writers who has contributed most largely to our

knowledge of this protean malady.* All the facts really known concerning the affection would continue as before. We might still speak of its typical growths as grey granulations, merely ceasing to use their synonym "tubercle." The meningitis, which occurs in this affection, we may again speak of as Granular Meningitis—a name under which it was described in 1827 by Guersant, and whose use was continued by many subsequent writers, such as Rilliet and Barthez, Bouchut, and others.

2. The more localised affection hitherto known as Tubercular Peritonitis, and also characterised anatomically by the presence of grey granulations, we may henceforth speak of as Granular Peritonitis. This condition has no necessary connection with the acute general affection Granulæ. All known facts concerning its natural history would remain unaltered by its change of name—certain misleading suggestions, indeed, implied by the old name would be got rid of, and we should be free to seek in an independent manner for the causes of this somewhat obscure malady. Its almost invariable association with an acute cirrhosis of the liver is a most noteworthy fact. The liver-affection is probably a sequence of the peritoneal condition; but the absence of anything like a general infection of the system is both instructive and remarkable, when considered in relation to the affection next to be mentioned.

3. Occupying a position, as it were, intermediate between these two affections, though substantially agreeing with no malady which is known in the human subject, we should place, as it appears to me, the lymphatic affection in the Rodent animals in which the so-called "Artificial Tubercle" is produced. Like Granular Peritonitis, it is at first a purely local malady, though in the guinea-pig affection there is a tendency to rapid "generalisation" of the new growths, which is almost wholly wanting in the allied disease in man. This difference is all the more instructive, because the malady in Rodents is as capable of being initiated by the introduction of irritants into the peritoneum as by their introduction beneath the skin. The direct influence of irritants upon parts in which lymphoid tissues abound, almost always suffices to induce a rapid hyperplasia of these tissues in guinea-pigs; and whether the part first implicated be subcutaneous tissue or peritoneum, this local overgrowth is succeeded by a gradual and more or less complete generalisation of similar overgrowths. In man, however, we meet with the most striking differences. There are the best of reasons for believing that no such extraordinary excitability of the subcutaneous tissues exists in him, and that lymphoid overgrowths are by no means so easily determined beneath his serous membranes. Moreover, when they are determined to a very marked extent (as in Granular Peritonitis), we see an almost complete absence of that tendency to generalisation, the exhibition of which makes the Rodent animals so remarkable and peculiar. In the one organ through which the blood immediately returns from the enormous mass of diseased tissues existing in the Granular Peritonitis of man, we do find what appear to be secondary effects induced. Even here, however, we have not a special overgrowth of lymphatic tissues in the liver similar to what occurs in the Rodentia, but a much more ordinary result of excessive irritation—we have an acute cirrhosis, in fact, in which the lymphatic tissues are altogether thrown into the shade by the enormous overgrowth of the connective-tissue elements amidst which they are interspersed. These facts, therefore, tend strongly to confirm the view which I have previously mentioned, viz., that no affection exists in man answering to that of the Rodents, because there is an almost complete absence in him of that extraordinary excitability of the lymphoid tissues which they display—an excitability showing itself in them by an extreme proneness of these tissues to overgrow under direct irritation, and by the manifestation of a like aptitude on the part of similar tissues in remote organs under the influence of obscure secondary irritant agencies, the precise nature of which is wholly unknown.

4. Next we have two allied affections as distinct from Pulmonary Phthisis as those to which I have already alluded, although they also are characterised by the occurrence of disseminated new growths having a distinctly lymphoid character. These are Leucocythæmia, and the affection named Adénie by Trousseau, in which multiple lymphomatous infiltrations and tumours are met with in various parts and organs of the body.

5. Lastly, taking the great majority of cases of Pulmonary Phthisis, we find in them the ever varying representatives of an anatomically protean malady—but of a malady which has nothing more "specific" about it than belongs to Chronic Bright's Disease in the kidney, or to any ordinary disease of another organ. The anatomical peculiarities of the lung are such as eminently favour the more or less simultaneous occurrence of different kinds of lesions under the influence of inflam-

matory or irritative influences. It is the various proportions in which these different kinds of lesions exist in different cases, combined with their different stages of evolution or decay, which accounts for the varying appearances presented by one case of phthisis as compared with another. In the main (and omitting the condition of blood-vessels) these tissue changes, as almost every one admits, belong to three different categories. They are as follows.

a. Epithelial or more or less Purulent Impactions within the bronchi and air-cells, occupying areas of very different sizes, and presenting different colours of grey or yellow, according to the amount of fatty degeneration or caseation which they have undergone. Changes of this kind are more or less intimately intermixed with those which follow.

b. Fibroid Overgrowths resulting from a hyperplasia of connective tissue elements in different parts of the portion of lungs affected; these being characterised by tissues presenting every grade of structure or variety between mere nuclear overgrowths of an embryonal character and the densest fibro-cartilage.

c. Lymphoid Overgrowths, more or less inextricably interblended with tissue-changes of the kind last mentioned, due to an irritative hyperplasia of the normal lymphoid patches which are to be met with around the bronchial tubes and their minute ramifications.

The changes described under *b* and *c* together constitute the well known *indurating infiltrations*. The two kinds of changes occur in intimate union; and, moreover, the more characteristic lymphoid hyperplasias shade away insensibly into the ordinary embryonal or nuclear overgrowth of the connective tissue elements. It is no more surprising or peculiar that the one should occur than the other; they are both mere irritative overgrowths of pre-existing tissues. Causes which stimulate the growth of one, should suffice to stimulate the growth of the other kind of tissue. The amount of actually developed fibrous tissue in this intermixture of *b* and *c* increases with age or in proportion to the slowness of its evolution. As Dr. Fox has forcibly pointed out, the tendency to undergo caseation or cheesy metamorphosis is by no means confined to the epithelial impactions; it extends also to these indurating infiltrations, and is generally well marked in direct proportion to the rapidity of their evolution, and the abundance of their corpuscular elements.

Such indurating infiltrations commence, for the most part, by the production of aggregations of minute granulations, into which epithelial overgrowths enter more or less largely; then comes a subsequent fusion of such granulations, together with a rapid overgrowth of connective tissue and lymphatic elements in and around the patch. Contiguous new centres of morbid growth arise; and larger and larger patches, becoming fused by mutual growth, subsequently undergo the most varied changes. All this, however, has been very accurately described by Dr. Fox.

The more acute the case of phthisis, the more apt are we to meet with a predominance of mere epithelial or purulent impactions; whilst the more chronic the cases, the more abundantly do we find the indurating infiltrations and granulations above referred to. It is, however, as Dr. Fox has remarked, almost impossible not to get some amount of the other change where either of them exists to any well marked extent. Taking into account the ulcerations, pigmentations, and other changes which these morbid tissues and products are apt to undergo, all the anatomical characters of pulmonary phthisis are explicable enough, without the necessity of our ever having recourse to a word the very mention of which suffices to summon to the mind a confusing cloud of unproved assumptions and conflicting theories.*

And if the lesions themselves of Pulmonary Phthisis can be fully explained without having resort to or occasion to use the word "tubercle", this is also certainly true concerning the general constitutional condition associated with the malady, and, concerning anything that we may know or say as to its hereditary nature. Those who have occasion to use the phrase "Tubercular Diathesis," will find themselves none the less wise if, in future, they speak or think of a Phthisical Diathesis. And, surely, nobody in these days, when so much more is known than was patent to our predecessors concerning heredity, will think it necessary to keep up old notions concerning the "specific" nature of a very ordinary disease, simply because there is evidence to show that a tendency to such a disease is frequently transmitted from parent to offspring. A man may inherit from his ancestors a well- or an ill-developed brain, and similarly he may inherit a well- or an ill-developed lung. If he have an ill-developed brain—a brain, I mean, so constituted that its tissues are more than usually prone to pass over into this or that form of morbid change, either spontaneously or under the influence of the very slightest determining causes, we should say that he inherited a

* In his work entitled "De la Granulie ou Maladie Granuleuse connue sous les Noms de Fièvre Cérébrale, de Méningite Granuleuse, d'Hydrocéphalie Aigue, de Phthisie Galopante, de Tuberculisation Aigue," etc. Paris: 1865.

* The so-called "Tubercular" Ulcerations of the Intestine, which are so apt to occur in the course of various chronic lung-diseases, may be equally well understood by us if we simply call them Granular Ulcerations of the Intestine.

predisposition to brain-disease, though the particular form which might appear would be altogether uncertain. Nobody doubts, however, that quasi-pathological accidents may determine in another individual, who inherits no such predisposition, similar forms of disease. The case is precisely the same with regard to lung-diseases. A man may inherit from his ancestors lungs which contain within themselves the elements of weakness—organs the tissues of which are so constituted, with relation to the whole organism, that the very slightest determining causes suffice to initiate a set of changes which terminate in one or other of the forms of pulmonary phthisis. And, similarly, just as brain-disease may be acquired in the life of an individual who inherits no predisposition, so, under the stronger pressure of general and local causes, may any of the forms of phthisis manifest themselves in individuals who inherit no family predisposition to such a disease.

Where is the difficulty? What occasion have we to resort to the use of the word "tubercle"? How does so much depend upon the use we make of it? I must confess myself unable to understand what Dr. Wilson Fox means when he says: "The etiology of phthisis, the therapeutics of phthisis, and the prognosis of phthisis, all hang upon this point—how far tubercle is concerned in the morbid anatomy of phthisis." To me it seems quite the reverse. I regard this question as one of a mere verbal nature, and as capable of being separated entirely from all problems as to the etiology, therapeutics, and prognosis of phthisis.

Were it not for the very important nature of these questions under discussion—were it not for the fact that professional opinion in this country might be led into grooves which would subsequently, as I conceive, introduce a lamentable confusion into the science of medicine and pathology—I should not have ventured to speak at such length. What I have said, however, may be taken as the expression of views which I have arrived at slowly and deliberately after the most earnest consideration of all the facts. I would say then, emphatically, if we accept the new signification which has of late been proposed for the word "tubercle", we involve ourselves in an endless series of disputes and differences of opinion as to the real nature and limits of such a growth as compared with many Chronic Inflammations, with Syphilitic Indurations, Scrofulous products, Leucocythæmic growths, the Lymphomata of Adénie, and other morbid products. Whilst, on the other hand, if we throw away this indefinite and almost meaningless word "tubercle", we shall at the same time get rid of an entangled brushwood of conflicting opinions, and of a series of pitfalls which simply hinder our progress and prevent that almost complete unanimity concerning the mere facts themselves which would otherwise prevail.

ON A PECULIAR KIND OF HARE-LIP; AND ITS TREATMENT.

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HAVING had several cases of hare-lip similar to those which are figured in the accompanying photographs, I have thought it worth while to notice briefly the very remarkable nature of this deformity, and the method which I have used for its remedy.

The first of these (No. 1) occurred in the autumn of 1864; No. 2



Fig. 1.

and No. 3 were children of the same parents, who had a third child with the same deformity; and No. 4 represents No. 3 after being operated on.

The deformity includes the bones and the soft parts which enter into the composition of the upper jaw, the hard and soft palates, the upper lip, and the lower part of the nose. A chasm, an inch in width, separates the right from the left segment of the lip, and through this aperture there protrudes a portion of bone, consisting of what ought to have been the central part of each superior maxillary. This is adherent to and projects beyond the tip of the nose, and is covered by a portion of soft parts, consisting of integument, mucous membrane, and prolabium, corresponding to the central deficient part of the upper lip. The projecting bone contains the two incisor teeth on each side, and corresponds to the two premaxillary bones, separated from the maxillary, thrust forward to the tip of the nose, and carrying before it the central



Fig. 2.

portion of the lip. A glance at the photographs will, I think, make clear to any who may not happen to have seen a similar case the nature of the deformity. There is also in Erichsen's *Science and Art of Surgery* a very good print of it.

Like many other deformities, this is no doubt primarily a case of arrested development. The German poet Göthe is said to have been led to the discovery of the presence of a premaxillary bone in man by his belief in ideal archetypes (*Nature*, June 2nd, 1870); and, if so, Professor Tyndall might have adduced this as another instance of the scientific use of the imagination. In cases like the present, and indeed in all cases of hare-lip, the deformity consists in a continuance beyond the proper time of the separation between the premaxillary and maxillary bones. But in most cases of hare-lip this junction, though late, takes place before birth, and the separation of the lip on one or both sides, constituting the ordinary hare-lip, is all that is left to show the original arrest of development. Very frequently the intermaxillary becomes attached to one, usually the right maxillary bone, forming a projection which is separated by a greater or less space from the left, and accompanied by more or less cleavage through the hard and soft palates. This is the class of cases in which the projection may be thrust back, and the



Fig. 3.

injury repaired, without loss of bone or teeth. But in such cases as those of which I am speaking the projection is too great, and the separation between the maxillary bones too wide, for this proceeding to be successful. In the photograph pictured (No. 3) the amount of separation was rather more than an inch.

In considering what ought to be done, it seemed to me necessary, first of all, to remove the projecting bone, and then to unite the right

and left sides of the lip in the usual manner. This having been done, there remains a part redundant and a part deficient. The central part of the lip is redundant; because, being adherent to and deriving its nourishment entirely from the tip of the nose, it cannot be made available in the formation of the lip, and accordingly Mr. Erichsen advises



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that it be carefully dissected away. The part deficient is the *columna nasi*, and it occurred to me that in the central portion of lip we have exactly what may be used to remedy that deficiency. I would recommend that the operation be divided into two stages, the first consisting of removal of the protruding bone and the junction of one or both nostrils to the central part of the lip, the second being the ordinary operation of hare-lip, and the implanting of the *columna* into the upper part of the lip.

Hitherto I have attempted to remedy the defect by means of a single operation; but in two cases, while the *columna* adhered to the nostrils, and the edges of the lips also adhered to each other, the *columna* did not adhere to the upper edge of the lip, and required a second operation for that purpose. In the last case on which I operated, the child had a violent attack of diarrhoea on the fourth day, and the *columna* ultimately adhered to the left nostril and to the left segment of the lip, but the union between the right nostril and the edges of the lip gave way. The little patient made a very narrow escape from death from diarrhoea, and for the space of two or three months I did not consider her in a fit state for operation. Subsequently I performed the operation as for single hare-lip extending into the cavity of the nostril. The deformity was more completely remedied than in any of the other cases on which I have operated (one of which is represented in figure 4). But the child was of a weakly constitution, and died rather suddenly of diarrhoea a few weeks afterwards, without my having had a photograph taken.

I have thought it worth while to bring forward this subject; because I consider that, in a practical point of view, the saving of the central portion of lip, and converting it into a *columna nasi*, are much preferable to its excision. I have been surprised at the little deformity which remains after the adoption of this proceeding. Secondly, I consider these cases as very suggestive in a biological point of view. Here we have not only the intermaxillary bones separated from the maxillary in the human subject at birth, but they are also carried forward to and beyond the tip of the nose, requiring only the intervention of osseous matter to fill the chasm and constitute the true snout of the lower animals. Is this curious deformity one of the missing links which connect man with the lower order of creation? Or, like the occasional hooflets which, occurring in the horse, are supposed to point to his descent from the fossil hipparion, does it point to our descent from some unknown and remote progenitor, the congener perhaps of the hipparion, in whom the premaxillaries were permanently developed and projected beyond the organs of smell?

SECTION OF THE ORBICULAR MUSCLE AND INTEGUMENT AT THE OUTER CANTHUS, AS A PRELUDE TO EXTRACTION OF CATARACT.

By EDWIN CHESSHIRE, Esq., F.R.C.S., Senior Surgeon to the
Birmingham and Midland Eye Hospital.

BEFORE operating for extraction of cataract, I have recently been making a section at the outer canthus through the fibres of the orbicular muscle and the integument; and I have found so much advantage from the proceeding, that I wish to submit the plan to the notice of my professional brethren, in order that it may be more fully tested. I have done five extractions on this method at present, and in every case complete success has resulted.

The advantages attending division of the orbicular muscle at the

outer canthus, before making the corneal section, are, more extensive exposure of the globe, which enables the operator to manipulate his instruments, and to make his section through the cornea with greater ease. And the spasmodic contraction of the orbicular muscle being overcome, the operator is left to complete his operation at his leisure; while all risk of sudden protrusion of the lens, followed as it sometimes is by prolapse of the iris and escape of the vitreous is almost entirely avoided; and the contraction of the lids on the globe, which is sometimes a troublesome symptom in the after-treatment of cataract-extraction, is prevented.

With division of the orbicular muscle, the wire speculum, which greatly facilitates each step of the operation, may be used without injury or annoyance to the patient. No sutures are required, as the divided surfaces readily unite, and scarcely leave a trace behind them. All that is necessary to be done is to keep the eyelids nicely in apposition for a few days after the operation by means of strips of court-plaster. All bandages and other coverings after extraction are to my mind objectionable, as it is important to have the fullest opportunity of examining the appearance of the lids without disturbing the patient by the removal of external appliances. Moreover, the support afforded by the lids to the corneal flap, when nicely kept in position by strips of court-plaster, is very agreeable to the patient. Spasm may be brought on, and the partially healed corneal flap may be opened, by the removal of bandages, wool, etc., which may have become adherent to the lids.

The operation is done as follows. A wire speculum is placed between the lids, to enable the operator to make his section through the muscle and integument at the external canthus with precision and ease. I have made no allusion to the mode of extracting, as the plan I propose is equally applicable to all extractions. Suffice it to say, that I always use Graefe's knife; and that Graefe's or Liebreich's operations are selected, as may appear most suitable to the particular case. I never use chloroform or ether in extraction, as the sickness which frequently follows their administration far outweighs any advantage that may otherwise result from the use of anæsthetics during the operation; and with the orbicular section, the globe being more under control, they are still less required. Where great neatness is desired, the section may be made subcutaneously.

REMARKS ON PSORIASIS.

By A. S. MYRTLE, M.D.,

Consulting Physician to the Harrogate Bath Hospital.

WHEN I hastily penned the remarks which I made on psoriasis, and ventured to differ with Mr. Balmanno Squire when he published the view he holds that it is the leprosy of Scripture, I had no idea that my comments should have rendered it needful for me again to request a little space.

With all deference to Mr. Squire, his reply is, in my opinion, no answer to my letter, and does not say one word in further support of his "dogma"—very much the contrary; for what are we to understand by the fact that, whilst in his first letter he bases his argument on the assertion that "psoriasis is the only disease I have seen that fairly corresponds to such a description"—namely, "a leper as white as snow"—the disease most dreaded by the Jew, because, according to the Levitical laws, its existence deprived the individual of all social privileges and estate,—in his second letter, when passing judgment on my statement regarding the presence of psora acting as a barrier to a girl's full intercourse with her fellows, or to her entering into marriage, he speaks of it as if leprosy were of no importance whatever, and chaffingly asks the question, "Are blooming healthy individuals at such a discount, even with the drawback (*if it be one*) of a patch or two of psoriasis?" Does he mean to say that the presence of these patches may prove ornamental? I am at a loss to know what he means.

I am equally at sea when he says, "if it be not profane to think that the constant maintenance of the varied and undeviating laws of Nature is a greater miracle than any conceivable deviation from them." Is he speaking of the laws regulating the heavenly bodies, or those affecting the skins of his Jewish acquaintances and patients? and, if the latter, are they undeviating?

I never heard before of emotional eruptions of psoriasis, and cannot see what connexion there is between abortion through mental influences and cutaneous diseases.

Because I hold very different views regarding psoriasis, and decline to accept a dogma which Mr. Squire brings before the profession, am I bound to furnish him and the readers of the JOURNAL with the means which I have had at my command whilst investigating the sub-

ject, to enlighten him as to the number or nationality of my patients? or do I give him any cause to charge me with "voluntarily putting myself into any other attitude of mind than that of assuming", when I say that, as far as I have been able to ascertain, race has nothing to do with it (psoriasis)?

The remarks upon the present London fashionable toilette are, to a country practitioner like me, most novel and instructive. Unfortunately, in this primitive district we are still in very low-bodied frocks and very short sleeves; and it may be years before square-cut bodies—the *de rigueur* of evening dress which Mr. Squire so artistically describes—may reach us. Meanwhile, we shall live in hope.

I quite believe Mr. Squire has met with too many persons who have steadily persevered with a course of Harrogate and many other mineral waters for months without benefit; but may I ask him kindly to take into consideration this one circumstance? Each and all of these patients had persevered for years with the usual remedies before they tried mineral waters. One patient presented himself to me the other day. He produced a bundle of what he styled old and new prescriptions, commencing October 3rd, 1864, and terminating August 1872. During this time he had been ringing the changes on mercury, antimony, arsenic, iodide of potassium, colchicum, with less potent drugs, such as iron, sarsaparilla, nitric and other acids, alkalies, etc., under the able advice of the late Mr. Startin, not only without benefit to the eruption, but with the loss of general health.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

UNIVERSITY COLLEGE HOSPITAL.

ACUTE PULMONARY TUBERCULOSIS WITH ALMOST COMPLETE ABSENCE OF PYREXIA.

(Under the care of Sir WILLIAM JENNER, K.C.B.)

J. W., a dressmaker, aged 40, single, was admitted on September 3rd. She had suffered from cough in winter for several years, and for the last year or two a slight dry cough had persisted during the summer. She had always lived well, and, although never very strong, had enjoyed good health until about two months before admission, when her cough became more troublesome, the expectoration more abundant, and she began to perspire at night. She soon lost strength, and was obliged to give up work. Her father died of phthisis. On admission, the patient was much emaciated and very weak, and of well marked tubercular build. There was some dyspnoea. On examining the chest, there was found marked dulness at the right apex with bronchial breathing and occasional coarse crackling; below there was harsh breathing with finer *râles*, except at the base posteriorly. There was deficient resonance over the whole left lung; absolute dulness at the apex, where also the breathing was almost tubular with large *râles* at the end of inspiration; below this there was bronchial breathing with moist *râles* down to the base. She rallied a little after admission, but soon began to suffer from occasional attacks of diarrhoea, lost ground slowly, and died on January 12th.

The remarkable feature of her case was her temperature. Up to December 6th it was occasionally below 98 deg., but never above 99 deg.; she had then a slight febrile attack which lasted three days, but the highest temperature was only 100 deg. Again, from December 20th to December 30th, the thermometer varied from 99 deg. to 100.6 deg.

Necropsy, January 13th.—The lungs were everywhere firmly adherent. On section, the right lung was studded with tubercles, which were far more abundant at the apex than at the base. The apex contained a few small cavities, the largest not bigger than a small bean; the tissue between solid and pigmented, containing opaque and softening tubercles. Lower down the tubercles were grey, semitransparent, and firm, evidently recent; the tissue between was crepitant, and here and there emphysematous, especially at the base; no appearance of recent pneumonia; lung-tissue everywhere tough. The left lung was small and contracted; there was a cavity of the size of a small apple at the posterior part of the apex, more tough, solid, non-crepitant tissue than in the other, and fewer distinct grey granulations. The spleen was somewhat large and soft; it weighed nine ounces. The other organs were tolerably healthy.

In the course of the *post mortem* examination, Sir William Jenner made the following remarks.

The relation of pyrexia to phthisis is a point which has been hotly disputed, and probably will be for some time to come. The question whether tubercle is itself a product of inflammation, or whether the inflammation is only a secondary process, has given rise to much difference of opinion amongst pathologists; but there is another aspect of the question which is of far greater importance to us as practical physicians—viz., is fever an invariable and necessary companion of acute tuberculosis? can we ever diagnose from the presence or absence of elevation of temperature that tubercles are or are not in process of formation within the body? Some have asserted that the mere fact that a person's temperature was found, after careful observation, to keep within the normal limits, was absolute proof that the patient was not the subject of active tuberculosis. The truth of this statement has lately been questioned, and, I think, justly. It is in reference to this point that the records of cases like the present are valuable. Here is a woman who, after suffering for several years from pulmonary catarrh, becomes at last, as so often happens, the subject of acute deposition of tubercle, which carries her off in about six months. Yet during the four months she has been in hospital there has been an almost complete absence of pyrexia. Her temperature has been taken at least twice every day, and until the last month it has been uniformly below 99 deg. Only during the last four weeks has she had two febrile attacks, lasting a few days each. I must say that now I see the state of the lungs, I am myself somewhat surprised; I should scarcely have thought that such an amount of tubercle could be deposited with so little elevation of temperature. No doubt a continuance of pyrexia without evident cause is of value in leading us to watch for evidence of the presence of tubercle; but, after what we have seen to-day, I do not think that any of us will be likely to rely too much on the absence of pyrexia as conclusive evidence of the absence of tuberculosis.

BIRMINGHAM GENERAL HOSPITAL.

SEVERE AND CHRONIC ODONTALGIA CURED BY A SINGLE LARGE DOSE OF QUININE.

(Under the care of Dr. WADE.)

MATILDA W., aged 17, a domestic servant, was admitted on November 1st, 1872. For three months she had had very severe pain in the teeth. At first, those of the upper jaw were mostly affected. During the three weeks preceding her admission, the pain had been confined to the left half of the lower jaw. The pain always precluded all hope of sleep if it came on in the evening. The teeth were very defective in the upper jaw. On the right side all but the incisors were wanting; on the left the first bicuspid and first molar were absent. In the lower jaw, on the right half the first and second molar, and on the left half the second molar, were wanting. All that remained of the other teeth were simple stumps, much decayed and discoloured. The general health of the patient had been pretty good; the various functions were well performed. She was ordered to take at once a draught containing twenty grains of sulphate of quinine, with dilute sulphuric acid, in an ounce of water. The draught produced cinchonism, with speedy and great relief to the pain, which in the course of thirty-six hours had entirely subsided. She remained as a patient for a fortnight, when she was discharged, having taken no other medicines, and having had no return of the pain.

Dr. Wade drew the attention of the students to the success of the treatment in this case, and stated that a sufficiently large dose of quinine will almost invariably cure odontalgia, even when the teeth are destroyed to so great an extent as they were in this case. Over odontalgia caused by inflammation, or abscess at the extremity of a fang, quinine exerts no influence. The dose required to remove the pain and produce cinchonism varies considerably from fifteen to thirty grains; and it is worth notice that, whereas a sufficiently large dose will cure the odontalgia, an insufficient one, although a large dose, will not alleviate the pain at all.

ACUTE BRONCHOCELE.—In the *Archiv der Heilkunde*, vol. xiv, No. 6, Ludwig (of Pontresina) describes the case of a gentleman who, after suffering from violent paroxysms of cough for some days, was suddenly seized with a swelling on the front of the neck, which impeded respiration. There was found to be an elastic swelling extending downwards from four centimeters below the middle of the thyroid cartilage nearly to the sternum, and to the sterno-mastoid muscle on each side. In the course of a few hours, it increased to the size of a child's head; the dyspnoea became more intense, and deglutition was difficult. There was no pulsation in the tumour. Soon, however, it began to diminish; and the next day it had entirely disappeared. Ludwig regards the case as one of acute hyperæmia of the thyroid body, but cannot assign a cause.—*Berliner Klin. Wochenschr.*, March 3rd.

THE
GENERAL MEDICAL COUNCIL
ON
EDUCATION AND REGISTRATION.
SESSION, 1873.

Thursday, March 27th.

Dr. PAGET, President, took the chair at 2 P.M.

The Apothecaries' Society and the Conjoint Examining Board.—Mr. BRADFORD handed in two letters dated April 19th and June 14th, 1872, relating to the question whether Government would remove the obstruction which prevented the Society of Apothecaries from taking part in the formation of a Conjoint Examining Board for England. [The letters were, at Mr. Bradford's request, read by the Registrar.] Mr. Bradford said that the object of the Bill proposed by the Society was threefold; first, to remove the necessity for apprenticeship; secondly, to enable the Society to select examiners from registered practitioners in general, in place of being confined to members of the Society; thirdly, to enable the Society to expel persons guilty of disgraceful conduct. He moved—

"That the correspondence which has passed between the Lord President of the Privy Council and the Society of Apothecaries be entered on the Minutes."

Dr. PARKES, in seconding the motion, said that he would add a few words to what had been said on the previous day by Dr. Storrar respecting the University of London. He had been informed by Dr. Carpenter that Mr. Winterbotham had told him that the Lord President of Council was willing to bring in a Bill enabling the University to join the conjoint board, on condition that the fees required from candidates should not be raised without the authority of the Privy Council, and that the rules made by the conjoint board should also be submitted to the Privy Council for approval. The Home Office by some means learned that these conditions would not be acceptable; and therefore the proposed Bill was abandoned.

The motion was carried.

Sir WILLIAM GULL said that the Council—at least the majority of it—had last year decided that the formation of joint examining boards was desirable; and were then disappointed that little progress had been made. He was astonished at the hindrances which were presented on the previous day, when it was proposed that the President of the Council should communicate with the Lord President of the Privy Council. It was then alleged that the President of the Medical Council knew so little that he could not represent the opinion of the Council. Now the President knew enough to be able to state that the examining bodies in England were desirous of combination, and much more to the same purpose. Some of the members, however, would have it that no advance had been made: All this was trifling and wasting time, and disappointing the hopes of the profession; and in this everyone who had no interests to consider but those of the profession at large, would agree with him. He moved—

"That the President and four members of the Council be appointed as a deputation from the Council, to ascertain from the Government whether they are willing to aid the Council in the removal of any legal difficulties that may exist in carrying out the objects of Clause 19 of the Medical Act."

Mr. HARGRAVE seconded the motion.

Dr. ALEXANDER WOOD said that his object had not been to advocate delay; but he desired that the subject should be considered before communicating with Government.

Dr. ANDREW WOOD said that any objections which he felt against making application to Government were increased by what he had now heard, especially by the revelations made by Dr. Storrar and Dr. Parkes respecting the University of London. Was the Medical Council to bend the knee to the Privy Council and its medical adviser? Last year, the Scottish members of the Council were anxious to carry out the wish of that body for the formation of a Conjoint Board in Scotland; and on their return to that country, they called on the various bodies to consider the subject. They did consider it; and the more they did so, the more they became convinced that in Scotland the plan would interfere with their independence, and would not be for the benefit of the public. They believed, indeed, that the establishment of a dead level, such as would be the result of a conjoint scheme, would lower the standard of professional education. If any of

the present examining bodies sent out imperfectly qualified men, the fault lay with the Medical Council, who had the power of visitation, and of making representation to the Privy Council when necessary. But he failed to find evidence that unqualified persons were admitted to the profession by the examining boards; on the contrary, the lists that had been furnished to the Council by the various bodies showed an appalling number of rejections. Again, the lists sent from the Army Medical Department formerly showed a large proportion of rejections; but in this year's list, of nineteen candidates, only one was found disqualified. There was also a great progress in the attainments of practitioners throughout the kingdom; even in the most remote parts of Scotland, there were men in practice from whom much valuable information could be obtained. Year by year the status of the medical practitioner had been improving; and this was due in great part to the Medical Act and the Medical Council. The Council had caused examinations in preliminary education to be established uniformly, had prolonged the curriculum of professional education, and had made the examinations more stringent. With scarcely an exception, every suggestion that the Council had made had been carried out. The Council would best advance the interest of the profession by avoiding chimerical schemes, and following the practical course of inspecting and improving the examinations.

Dr. PARKES said it was important to know what answer was to be given by the President of the Medical Council to any questions that might be put to him by the Lord President. He feared that the Lord President would urge that the efforts to form a conjoint board had been but little successful; and that he would at last ask whether the Council desired to have an Act of Parliament to compel the formation of conjoint boards. He did not think that the President should be committed to this condition of things without receiving definite instruction from the Council. The Council should affirm that they were ready to go on with the formation of conjoint boards.

Sir D. CORRIGAN said that a conjoint board had not been formed in England, inasmuch as two of the examining bodies had not joined it. The same was the case in Ireland. He did not think that the general opinion of the profession was in favour of conjoint boards.

Dr. RISDON BENNETT said that the plan proposed for England was about to be brought into operation; it was, however, incomplete, since two bodies were not represented. These had difficulties which prevented them from joining; and it was for the Council to see whether these could be overcome by the aid of Government. In the present state of affairs, the only thing to be done was to adopt the motion of Sir William Gull. It behoved the Council to grapple with the difficulty before it. If the Government stated that they could not remove the difficulties, except on conditions which could not be accepted, then it would be for the Council to devise some method of attaining the object in view. He trusted that the attention of the Government would be specially directed to clause xix of the Medical Act, in order that the extent of the power which the Council possessed under that clause might be known.

Dr. STOKES thought that much had been done in Ireland towards the formation of a conjoint board. Three of the examining bodies had agreed on a scheme.

Dr. QUAIN thought that the discussion had become discursive. He wished to know the object of an "enabling Bill." The University of London could take care of its own interests; and the Society of Apothecaries had followed a proper course. Were there any other bodies which required an enabling Bill?

Dr. HUMPHRY said that it was not quite plain whether the Government would support or approve a Bill brought in by private members on behalf of the Apothecaries' Society. It was quite evident that the Government would not themselves introduce a Bill into Parliament except on conditions which would interfere with the independence of the profession; and, from what he saw of the tendencies of Government, it was important that such independence should be preserved. Even if no aid were obtained from Government, and little or no progress were made beyond what had already been done, it was a mistake to say that no progress had been made; and the Council must proceed as far as it could with the powers which it already possessed. Combinations should be made where possible; and in other cases the visitation of examinations should be carried out.

Dr. ACLAND said that what the Council desired to know from Government was, whether it intended to aid or to mar their work, and whether the profession really was or was not independent. The formation of conjoint boards might or might not be a good thing; but the opinion of the public and the profession, and his own opinion, were in favour of it. Was it the fact, or not, that while the Council was endeavouring to produce combinations of the boards, it was intended that it should submit to certain conditions? The Council had long ago con-

sented to the principle of conjoint boards; and in endeavouring to form them it was carrying out the intentions of the Government. And now a scheme for England remained incomplete; and the only obstacle to its completion lay with Government. When the Medical Act was drawn up in 1858, it was evident that those who framed it believed that the examining bodies had power to combine; and he believed that Mr. Walpole, who had carried the Act through Parliament, would assist the Council in removing any disabilities that existed. He would like to know whether Mr. Lowe, the member for the University of London, was willing to aid in the matter.

Dr. STORRAR had had no communication with Mr. Lowe for some time, and could give no precise information.

Dr. ACLAND said that in Ireland three of the examining bodies had consented to a scheme; a fourth (the Society of Apothecaries) had not yet joined, on account of a technical difficulty; and the fifth (the Queen's University) was holding back until it saw what the others did. With regard to Scotland, it was alleged that there were difficulties; but he had failed to discover what they were. But if it were considered there that the formation of a conjoint board would not conduce to the interest of the public, the objection was honourable and honest. There was only one thing for the Council to do; to ascertain from the Government whether it would or would not enable the Medical Council to go on in its work except under certain conditions. Until this was known, the Council was in the absolute fix of being able to do nothing; but, having obtained the information desired, it would do what was consistent with the good of the profession and the public, and with the conscience of its members. He would support the motion: and would call on his Scottish and Irish colleagues to assist the Council in obtaining from Government the information which was desired.

Dr. A. SMITH asked whether the University of Oxford had accepted the English scheme.

Dr. ACLAND said that it had, so far as to appoint him and Dr. Rolleston members of the Committee of Reference.

Dr. ALEXANDER WOOD proposed as an amendment—

"That the Council find that several unexpected difficulties stand in the way of forming conjoint examining boards in the three divisions of the kingdom. That it appears that no such combination can be legally formed without an enabling Act of Parliament which the Government are unwilling to introduce, except on conditions which will imperil the independence of the profession. That, under these circumstances, the Council is of opinion that it would be inexpedient at present to press conjoint schemes."

Sir Benjamin Brodie, when President of the Council, declared it to be his opinion that the great want in medical education was the preparation of the mind of the student to receive instruction; and if the Council had done nothing beyond effecting that improvement in preliminary education which had been the result of its labours, it would deserve gratitude. He believed that the meaning of the nineteenth clause of the Medical Act was, that registration under two qualifications might be rendered possible without the necessity of passing two separate examinations. For many years, there had been no desire in the Council for a general combination of examining bodies. If the Council went to the Lord President of Council, he thought they would do little beyond asking him his "opinion of things in general." The boards in England, he believed, had been exerting themselves to form a combination under difficulties; and in Scotland and Ireland also, attempts had been made. But, assuming that all concerned were in earnest, this did not affect the question under consideration. The University of London and the Apothecaries' Society had done what was right. They had applied to Government; and had been told to bow themselves down, and also to persuade the other bodies represented in the Council to give up their independence—which no other learned profession had ever done. The object of Government was to place all education under its control; and this made him cautious as to communicating with it. But supposing that Government interference in the present instance was desirable, was it for the Medical Council to ask for it? It was for the two bodies which had difficulty in the way of taking part in the conjoint scheme to do so. The Medical Council, if it applied to Parliament, would have to ask for a more extensive measure. Again, the Council was not altogether united with regard to conjoint examinations. If there was a defect in any of the examining bodies, it was for the Council to inquire into the matter; and this would improve the examinations more than fighting for what he must now call shadows—though they might at last prove to be substances.

Dr. FLEMING seconded the amendment. Even if an enabling Bill were obtained, it would not help the Council, as it would not compel the examining bodies to combine. He would like to see a large and

comprehensive measure of medical legislation, which should give the Council power to make laws for the regulation of the profession.

Dr. SHARPEY said that in 1870 the Medical Council had agreed to a Bill which contained the same conditions as those now objected to. As to leaving the University of London and the Society of Apothecaries to help themselves, it must be remembered that last year the Council expressed a decided opinion that measures should be taken to enable these bodies to join in the conjoint scheme.

The PRESIDENT said that Dr. Sharpey's statement regarding the action of the Council in 1870 was not quite accurate. In the Bill introduced in that year, all the power given to the Privy Council was that of veto on the schemes for examination to qualify for registration. The independent action of the universities and corporations was not affected; and this was very different from what was now proposed.

Sir ROBERT CHRISTISON would like to know from the representative of the Universities of Edinburgh and Aberdeen (Dr. Macrobain) what was the opinion of these bodies.

Dr. ARJOHN could not support the amendment; but he thought that application to Government was dangerous and unnecessary. If the Government refused its aid on application, the Council would only be embarrassed.

Dr. MACROBIN said that the Universities which he represented had agreed to the institution of conjoint examinations in practical subjects. He thought that the medical corporations in Scotland might form a joint board to grant a single diploma for general practice. The Universities in Scotland differed from those in England, in that they were the great educating bodies of that division of the kingdom. He feared that the effect of forming a board in Scotland on the same plan as that in England would be to lower the standard of the degrees. But the Universities might so far combine among themselves as to appoint three assessors from each University, who should be common to all, so that the examinations of one should not be lower than those of another.

On the proposal of Sir R. CHRISTISON, the debate was adjourned.

Returns from the Army Medical Department.—A statement was presented of the degrees, diplomas, and licences of the candidates for commissions in the Medical Department of the Army, who, in February last, presented themselves for examination, showing the number that passed and did not pass. The following is the general result:—Total number of candidates, 19; succeeded in obtaining appointments, 12; succeeded in examination, but not in obtaining appointments, there being only 12 vacancies, 6; failed in examination, 1.

Dr. ANDREW WOOD moved, Dr. PYLE seconded, and it was agreed—

"That the returns from the Army Medical Department be received and entered on the Minutes; and that a letter of thanks be addressed to the Director-General of the Army Medical Department for his kindness in forwarding them."

Friday, March 28th.

Dr. PAGET, President, took the chair at 2 P.M.

Conjoint Examinations.—The discussion on the motion of Sir William Gull and the amendment of Dr. Alexander Wood, was resumed.

Sir ROBERT CHRISTISON said that, when on the previous day he addressed a question to Dr. Macrobain, he was quite aware that he stood in a peculiar position as the representative of two Universities, one of which was ready to assent to a general scheme of combination, while the other regarded it as highly inexpedient. It had been several times asked in the Council what were the difficulties which existed in Scotland. He would endeavour to explain what these were, and also what were the facilities. It must be felt by all that the improvement of medical education was a great object; and he would show how this might be done. The University of Edinburgh had most carefully examined the proposal to form a conjoint board; and had met with technical difficulties arising out of the constitution of the Scottish Universities. They had the power of altering their ordinances; but they would not alter the provisions of their charters nor of the University Act. Whenever the Council proposed any alteration which the University of Edinburgh could carry out, that body would no doubt do so; but when it was asked to do a thing which would be inconsistent with the charter or the Act, then the University could not comply. Until the conjoint scheme was proposed, the University of Edinburgh had shown itself to be loyal to the Council. It had long ago complained that the degree of Doctor of Medicine was given at too early an age in Scotland. A change was made by which the degree of M.B. was instituted as a preliminary to that of M.D. The University of Edinburgh, and he believed that of Glasgow also, had transferred the thesis from the former to the latter degree. He would not refer

to what might be done in the way of producing uniformity of examination as well as of education. He approved of Dr. Macrobis's proposal to appoint assessors; and thought it would be a simple and practical means of carrying out the object of the Council. The University would welcome examiners from without; and he, for one, would be very glad to have the labour of examining divided. The only other improvement that was wanted was the formation of a conjoint board of the corporations in Scotland, so that no diploma should be given in any single branch of the profession. In this way there would be two conjoint boards in Scotland; one of the corporations, licensing for general practice; the other of the Universities, granting the higher degrees in medicine. He would ask the Council to allow this plan to be carried out if it believed, as he did, that a great improvement would be effected, although not all that might be desired. If, on the other hand, the Council attempted to carry through the formation of a single conjoint board in Scotland, it would be opposed by all the bodies. He was desirous that all examining bodies should enter the formation of conjoint boards according to their abilities. He was surprised to hear that Government refused to enable some of the bodies to join the conjoint scheme. He thought that the Council should not apply to Government, but that it should encourage schemes of combination as far as it could, and, beyond this, carry out the visitation of examinations with a view to their improvement.

Dr. PYLE supported Sir W. Gull's proposal. He could not agree with Dr. Alexander Wood that the President would only be able to speak to the Lord President of the Council on "things in general," inasmuch as he had definite information.

Dr. ALLEN THOMSON said that the opinion in Scotland was that the scheme desired by the Medical Council included too much. If it had been limited to the practical branches of professional knowledge, it would have been more likely to succeed; and he thought that the profession and the public would have been contented with this. He was of opinion that a conjoint board was desirable, with certain limitations; and he agreed with Sir R. Christison as to the manner in which combinations of the corporations and of the universities might be formed. He thought that in the universities the appointment of assessors from without should be encouraged, so as to remove all objections to the conduct of the examination of candidates by their own teachers.

Sir WILLIAM GULL, in reply, said that the object of his motion seemed not to have been sufficiently understood. It was, that the Government should be asked what aid it would give the Council in removing the difficulties in the way of carrying out its object. The Council would stultify itself if it gave up its plan in consequence of the letter that had been addressed to the Apothecaries' Society.

The amendment was put to the vote, and lost; 8 voting for, and 14 against. The original motion was then carried by a majority of 14 to 4.

The PRESIDENT then retired for the purpose of writing a letter to the Lord President of Council on the subject of a deputation. He was instructed also to apply for the assistance of some of the cabinet ministers on the occasion. During his temporary absence, the chair was taken by Dr. Stokes.

Visitation of Examinations.—The Council entered on the consideration of the following Report of the Committee on the Visitation of Examinations, deferred from the last meeting of the Council.

"The Committee on this subject, appointed on July 8th, 1871, beg to report:—1. That, in their opinion, the time has now come when an interchange of visitors between the three Branch Councils would strengthen confidence in the visitation, and would tend to assimilate the character of the examinations of the various boards. 2. That, with the view of carrying out the resolution of the Council of July 8th, a committee of visitors be appointed to make arrangements what examinations should be visited, and for carrying out the visitation. 3. That the committee of visitors consist of eight, four to be elected by the English Branch Council, and two by the Scottish and Irish Branch Councils respectively. 4. That each examination reported on shall be visited by a due proportion of members of the Branch Councils, other than the one in that division of the kingdom where the examination is conducted. 5. That it is not desirable that visitations should take place in the case of those examining boards with regard to which it shall appear to the visitation committee that there is a reasonable prospect of a conjoint examination being formed."

Dr. ALEXANDER WOOD moved—

"That the Report of the Committee on the Visitation of Examinations be approved of, with the exception of paragraph 5, which is now unnecessary."

There was no doubt of the beneficial influence of visitations, though he would not say that they were better or worse than the formation of conjoint boards. He considered that there should be an interchange

of visitations between the three divisions of the United Kingdom. It would enable the Council to be better informed as to the differences between the examinations; it would lead to an interchange of opinions, and would remove the idea that the visitors were disposed to regard favourably the examinations carried on in their respective divisions.

Dr. STORRAR seconded the motion, and spoke of the favourable results which had already followed the labours of the Council. There had been a marked improvement in the character and attainments of the students; and a great diminution in the number of those who went to grinders. The Assistant-Secretary of University College had informed him that there was a great improvement in the students, and that he attributed this to the institution of the preliminary examinations. Again, in consequence of the recommendations of the Council, the examinations had become more practical, and the means of obtaining instruction had been improved. One remarkable result was the disappearance of grinders. Twenty years ago there were men who made large incomes from this source. He had lately been told by Mr. Ellis, the Professor of Anatomy in University College, that in his class, of about 240 students, there were not more than six who went to the grinder; and these were mostly men who had been repeatedly rejected. He thought that benefits would result from the visitations, the object of which was not to find fault, but to point out improvements.

Dr. PARKES moved as an amendment—

"To substitute for clause 4 in the report, the following clause:—That a Committee of five members of Council be appointed to form a plan for the visitation of examinations, and shall be empowered to appoint two or more persons (not members of the Council) to visit the various examinations of the licensing bodies, and to report to the Committee; and that, after consultation with the Financial Committee, a proper remuneration shall be assigned to these visitors."

He thought that this plan would be more efficient than that of reciprocal visitations proposed by Dr. Alexander Wood. At present, the members of Council had difficulty in finding time to carry on the visitations in their own divisions of the kingdom; and the difficulty would be increased if they were sent to others. Under the plan which he proposed, a small number of visitors would be sufficient to supervise all the examinations.

Dr. ANDREW WOOD seconded the amendment. Admitting that the members of the Council did the work of visitation in an efficient manner, and that there was no ground for supposing that they always endeavoured to be unduly agreeable and courteous, the plan proposed by Dr. Parkes would remove all suspicion on the part of the public. The appointment of visitors from outside the Council had been proposed in 1861; but the expense could not then be borne. Now, however, the case was different; and it would not be necessary to make the visitations every year.

Sir ROBERT CHRISTISON thought that one visitor should be appointed for each division, and that he should be accompanied by a member of Council.

Dr. ALEXANDER WOOD, while he was bound to vote for the report of the Committee of which he had been Chairman, would be well pleased if Dr. Parkes's amendment were adopted.

Dr. STORRAR approved of Sir R. Christison's suggestion. He objected to placing the visitations entirely in the hands of experts.

Sir WILLIAM GULL thought that the visitations should be conducted by young men, who had recently passed through medical study and examination.

Dr. BENNETT considered that the Council ought not to delegate the duty of visitation to others.

Mr. QUAIN said that the object of visitations was to test, not examinations for honours, but those which enabled men to enter the profession. For this purpose, young men would be the worst that could be found. The visitor ought to have a good deal of experience; and it must be remembered also, that examiners would not like to be judged by young men. As to the final examination, it would not be possible to get properly qualified men to go from one part of the kingdom to another; they would be either those who had little or no practice, or who had retired.

Dr. STOKES spoke of the improvement in the mental and moral condition of the students, and the diminution of grinding, which had in recent years taken place in Ireland.

Dr. FLEMING supported the amendment. He objected to the proposal to appoint young men as visitors.

Dr. SHARPEY thought that the number of visitors proposed by Sir R. Christison was too small. It would be difficult to find men combining both scientific and practical knowledge in a sufficient manner.

Dr. ALLEN THOMSON was in favour of the plan proposed by Sir R. Christison.

The amendment was put to the vote and carried; 12 voting for, and 8 against it. It was then put as a substantive motion.

Dr. ANDREW WOOD proposed as a second amendment, and Mr. HARGRAVE seconded—

"That Dr. Parkes's motion be adopted, with the omission of the following words: 'To substitute for clause iv in the report the following clause.'"

This amendment was also carried; and was put as a substantive motion.

Sir ROBERT CHRISTISON proposed as a third amendment, and Mr. HARGRAVE seconded—

"That an inspector of examinations (not a member of Council) be appointed for each division of the kingdom, by the Branch Council of each division, to report to the Council at its next session; and that at each visitation of examinations he be accompanied by a member of Council."

After some remarks from Sir D. Corrigan, Dr. Quain, Dr. Parkes, Dr. Alexander Wood, Dr. Andrew Wood, Dr. Smith, and the President, Sir R. Christison's amendment was put to the vote and negatived; 7 voting for, and 12 against it.

Dr. ALEXANDER WOOD proposed as a fourth amendment, and Dr. QUAIN seconded—

"That this Council is of opinion that the visitation of examinations, as conducted by the members of the Council, has proved very beneficial; that the Council is, however, also of opinion that the time has come when the alternative afforded by the Medical Act be adopted, and that the aid of competent persons, not members of the Council, should be obtained to aid in performing the duty; that a Committee be appointed to prepare a scheme to carry out such a plan, including the due payment of the visitors, and to report during the present session of the Council."

This amendment was carried by a majority of 16 to 4; and, being put as a substantive motion, was agreed to; and the following Committee was appointed:—Dr. Alexander Wood (Chairman), Dr. Storrar, Dr. A. Smith, Dr. Sharpey, Dr. Parkes, Dr. Quain, and Sir R. Christison.

Case of John Permewan.—The Council finally considered a memorial from registered practitioners at Redruth, in Cornwall, respecting the case of John Permewan, who, having been convicted of felony in 1866, has been struck off the *Register*, and was now practising in that place. He had last year obtained the licence of the Royal College of Physicians of Edinburgh, representing that he was a member of the Royal College of Surgeons of England and a licentiate of the Apothecaries' Society.

Dr. ALEXANDER WOOD read some correspondence from the Secretary of the Edinburgh College, explaining that it was through an accidental oversight, which was much regretted, that the fact of Mr. Permewan having been struck off the *Register* was not noticed. He had been asked to give up the diploma which he had received from the College, and had done so.

After some discussion, the following resolution was passed, on the motion of Dr. ANDREW WOOD, seconded by Dr. FLEMING:—

"That a letter be addressed by the Registrar to certain practitioners at Redruth, Cornwall, who have memorialised the Council in regard to the case of John Permewan, stating that, having already exercised their power under the Medical Act, in striking his name off the *Register*, the Council have referred the matter to the Royal College of Physicians of Edinburgh."

Saturday, March 29th.

Dr. PAGET, the President, took the chair at 10 A.M.

Conjoint Examining Board in Ireland.—The Council took into consideration the following scheme for forming a conjoint examining Board, which had been agreed on by the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland.

1. That it is expedient to form a board for a joint examination in medicine, surgery, and pharmacy for Ireland, which Board should be constituted of examiners appointed by the several co-operating medical authorities. 2. That none of the Irish medical authorities mentioned in schedule [A] to the Medical Act, co-operating in this scheme, should give any of the qualifications mentioned in said schedule to any candidate who has not previously passed the final examination conducted under the proposed conjoint board, unless such candidate shall be already on the *Medical Register*. 3. That a committee of reference should be constituted, consisting of two from each of the Irish bodies mentioned in schedule [A] of the Medical Act, co-operating in the conjoint scheme, and that it should be the duty of the committee of reference—*a.* To determine the number of examiners to be assigned

to each subject at each examination. *b.* To arrange and superintend all matters relating to the examinations in accordance with regulations approved by the co-operating medical authorities. *c.* To consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by any of the co-operating medical authorities, and to report their proceedings to all the said authorities. *d.* To bring under the notice of the co-operating medical authorities any dereliction of duty on the part of any examiner. 4. That all medical students ought to be required to pass an examination in arts previous to entering upon their professional studies. 5. That no student should get credit for medical studies pursued before he shall have passed a preliminary examination in English, Latin, arithmetic, algebra, and geometry; and that no candidate should be admitted to his first professional examination until he shall have also passed in Greek, and the elements of physics and meteorology; but that any student who so pleases may present himself for examination in all the subjects of the preliminary examination previous to the commencement of his professional studies. 6. That the appointment of examiners in arts should be entrusted to the Universities co-operating in the conjoint scheme. 7. That no student should be admitted to the final examination of the conjoint board unless he has completed a curriculum of study to be agreed upon by the Universities and Medical Corporations co-operating in the scheme. 8. That the professional examinations conducted under the conjoint scheme should be two in number. The first may be passed at the termination of the student's second year, but not sooner; and the final, or pass examination, at the termination of his professional study. 9. That the subjects for the first professional examination under the conjoint scheme shall include—*a.* Anatomy and Physiology. *b.* Botany and Materia Medica. *c.* Chemistry and Pharmaceutical Chemistry. *d.* Practical Pharmacy. And that the subjects for the final professional examination shall include—*a.* Medicine, Clinical Medicine, Medical Pathology, and Therapeutics. *b.* Surgery, Clinical Surgery, Surgical Pathology, and Therapeutics. *c.* Midwifery and Diseases of Women and Children. *d.* Hygiene and Forensic Medicine. 10. That in consequence of the communication (dated 17th April, 1872), from the Chancellor of the Queen's University, this University be omitted, for the present, from the table of examiners. 11. That the following scheme for the subjects of examination, and the distribution thereof amongst the corporation of the Irish medical authorities co-operating in the scheme, should be adopted, viz.—1. Anatomy and Physiology, including examination on the dead subject and microscopic anatomy—University of Dublin, 1; College of Physicians, 1; College of Surgeons, 2. 2. Botany and materia medica—University, College of Physicians, and Apothecaries Hall, each 1. 3. Chemistry and Pharmaceutical Chemistry—University and Apothecaries' Hall, each 1. 4. Practical Pharmacy, including an examination in the compounding of medicines—Apothecaries' Hall, 1. 5. Medicine, Clinical Medicine, Medical Pathology, and Therapeutics—University, 1; College of Physicians, 2. 6. Surgery, Clinical Surgery, Surgical Pathology, and Therapeutics—University, 1; College of Surgeons, 2. 7. Midwifery, and the Diseases of Women and Children—University, College of Physicians, and College of Surgeons, each 1. 8. Hygiene and Forensic Medicine—College of Physicians and College of Surgeons, each 1. In each department (except chemistry and practical pharmacy), two examiners, at least, to form a board. 12. That graduates in arts who have completed a full professional curriculum, and have passed in their respective Universities an examination in all the subjects comprised in such curriculum, shall be exempt from examination in all the subjects of the first professional examination, except practical pharmacy. 13. That no member of the committee of reference should act as an examiner under the conjoint scheme. 14. That Professors and Lecturers in the Universities and Medical Schools should be eligible for the post of examiners under the conjoint scheme, but that no person engaged in private tuition should be eligible for any such office. 15. That the fees to be charged for the examination or examinations of the conjoint scheme, to candidates who are not Graduate in Arts, should be thirty guineas; and that, after payment of the expenses of the examinations, the surplus remaining should be divided between the Colleges of Physicians and Surgeons in the following proportions, viz.: *Three-eighths* to the College of Physicians, *Five-eighths* to the College of Surgeons. 16. That the fees to be charged for the final examination of the conjoint scheme, to Graduates in Arts, should be five guineas. 17. That candidates who have paid the fee of thirty guineas, and have passed the examinations of the conjoint board, should be entitled to the Licence of the King and Queen's College of Physicians, and to the Licence of the Royal College of Surgeons in Ireland, provided that the candidates shall have complied with the regulations of the respective

bodies. 18. That no person who has passed the conjoint examination should be entitled to the Licence of the Apothecaries' Hall until he has complied with the regulations of that body.

Dr. APJOHN moved—

"That the Council, under the powers conferred upon it by the 19th clause of the Medical Act, approves of and sanctions the foregoing conjoint scheme of examinations agreed upon by the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland; but the Council has come to the conclusion, and that conclusion is on record, that full degrees in medicine should not be conferred except on persons who have formerly graduated in arts."

The plan, which had been prepared after much deliberation, included all that was in the English scheme, and also provided for the general education of the students. He did not, however, say that it covered all the ground; but he did not expect any great opposition to it on the part of the Council. He regretted the failure to establish a conjoint board in Scotland; but, no doubt, there were satisfactory reasons for this. He hoped that the Apothecaries' Hall and the Queen's University in Ireland would be able to join in the scheme.

Mr. HARGRAVE seconded the motion.

Dr. STOKES said that the Irish scheme was a manifestation of loyalty towards the Council and an earnest attempt to carry out its wishes. Numerous meetings of the various bodies represented had been held, and there had been two conferences; and the result was the scheme laid before the Council. The objects kept in view were to ensure that all persons entering the profession should receive a competent professional education; and to advance the general education of the medical student—a matter of great importance in fitting him for the study of the technical part of his profession. He believed that the scheme had been well considered; and hoped that the Council would approve it as they had the English scheme.

Dr. STORRAR asked how it was that the Apothecaries' Hall appeared in the scheme of examinations, though it had not consented to the general scheme.

Dr. LEET said that the Apothecaries' Hall, which had at first taken part in the conference, had not formally withdrawn. The Hall had assented to a scheme; but subsequently alterations were made which were considered to be to the prejudice of that body. One objection to the new scheme was, that there was to be only one examiner in Practical Pharmacy. This was especially undesirable in Ireland, where a large number of the general practitioners had to dispense medicines. The poor would suffer if the medical men were not properly prepared for this duty. He believed, also, that this Council had expressed its disapproval of having only one examiner on any subject. Then, in the second examination, the Apothecaries' Hall considered that they ought to have an examiner either in midwifery or in hygiene. One in hygiene was assigned to them; but this was omitted in the scheme now presented. The Apothecaries' Hall had given up its share of the fees, as it retained the right of granting licences.

Dr. AQUILLA SMITH said that the first scheme to which Dr. Leet referred was only a preliminary report.

After some remarks from Dr. ANDREW WOOD and Sir D. CORRIGAN,

Sir WILLIAM GULL congratulated the Council on having such a good scheme laid before it. It had, since the previous day, passed from Nox and Chaos to Light and Kosmos. He moved as an amendment:—

"That the scheme for a conjoint examination agreed to by the University of Dublin, the College of Physicians, and the Royal College of Surgeons in Ireland (dated June 28th, 1872), be sanctioned, with or without the co-operation of the Apothecaries' Hall of Dublin; but the Council feel it most desirable that such co-operation should, if possible, exist."

Dr. ACLAND seconded the amendment. The members of the Council must sympathise with the Apothecaries' Hall in their difficulty; and he hoped that body would yet be enabled to join the scheme.

Dr. RISDON BENNETT congratulated the Irish bodies on the success of their attempt to form a conjoint scheme—though it was not so complete as might have been hoped for. With reference to a remark that had been made, that a scheme approved by the Council might be altered at pleasure afterwards by the bodies represented in it, he said that it was not so, and that this had not been done with regard to the English scheme.

Dr. ALEXANDER WOOD objected to some of the details of the scheme, especially those relating to preliminary education. He thought it a mistake to bring up a general plan with details, as had been done in the present case.

Sir R. CHRISTISON agreed with the latter remark; and, speaking of

the divisions of materia medica and pharmacy in the scheme, said that great difficulty attended all attempts to define areas.

After some remarks from Dr. ALLEN THOMSON, Mr. QUAIN, Dr. QUAIN, the PRESIDENT, and Dr. APJOHN, Sir W. Gull's amendment was put to the vote and lost; 10 voting for, and 11 against it.

Dr. ALEXANDER WOOD moved as an amendment, and Dr. ANDREW WOOD seconded—

"That this Council approve of the plan of co-operation laid before them by the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland with, or without, the co-operation of the Apothecaries' Company. That the Council does not approve of that portion of the scheme which includes the subjects of examination general and professional, which should be regulated from time to time in accordance with the recommendations of the General Medical Council."

This was also lost; 6 voting for, and 12 against it.

The debate was adjourned.

Monday, March 31st.

Dr. PAGET, President, took the chair at 2 P.M.

Charge of Infamous Conduct.—The Council investigated a charge of "infamous conduct in a professional respect," made against Dr. Matthew Bass Smith. The offence charged, as stated in the summons served on Dr. Smith by the Registrar, was that he, "being the medical attendant of Edmund Edmonds, of Newent, in the county of Gloucester, solicitor, and of his family, did in or about the year 1867, seduce and carnally know Jeannette Helena Edmonds, a niece of the said Edmund Edmonds, then being one of the members of his family, and who then was, or had been, attended by him in his professional capacity."

Dr. Matthew Bass Smith attended the Council, with his solicitor, and the latter asked for an adjournment, on the ground that he had not had sufficient time to procure evidence. The Council having ascertained that the notice was served on the 7th March, and that earlier service of the notice had been prevented by the difficulty of finding Dr. Smith, decided that the case must proceed. Mr. Ouvry, the solicitor to the Council, read the evidence in support of the charge.

The Solicitor of Dr. Matthew Bass Smith was heard in answer. He admitted that Dr. Smith had been guilty of immorality, but urged that his conduct was not such as to call for the interference of the Council. If it were so, the characters of many members of the profession would not bear investigation.

The PRESIDENT, in announcing that the Council, having heard the statements, would proceed to deliberate in private, expressed his entire dissent from the opinion expressed as to the general moral character of medical men.

The Council, having deliberated for some time, passed the following resolution:—

"That Matthew Bass Smith is judged by this Council, after due inquiry, to have been guilty of infamous conduct in a professional respect. That the said Matthew Bass Smith having been judged by the General Council, after due inquiry, to have been guilty of infamous conduct in a professional respect, the General Council do hereby adjudge that the name of the said Matthew Bass Smith be erased from the *Register*; and do by this order direct the Registrar to erase his name from the *Register* accordingly."

It was directed that a copy of these orders, signed by the President in the chair, and countersigned by the Registrar, be transmitted to the said Matthew Bass Smith.

Conjoint Examining Board in Ireland.—The Council renewed the consideration of the subject.

Dr. ANDREW WOOD (in the absence of Dr. Parkes) moved, and Mr. QUAIN seconded, the following amendment:—

"That the Council sanction the scheme of conjoint examinations approved by the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland, with the exception of that part of Clause 5 which follows the words 'Preliminary Examination' in the second line. The Council also desire to express a strong hope that the Apothecaries' Hall and the Queen's University in Ireland may be able to co-operate in the scheme."

After some remarks from Dr. Sharpey, Sir W. Gull, Dr. Alexander Wood, Dr. Storrar, Sir D. Corrigan, Dr. Risdon Bennett, and Dr. Apjohn, the amendment was carried. It was then carried as a substantive resolution.

Results of Examinations.—Tables of the results of examinations for degrees, diplomas, and licences in 1871 and in 1872 were submitted to the Council by direction of the Executive Committee; and, on the proposal of Dr. ANDREW WOOD, seconded by Dr. FLEMING, were ordered to be received and entered on the Minutes.

Dr. BENNETT moved, and Mr. HARGRAVE seconded—

"That the representatives of the several licensing bodies be requested to obtain the annual returns of the results of examinations from their respective bodies, and to forward them to the Registrar to be tabulated by the Executive Committee."

The motion was negatived.

The British Pharmacopæia.—The following Report from the *Pharmacopæia* Committee was read.

The Committee beg to report, that of the 25,000 copies of the *Pharmacopæia* which have been printed, 1,600 only now remain in stock. The sale of the *Pharmacopæia* has increased, and is increasing, as shown by the fact that, whilst in 1871 it amounted to 1,014 copies, in 1872 it amounted to 1,144; whilst in the first three months of the present year 650 copies have been sold. Under these circumstances, it is evident that before many months it will be necessary to issue either a new edition, or a reprint of the present edition.

The Committee are of opinion that a proposal to issue a new edition of the *Pharmacopæia* should not be entertained at present. The work, having been in circulation now between five and six years, is fully established in use; and the Committee feel that any attempt to replace it by another would be received with disfavour, as an unnecessary disturbance of existing arrangements.

The Committee therefore recommend, that a reprint of the present edition, with such corrections as may be necessary, be issued in sufficient time to meet the necessary requirements; and that the Executive Committee be authorised to make arrangements, at a proper time, for such reprint.

The Committee are further of opinion that, as several new medicines, and new forms of medicines have become established, or been introduced to the favourable notice of the profession, it would be desirable to supply the necessary information respecting these articles in the form of an appendix. Such addendum might be prepared at once, and issued in a separate form, for the use of those who possess the *Pharmacopæia*, and it may hereafter be bound up with the next reprint.

The Committee believe that the proposed appendix would occupy about a sheet of print, corresponding to that of the *Pharmacopæia*, and they recommend that it be prepared, and issued when ready.

The services of Dr. Redwood will be made available for preparing the work, under the direction of the Committee, of which proofs will be circulated, when ready, amongst the members of the Council, for suggestions and revision; after which, on completion by the Committee, the Executive Committee should be authorised to take steps for the publication of the same.

The Committee have in hand a balance of the sum placed at their disposal in 1869, amounting to £45 2s. 6d. They recommend that the Committee be reappointed, and that the further sum of £50 be placed at their disposal.

R. CHRISTISON, *Chairman*.

On the motion of Sir ROBERT CHRISTISON, seconded by Dr. A. SMITH, the report was ordered to be received and entered on the minutes. It was then adopted.

Tuesday, April 1st.

Dr. PAGET, President, took the chair at 2 P.M.

Charge of Infamous Conduct.—The Council investigated a charge of "infamous conduct in a professional respect," made against Robert Riddell, surgeon. The substance of the charge, as stated in the summons served on Mr. Riddell, was, that he "being the medical attendant of Thomas Broomfield, of Lauder, in the county of Berwick, North Britain, solicitor and bank agent, and of his family, for a number of years, down to July, 1865, in that year and since, by writing and otherwise, had stated or insinuated, or used language from which the inference might be drawn, that he had committed adultery with the late wife of the said Thomas Broomfield, he being at the time, when such adultery was alleged to have been committed, the medical attendant of the wife of the said Thomas Broomfield."

Mr. Ouvry, the solicitor to the Council, read the evidence in support of the charge. The solicitor for the complainant (Mr. Broomfield), was then heard in support of the charge; and the solicitor for Mr. Robert Riddell was heard in answer. The following resolution was adopted by the Council:—

"The Council, after due inquiry, do not, under the circumstances, see fit to direct the Registrar to erase Mr. Robert Riddell's name from the *Register*."

The case of James Mauchinny, supposed to be a registered person, convicted of theft at Stirling, was deferred for legal evidence of identity.

Restoration of a Name to the Register.—A memorial from Frederick Henry Morris, M.D., praying that his name might be restored to the *Medical Register*, was read. The name of Dr. Morris had been erased in consequence of his conviction on an alleged charge of indecent assault, committed at Swindon, in 1871. The memorial was accompanied by numerous testimonials in his favour, from inhabitants of Swindon and the neighbourhood.

The Council resolved that the name of Frederick Henry Morris, M.D., should be restored to the *Register*.

Alleged Forgery of a Certificate by a Student.—Respecting the case of a medical student, alleged to have been guilty of forging a certificate of having passed his preliminary examination, the solicitor reported that a warrant for the apprehension of the accused person had been taken out, and was in the hands of the police, who had been unable to find him, as it appeared that he had gone to America.

Wednesday, April 2nd.

Medical Qualification of Women.—An elaborate report on this subject was presented, and, on the motion of Dr. ACLAND, seconded by Dr. MACROBIN, was ordered to be received and entered on the minutes.

Dr. ACLAND moved, and Dr. MACROBIN seconded—

"That the Committee on the Medical Qualification of Women be empowered—Firstly, to enter into communication with any public institution in which there is provision for the education and examination of women as—1, midwives; 2, dispensers; 3, superintendents of nurses and of medical institutions. Secondly, to consider and report if, and in what manner, a public register of persons qualified to act as midwives, dispensers, and superintendents of nurses and of medical institutions might be kept."

Dr. HUMPHRY moved as an amendment, and Dr. PYLE seconded—

"That the Committee be reappointed, and empowered to consider and report whether and in what manner a public register of persons obtaining the qualification of midwives might be kept."

After discussion, the amendment was lost; and the original motion was carried by a majority of 13 to 7.

The Executive Committee was appointed, to consist of Dr. Risdon Bennett, Dr. Acland, Dr. Sharpey, Dr. Quain, Dr. Andrew Wood, and Dr. Aquilla Smith.

A Report of Committee on the Professional Part of Medical Education was presented; but its consideration was deferred to the following day.

Thursday, April 3rd.

The Report of the Committee on Medical Education was brought forward; and, after discussion, the further consideration of the subject was postponed to next session.

Deputation to the Lord President of Council.—The President and several members of Council waited as a deputation on the Lord President in Council. On their return, Dr. Paget reported that the deputation had been informed by Lord Ripon (with whom were Mr. Bruce and other members of the Government) that the Government could not undertake to introduce a partial measure of the nature of a Bill to enable the various bodies to join in conjoint schemes; and that his lordship said that such a measure might be introduced by a private member, in which case the Government would consider what course it would adopt.

Visitation of Examinations.—A report on this subject was presented and discussed; and the debate on the subject was adjourned till Friday.

Two distinguished men have just died in Paris, viz., Gen. Soumain and the Marquis de Chasseloup-Laubat. Both the deaths were sudden, the former from disease of the heart, and the latter from apoplexy. M. Chasseloup-Laubat was a great *savant*, and member of several learned bodies of Europe. He had distinguished himself from early life, and held several important posts under the different Governments that have succeeded one another in France since 1828. He had rendered immense service to the French army and navy; and, at his death, he was a member of the National Assembly, and, it was only on Saturday last that he read before that body his report on the reorganisation of the army, which, with slight modifications had been unanimously adopted. On his return home from Versailles in the evening he continued to work as usual; at eleven he felt slightly indisposed, and at midnight he was dead, leaving behind him a young widow (an American lady) and two children, the Marquis himself having just completed his sixty-ninth year.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 5TH, 1873.

THE GENERAL MEDICAL COUNCIL.

WHEN Mr. Sims Reeves was recently advertised to sing a new song entitled "Nothing", an aggrieved member of the public wrote to say that there must be some error as to the novelty of the thing; for he had many times attended to hear Mr. Sims Reeves sing, and each time he had sung—nothing. The General Medical Council have commonly performed the same tune so often, that the medical public will not be surprised to find that this is the burden of their rather prolonged performance on this occasion. The great expectation of the present year was the probability of completing arrangements for setting the conjoint boards to work. We need not here recapitulate the history of a failure which is set forth in the Council debates, Dr. Storrar being the chief soloist. The general result, however, communicated to the Council late on Thursday afternoon, is that the Government, for very ample and sufficient reasons, decline to be responsible for a little patchwork Bill of the kind proposed. This result might easily have been foreseen, the moment it became necessary to make the conjoint examinations a matter of imperial legislation. As a family arrangement, the formation of conjoint examining boards had much to recommend it. But it is no settlement of the question of medical reform; and it was preposterous to ask the Government to establish what would have amounted to a huge corporate monopoly, without giving any guarantees that the conditions of admission would be such as ultimately to meet the wants of the nation and the profession. The Council seemed to derive some comfort from the observation of the Lord President, that they might introduce an enabling Bill through a private member; and that, when he saw the clauses of the Bill and the general position of medical legislation, he would consider how far the Government could support it. But, as it is perfectly well known that the Government will not allow a Bill to pass which would take control from their hands in so important a matter; and as it is certain that the profession would not agree to any meddling and muddling of so petty a character as a substitute for medical reform, the general prospects of the Bill are quite desperate, and the modicum of hope which remains in the breasts of some of the Council may be considered as illusory.

We cannot regard this expensive result of nothing as altogether valueless. It shows at least more than ever the desirability of a general measure of reform, and it clears the way for it. What the Council ask for is hopeless; but that is the less important, as in view of a larger measure it is unnecessary. On this head, we shall be prepared to make a public statement hereafter. It is only necessary now to say that Mr. Headlam, acting on behalf of the Reform Committee of our Association, and after communication in the proper quarters, has given notice of the reintroduction of the Association Bill. It may be hoped that the senseless measure introduced on a former occasion by some adventurous spirit, with the effect of stopping all progress, will not be drawn lumbering out of the limbo to which it was consigned by common consent, in order again to obstruct the path of reform.

The rest of the business of the Council included the tedious and

fearfully costly process of striking a practitioner off the *Register*, and the passage of abstract resolutions in favour of State Medicine degrees, and the education and registration of midwives, dispensers, and nurses. It is not worth while to discuss these at present, as we shall have presently to return to them in a more practical form. A new edition of the *Pharmacopœia* will be issued, as we have already stated, with an appendix, for which important national object fifty pounds were voted; the expenditure of the Council being, according to a well established rule, in an inverse ratio to the importance of the objects of it. The treasurers were able to present a rather favourable budget, as the Council meetings of last year were less prolonged, and, therefore, less expensive. *Per contra*, the budget of next year seems likely to show something very like a deficit. The Council have sat so long over the egg which Lord Ripon has added, that they will barely be able to make both ends meet. The result of this year's meeting will not, we fear, increase the confidence of the profession in the Council as at present constituted, or their satisfaction with its proceedings. It is one of the most expensive and least productive meetings which has yet been held, and that is saying a great deal.

PROFIT AND WILFUL NEGLIGENCE.

IT seems important that medical men should have their attention called to a case which was recently tried at the York Assizes, and which has an immediate bearing upon the law of lunacy. The Commissioners in Lunacy have power to prosecute any person for an offence against the provisions of the Acts under which they exist; and one of these provisions is, that no person—unless he receives no profit from the charge—shall receive into any house, other than a registered hospital or asylum, or licensed house, or take the care or charge of any one patient as a lunatic or alleged lunatic, without the like order and certificates as are necessary for the legal reception of a patient into a properly constituted asylum. This restriction is of vital moment, not only to the liberty of the subject, but to the humane care and treatment of those who are afflicted by mental disease. It forms, in fact, one of the most valuable of those safeguards with which the legislature has fenced about those who suffer from infirmity of mind; and, together with another provision, which imposes a penalty upon any one who shall wilfully ill-treat, abuse, or neglect a lunatic entrusted to his or her care, confers a salutary power of supervision and restraint over those who are the custodians of a helpless and dependent class. Considering the practical utility of the restriction referred to, it is not to be wondered at that the Commissioners have been zealous in enforcing it, and in giving it publicity. Wisely lenient in cases in which transgression has arisen out of ignorance, they have been sternly just when it has sprung out of conscious evasion and cupidity, or where it has been aggravated by cruelty or neglect. Accepting an apology where a lunatic has been received for profit into a household through an imperfect knowledge of the law, they have unhesitatingly entered upon a prosecution where no such excuse could be urged, or where harshness and deprivations have been added to illegal reception. It was under the latter circumstance that they placed on his trial, at the late Assizes at York, John Vollans, who was accused of having illegally received and detained his sister, Elizabeth Vollans, as a lunatic boarder in his house, and of having wilfully ill-treated and neglected her. At the trial of this man, several questions as to the meaning and interpretation of the law arose, and were decided in a manner so much at variance with previous decisions and common sense, that a further consideration of them is imperatively requisite. Medical men who are constantly consulted as to the manner in which cases of insanity are to be disposed of, have a right to demand a clear and definite explanation of the law. They are often taunted by lawyers because they differ amongst themselves in their judgments upon the infinitely abstruse and complex problems, which are frequently presented to them in their professional work.

Surely they are entitled to demand of lawyers that a fixed meaning should be attached to a few simple words.

The first question which arose at the trial of Vollans had reference to the meaning of the word "profit," which the Lord Chief Justice of the Common Pleas, the presiding judge, found a very dark and puzzling term. He intimated to the counsel for the prosecution at the opening of the case, that a preliminary difficulty in connexion with this word had to be encountered. The reception of a lunatic to be illegal must be for profit; and seven shillings per week, the sum which the defendant received for the care and maintenance of his sister, could not, in the opinion of the Lord Chief Justice, be looked upon as a "profitable sum." His Lordship supposed a case in which a brother undertook the care of a lunatic sister, and received relief for that sister from the union to the amount of half-a-crown a week, and expressed a decided opinion that, under such circumstances, the brother could not be said to receive the sister for profit. But let us suppose another case, and many such actually exist, in which a labourer receives into his cottage as a boarder a lunatic or imbecile in no way related to him, or any member of his family, for a like sum of half-a-crown a week. What, in that case, is the inducement to the reception of the lunatic? No family ties exist. Is it philanthropy or profit? Clearly the latter. The labourer knows more of the value of half-a-crown than the Lord Chief Justice of the Common Pleas, and is also more keenly alive to the value of the work done by lunatics, and to collateral advantages derived from them. To the non-legal mind it would seem reasonable to infer profit in every case in which any payment in cash or kind is derived from the reception of a lunatic, or in which any advantage or privilege is thus obtained. This view is in harmony with the opinion of the Law Officers of the Crown, expressed on the motion of the Commissioners in Lunacy three years ago. In answer to the question, "Is the word profit to be read as synonymous with payment?" they said, "We are of opinion that payment is not absolutely synonymous with profit. Profit is the larger term, and may include other advantages besides pecuniary." But such refinements are altogether distasteful to the Lord Chief Justice, who developed other novel notions on the question of profit. He told the jury they must not measure profit by twopences or threepences, but must deal with it in a fair and liberal manner, and go to the consideration of it with common sense. Here is a piece of excellent ruling. "Profit is not to be gauged by twopences and threepences." If John Vollans had kept three hundred lunatics at seven shillings a week per head, and had made threepence a week on each, he would have had a clear income of about £200 a year, which, according to Lord Chief Justice Bovill, looked at fairly and liberally, could not be regarded as profit. But the evidence, looked at in the most liberal spirit, went to show that John Vollans derived a substantial profit, not measured by twopence or threepence, but by four or five shillings per week, from the sum paid for the maintenance of his unfortunate sister. She was housed in an attic, miserably clothed and accommodated, provided with scant bedding and cheap food, and only bounteously dealt with in the matter of vermin; three or four shillings a week must have covered every expense incurred on her account. The rate of maintenance in our public asylums, in which a costly apparatus of cure has to be supported, and in which everything that science or humanity can suggest for the benefit of the insane poor, is done without stint, averages about ten shillings a week; while in workhouses, pauper lunatics are kept in cleanliness and comfort, in a condition that must be called luxurious, when compared with that in which Elizabeth Vollans was found, for four or five shillings a week. The question of "how much profit" was never raised before, and endless complexities and evasions must occur if the Lord Chief Justice's decision on that point is to be considered final and authoritative. Many previous decisions seem to be opposed to it. In several cases of prosecution under the Lunacy Acts, sums very little greater than that received by Vollans have passed as profit. Thus, in *Regina v. Carter*, the sum paid was twelve shillings a week, and the defendant was found guilty of a misdemean-

our and fined. So in *Regina v. North*, the sum paid was eleven shillings a week, and the defendant was convicted and sentenced to nine months' imprisonment.

We come next to the question of wilful neglect; and here we find ourselves even more hopelessly at issue with the Lord Chief Justice than as regards profit. Dr. Crichton Browne, who had visited the lunatic by the directions of the Commissioners in Lunacy, described the state in which he found her. She was confined in an attic, approached by a ladder, and shut off from the rest of the house by two doors secured by iron bolts. In this attic she had been immured for twelve months, having only left it upon six or eight occasions, when she was permitted to take exercise in the kitchen-court for a period not exceeding ten minutes. For eight years she had been shut up in another attic, from which she had been removed because she stamped on the floor and annoyed Mr. Vollans' household. The smell of the attic in which she was pent up was extremely sickening and offensive. No article of furniture was contained in it except a kind of bedstead made of an old press and a door broken off its hinges, and on this was spread a sack of straw and two grimy fragments of blankets, the only bedding and covering which had been granted to this wretched woman during the whole of the previous winter. There was only one article of chamber crockery, a large brown earthenware basin, which was half filled with urine, which was used for the reception of all excretions and refuse, and in which Elizabeth Vollans had to perform her ablutions when fresh water was taken to her. The attic was lighted by two small skylights, so badly glazed that the rain trickled through one of them. There was no fireplace, and the only means of heating the attic was the kitchen flue, which passed up along one wall, and which, at the time of Dr. Browne's visit, was quite cold, although the kitchen fire was then lighted. Here in this miserable chamber Elizabeth Vollans was mewed up, having never during her nine years' incarceration been visited by a clergyman, a medical man, or any one but members of Mr. Vollans' family, and by them only as seldom as might be. Clad in dirty clothing—her chemise, which had once been white, was of a brown colour and smelt offensively—swarming with fleas (emigrants from the hens in the court outside), speckled with flea-bites so numerous that Dr. Browne counted thirty on a square inch of skin, with matted hair harbouring lice, this afflicted woman lived in dreary solitude, unprovided with occupation, or even with a book. And yet she was harmless and tractable, and only laboured under partial dementia, which had originated in some long-forgotten love-tale.

Now, if all this does not amount to wilful neglect, we are at a loss to know in what wilful neglect consists. The Lord Chief Justice, in charging the jury, expatiated on the barbarous treatment which the insane experienced in former days. But in what did the treatment which Elizabeth Vollans experienced differ from that except in the absence of bonds and stripes? And perhaps even these exemptions were not merciful. The utter helplessness of mechanical restraint might have encouraged resignation, and an occasional beating might have been a pleasing variety. Charles Lamb tells us that to the runaway boys who were imprisoned in the cells at Christ's Hospital, the beadle who came twice a week to conduct them to their periodical chastisements was a welcome guest; and we can readily believe that to Elizabeth Vollans, in her eternal garret, the arrival of her brother, although upon a correctional visit, and armed with a whip or bludgeon, would have been an interesting and exciting event. Conceive the life of this forlorn creature, buried in squalor and filthiness, breathing an atmosphere which a police officer compared to that in a wild animal's den, with nothing to look at but four bare walls—for the skylights, by a refinement of cruelty, were made of thick glass, so that even the clouds drifting above could not be seen—with nothing to read, nothing to do, shivering in winter beneath two small thin blankets that could not cover her spent and flaccid limbs, broiling in summer beneath the hot tiles, in darkness from sunset to sunrise, with no means of washing, denied the utensils of common decency, in feeble health, and with a care-laden mind, dragging on a desolate, degraded, and hopeless existence.

And then conceive an astute Yorkshire jury, under the guidance of a Lord Chief Justice, find that the man who subjected her to all this, and who received seven shillings a week for taking care of her, did not keep her for profit, and did not treat her with wilful neglect. After that, wilful neglect in the case of a lunatic is a practical impossibility, and their tender-hearted guardians may do their worst. It was all very well for the Lord Chief Justice to take isolated circumstances in her condition; omitting all notice of some of the most objectionable, and to point out that after all there might be no great hardship in sleeping on a door; that travellers were often compelled to occupy dirty quarters; and that the attic (*mirabile dictu*) was perhaps as well ventilated as the York court-house. It was not in any one isolated circumstance, but in the combination of all, and in their continuance, that the wilful neglect consisted. We cannot help feeling astonished that a judge, so susceptible as to have required frequent intervals of repose in a late celebrated trial, should have failed to be nauseated by the description of Elizabeth Vollans' attic. To our less sensitive perception it appears to have been the very chosen home of wilful neglect.

We regard the decision in this case as unfortunate in every way, and as likely to lead to disastrous consequences. We trust, however, that the Commissioners in Lunacy will not feel discouraged by it, but will persevere in their efforts to protect the insane and mitigate the asperities of their lot. The labours of their noble and philanthropic chairman will have been given in vain, if lunatics may still with impunity be treated as Elizabeth Vollans was before her removal from her brother's house.

MR. BOND is a candidate for the vacant assistant-surgeoncy at the Westminster Hospital.

AT the Convalescent Hospital, Eastbourne, an outbreak of pyæmia and hospital gangrene has occurred.

THE directors of the Bank of England have voted £1000 in aid of the London Hospital Extension Fund.

A CONCERT in aid of the Building Fund of the Hospital for Sick Children was given at the Beethoven Rooms on the 24th ultimo.

THERE has been a good deal of erysipelas in St. Mary's Hospital during the last few weeks, and most of the operations have accordingly been postponed.

THE Earl of Derby will preside at the annual festival in aid of the funds of University College Hospital, to be held at Willis's Rooms on Wednesday, April 30th.

AT a public meeting held on the 26th ultimo, £1000 was subscribed for the purpose of erecting the required accommodation for out-patients at the North-Eastern Hospital for Children. The total sum required is £3000.

UNLAWFUL DISPOSAL OF INFANTS.

THE Home Secretary has, we understand, directed a special inquiry into the circumstances connected with the late discovery at Bethnal Green of an attempt to bury the bodies of four infants in the coffin of an adult. Such outrages are, it must be feared, not uncommon, although they only occasionally come to light, owing to the absence of any power enabling the authorities at cemeteries to open coffins which they suspect to contain more than one body. Mr. Stansfeld promised the deputation of the Parliamentary Bills Committee of the British Medical Association, which waited on him on Saturday last, that he would attempt to devise clauses for the Registration of Births and Deaths Bill which would carry out a suggestion of Mr. Ernest Hart, and would check the facilities now enjoyed by sextons and undertakers for disposing of bodies of infants without certificate or formality on the uncertified and unregistered allegation that they were still-born. Such clauses would be very useful, and they will be looked for with interest. No complete check will however be given to these practices by any other measure than one requiring the registration, for the pur-

poses of burial, of all infants viable at birth, whether born alive or dead. The Coroner for Central Middlesex, Dr. Lankester, writes to us: "A few months ago, I held an inquest on three or four children found in the roof of a house. One was twelve months old, and another was four months old. These were children taken to an undertaker to be buried as still-born. He received the fees, and, instead of burying them, had stowed them away. There was a long inquiry, but no notice was taken of it by the press." The test of viability adopted in the clause presented to Mr. Stansfeld by the joint deputation of the Obstetrical Society of London and the Parliamentary Committee of the British Medical Association was an arbitrary one, but one which has received the assent of practical authorities generally; and the adoption of such a clause would prevent a good deal of crime, carelessness, neglect, and outrage of propriety, by the careless disposal of infant bodies which now goes on.

M. OLOZAGA.

OUR Paris correspondent writes to us as follows:—A very sad accident has just happened to M. Olozaga, the much esteemed Spanish Ambassador at Paris, which, it was feared, would involve the loss of his right eye, which was struck with the cue of his adversary at a game of billiards. The blow was so violent as to rupture the eye, causing great hæmorrhage and inflammation, which latter has assumed an erysipelatous character, and the patient himself is in great pain. I am happy to learn to-day, however, that the Spanish Ambassador is much better, and that hopes are entertained of saving the injured eye.

OPHTHALMIA IN SCHOOLS.

"A WORKER among the poor" writes quaintly, but truly, that the whole question is "wrapped up in separate towels." The children are well enough fed, and get good medical attendance. The schools are large, and rather over-ventilated. Epidemic ophthalmia is a reproach to any public institution, because it indicates a want of care on the part of the officials, and if the managers were changed instead of getting fresh, costly reports and making expensive additions to the infirmaries, these epidemics would cease. Cleanliness and segregation are the mortal enemies of epidemic as of endemic ophthalmia.

MEDICAL LEGISLATION.

THE President of the General Medical Council, with Dr. Acland (University of Oxford), Dr. Apjohn (University of Dublin), Dr. Storrar (University of London), and Mr. Bradford (Apothecaries' Society), had an interview on Thursday with the Lord President of the Privy Council and the Home Secretary, upon the subject of an enabling bill, to allow the University of London and the Apothecaries' Society and other bodies to take part in forming conjoint examining boards for medical diplomas in the three kingdoms. The Lord President declined, on the part of the Government, to introduce such a measure, and mentioned that a bill of larger character was contemplated. Such a bill as that proposed, he said might properly be introduced by a private member.

THE HOSPITAL SUNDAY MOVEMENT.

ON Tuesday afternoon a meeting of the Council of the Metropolitan Hospital Sunday Fund was held at the Mansion House, under the presidency of the Lord Mayor. There were present, among others, Archbishop Manning, Mr. W. H. Smith, M.P., Sir Anthony de Rothschild, Bishop Claughton, the Archimandrite Morphinos, Miss Stanley, Mrs. Garrett-Anderson, the Rev. Canon Oakley, Mr. R. Biddulph Martin, and the Rev. Dr. Finch. The Subcommittee reported that copies of documents relative to the movement, and suggestions for keeping the forthcoming "Hospital Sunday," on June 13th, had been sent to 2,628 ministers of all denominations in the metropolis, and replies approving of the scheme had been received from a large number of their clergy, there being only nine positive refusals. The result of the conference between the Subcommittee and the Rural Deans of Stepney and Fulham was reported to have been satisfactory. The Rev.

T. J. Rowsell stated that it had been arranged that whenever the laws of an hospital allowed of a grant of a certain number of admission tickets in proportion to the amount contributed, that grant would be made to the Committee of Distribution, who would distribute them among the clergy of the district. The report of the Subcommittee was formally carried. The names of Lord Mahon, M.P., Mr. W. H. Smith, M.P., and Mr. Jervoise Smith, banker, were added to the Committee of Distribution. The Rev. T. J. Rowsell moved, and Bishop Claughton seconded, a resolution to the effect that all the hospitals and dispensaries within the metropolitan area, selected by the Committee of Distribution, should be requested to send to the Committee, after the grant had been made, a certain number of tickets, in proportion to the amount voted. The Rev. Canon Nisbet moved that all hospitals and dispensaries within the area of collection, and fulfilling the conditions now or hereafter to be laid down by the Council, be admitted to participate in the distribution of the fund. Both resolutions were carried, and the meeting adjourned.

PUBLIC HEALTH LECTURES AT ST. THOMAS'S HOSPITAL
MR. ALFRED HAVILAND'S usual course of lectures at St. Thomas's Hospital, on the Geographical Distribution of Disease, will be delivered at the Medical School during the approaching summer session. Due notice of the course will be given.

ST. MARYLEBONE GENERAL DISPENSARY.
AT a meeting of the Board of Directors of this institution, held April 2nd, 1873, at 77, Welbeck Street, after a full discussion it was resolved, "That the directors be invited at the next monthly meeting to adduce further evidence regarding the working of the provident system, and to finally decide on the desirability of converting the St. Marylebone Dispensary into a provident institution." This dispensary is the oldest but one in London, having been instituted in 1783.

THE PUBLIC HEALTH ACT.
A SPECIAL general meeting of the Poor-law Medical Officers' Association, Dr. Lush, M.P., in the Chair, has been arranged for Monday, the 7th April, to take into consideration how far the present operation of the Sanitary Act, 1872, is in accordance with the interests and future prospects of the Poor-law Medical Service, and of advantage to the public, and how far it realises the expectations held out by the Bill in such respects.

PROVIDENT DISPENSARIES.
AT the last annual meeting of the subscribers to the Hull and Sculcoates Dispensary, the plan of turning the Dispensary into a Provident Dispensary was discussed. It was objected that provident dispensaries were open to abuse by being used by people in receipt of very good wages, and who could well afford to pay for medical attendance. The following resolution was, however, put and unanimously carried—"That it be an instruction to the committee to consider whether this institution cannot in some measure be made a provident institution."

A CHILD KILLED BY COUGH-MEDICINE.
IN charging the grand jury at the opening of the Liverpool Assizes, Mr. Justice Archibald dwelt at considerable length upon the charge against a woman named M'Grath of having caused the death of her infant child by negligently administering an overdose of cough-medicine, obtained from a local chemist. She obtained a two-ounce bottle, and, according to directions, administered the medicine three times a day, but on one occasion she gave the child the remaining contents—about an ounce and a half—and it died. The chemist had given evidence that the bottle did not contain more than eight drops of laudanum, and that if the whole had been taken at once, they would not be sufficient to cause death; but an analysis had shown that there was really so much laudanum that one-half of the quantity would have sufficed to cause death, and that the vinegar with which the draught was compounded was largely adulterated with hydrochloric acid. Now, if the

chemist were ignorant that the vinegar, which he stated he had bought from a wholesale dealer, was adulterated, or that there was a larger quantity of laudanum than he supposed, the woman could hardly be expected to have a greater knowledge, and therefore it was difficult to say how reckless negligence could be made out against her. The jury must examine the evidence. It was plain, however, that somebody was exceedingly culpable in adulterating the vinegar, and some steps should be taken in the matter.

MR. TYNDALL'S TOUR IN AMERICA.

PROFESSOR JOHN TYNDALL, during his recent scientific lecturing tour in the United States, delivered in all thirty-five lectures, at which his receipts aggregated 23,100 dollars. After paying expenses, a fund of over 13,000 dollars remained; and this, before leaving for Europe, the Professor placed in the hands of a committee, who are authorised "to expend the interest in aid of students who devote themselves to original research." The committee are Professor Joseph Henry, of the Smithsonian Institute; Professor E. L. Youmans, of Yale College; and General Hector Tyndale, of Philadelphia. The generous gift of Professor Tyndall and its object are warmly approved by the American press.

MEDICAL FEES.

A MEETING of the Executive Council of the Northumberland and Durham Medical Association was held in Newcastle on Tuesday, March 25th. It was resolved that the following resolution be published, viz., that "On and after Friday, April 11th, 1873, the fees for necessary professional attendance and medicines to club patients shall be ninepence per fortnight for married men or householders, and sixpence per fortnight for single men above the age of eighteen years." This resolution was agreed to in consequence of the increased expense of everything, and in order that the medical profession may participate in the general prosperity of the country.

SCHOOL EXAMINATIONS.

THE following extract from the *Guy's Hospital Gazette* describes a mode of proceeding which is very desirable in the interests of students and teachers, in view of the recent adoption, by the Council of the Royal College of Surgeons, of our suggestion that the pass and pluck lists of each school should be annually prepared. Something of the sort is adopted at most schools; those which do not carry it out strictly will not do themselves justice at the approaching examination.

"All the gentlemen who intend presenting themselves at the coming primary professional examination at the College of Surgeons have been subjected to a rigorous testing in the shape of a written and *viva voce* examination. We understand that the results of these examinations have been so far very satisfactory, and that, though there are some gentlemen who will be advised to wait till May or July, and some few whose schedules will be retained for the present, yet the majority of candidates have given such good proofs of knowledge, that we may fairly hope to see a very good pass list for Guy's Hospital at the coming examination."

THE ADULTERATION OF FOOD.

THE Adulteration of Food and Drink and Drugs Act, 1872, came into operation on Monday; and, in accordance with the Act, a public analyst has been appointed in every district, for the purpose of enforcing Section 5 of the Act. Among other provisions, the Act provides and declares that any person who shall adulterate, or who shall order the adulteration of, any article of food, drink, or drugs for sale, shall, on conviction, forfeit and pay for the first offence a penalty not exceeding £50, together with the costs of such conviction; and for the second offence he shall be guilty of misdemeanour, and be imprisoned for a period not exceeding six calendar months, with hard labour. It is declared, further, that any person who shall sell any article of food, drink, or drugs, knowing the same to have been adulterated, shall, on conviction for such offence, forfeit and pay a penalty not exceeding £20, together with the costs attending such conviction; and, if he afterwards commit the like offence, his name and address shall be pub-

lished at his own expense in such newspaper as the justices or magistrates may deem desirable. It is likewise declared that any person who shall sell any article, knowing the same to have been mixed with any ingredient so as to fraudulently increase its weight or bulk, and shall not declare such mixture at the time of selling, shall be deemed to have sold an adulterated article. The inspectors will, under the directions of Boards of Works and the public analyst, purchase within each district, and submit for analysis, articles of food, drink, or drugs, suspected to be adulterated. To prevent articles from being submitted to the analyst for the purpose of obtaining his certificate for trade purposes or for advertisement, arrangements have been made by which the article submitted for analysis will be known to the analyst by its rotation number only; and, in giving his certificate, that number only will be used. In directing proceedings to be taken in any case, the Board will only be in possession of the number, and not the name, of the tradesman. The inspectors will, in most districts, be in attendance daily (Sundays, Christmas Day, and Good Friday excepted) at a place appointed in the district, for the purpose of receiving from purchasers any article of food, drink, or drug they may wish to be analysed. Any person thus presenting articles will be required to fill up a form declaring that the article is in the same condition as when purchased, and shall designate the name under which the article was sold. The person bringing the article must also give his full address. The analyst shall give to the inspector of the district in which the article was purchased, a certificate, duly signed, of the result of his analysis, and in the absence of any evidence before a court, such certificate shall be accepted as sufficient evidence of the matters therein certified. The cost of analysis and certificate to be included in the costs.

NEW FIVES COURT AT GUY'S HOSPITAL.

A NEW fives court has been opened at Guy's Hospital, thanks to the liberality of the treasurer and governors, for the use of the students. The value of such a means of healthy physical recreation will undoubtedly be very great to the students and resident officers, whose duties confine them during many hours in an atmosphere which can never be wholly pure. All students will have the use of it till three o'clock in the afternoon, after which it is reserved for the use of the residents.

INHUMANITY.

MR. HUMPHREYS lately held an inquest in Mile End New Town respecting the death of Elizabeth Jackson, aged 18, a domestic servant. Her mistress, learning that she was feverish, told her she had better go, as she did not want anybody in such a state there. The deceased then went to a Mrs. Foley, who, however, finding she was feverish, also turned her away. The deceased was provided with a bed by a Mrs. Henley, but was taken out and placed on the stones when it transpired that she had a fever. A police constable, finding her insensible on the stones, had her removed to the hospital, where she died from inflammation of the brain. The coroner said that he had never had a worse case of inhumanity before him. The women might have taken the deceased to the infirmary instead of turning her into the streets. The jury returned a verdict in accordance with the medical evidence.

THE LATE DR. ORMEROD.

THE medical profession and several influential residents of Brighton have resolved upon a memorial to the late Dr. E. L. Ormerod, for many years consulting physician to the Sussex County Hospital, which charity greatly benefited by his exertions and liberality. The memorial is to take that form which would, it is believed, have been most acceptable to his feelings. It is proposed to raise by subscriptions a fund, to be called the "Ormerod Exhibition Fund," the interest of which shall be bestowed, at the discretion of the medical officers for the time being of the Sussex County Hospital, upon the student or students of the hospital about to complete their professional education in London or elsewhere, who, by character and attainments, shall be thought most deserving. A considerable sum has been subscribed before publication.

THE TUBERCLE DEBATE AT THE PATHOLOGICAL SOCIETY.

THE interest felt in the debate at the Pathological Society was evidenced by the presence of a crowded and attentive audience at the adjourned meeting on Tuesday. The limitation of the speakers to ten minutes was judiciously withdrawn by the President when desired. Several of those gentlemen who joined in the discussion were thus enabled to present their views at some length and in an intelligible form. To have dwarfed a discussion on so important a subject would have been a pity, and we think the Council have done wisely in modifying the restrictions which they were at first inclined to impose on the debate. Only a few of the intending speakers were enabled to join in the discussion during the evening. The debate was accordingly adjourned until the next ordinary meeting, when Dr. Green, Dr. Crisp, Dr. Kelly, Dr. Pollock, and Dr. C. J. B. Williams are expected to speak, and Dr. Fox will reply. The President intimated that the discussion would be continued at the next meeting of the Society until the debate was concluded. It seems doubtful if this can be accomplished at one sitting.

THE LATE MR. W. HARVEY OF ISLINGTON.

THE following resolution has been unanimously adopted by a recent meeting of the Islington Board of Guardians. "That this board have received with deep concern the intelligence of the decease of their late esteemed and respected chairman, William Harvey, Esq., who devoted a large portion of his life, with much advantage, to the service of this parish. The board desire to convey to the members of the family their deep condolence at the irreparable bereavement which they and the parish have sustained, but they feel assured that the universal sympathy which will be manifested will, to some extent, mitigate their great affliction." The Islington Vestry have passed the following resolution. "That this vestry desire to record their deep regret at the loss sustained by the parish and the vestry in consequence of the decease of Mr. Wm. Harvey, the late Chairman of the Sanitary Committee, and to express their admiration and gratitude for the devoted and able assistance given by the deceased for many years to the public affairs of the parish, and to the religious and moral institutions of Islington."

THE HABITUAL DRUNKARDS' BILL.

LAST Monday evening a discussion was held at the rooms of the Social Science Association, Adam Street, Adelphi, on the Habitual Drunkards' Bill. Dr. Acland of Oxford took the Chair; and among those present were Sir J. Eardley-Wilmot, Mr. Clare Read, M.P., Drs. Shrimpton, Carpenter, and Wane, and Messrs. Rawlinson, Hill, and Mozley. The discussion was opened by Mr. A. Safford, who said that the Habitual Drunkards' Bill was fraught with much that was good as well as evil to the community. Its promoter, Mr. Dalrymple, deeply impressed with the evil of drunkenness, had brought forward this measure, and had been successful in getting a Commission of Inquiry granted by the House of Commons. Mr. Safford then reviewed the main features of the Bill, and commented upon the various provisions to which objection had been urged, and invited the meeting to fully discuss its merits and demerits. Mr. Mozley thought that with the objects of the Bill all must express sympathy, but the question was, how far it interfered with the liberty of the subject. The danger of abuse was great, especially where it was proposed to appoint a guardian to administer the estate of an habitual drunkard. Mr. Hill said that the originators of the Bill might be guided by the best intentions, but he should regret if, in its present form, it should be added to the statute-book. The evil of drunkenness, great as it was, was not without a remedy other than was provided by the measure. Sir J. Eardley-Wilmot was of opinion that by improving the social condition of the working-classes their moral condition might be improved. Out of two hundred millions of money earned by them, seventy-five millions were annually consumed in spirituous liquors. Mr. Freeman regarded the Bill as one of oppressive legislation, but thought the subject one difficult to deal with. Mr. Clare Read, M.P.,

one of the promoters of the Bill, believed that the measure provided ample security for what was called the liberty of the subject. The liberty to get drunk was a liberty which this country should restrain. It had been asserted that drunkenness was no crime, but a man who was constantly drunk committed a crime against himself and against society. The Bill, though it might have a number of faults, was, he believed, a step in the right direction, and one which was almost imperative. He did not entirely agree with all its provisions, but he greatly approved the principles of the Bill; and if it did nothing more, it would draw public attention to a growing and increasing evil in this country. Dr. Wane said that drunkenness helped largely to fill our prisons, hospitals, lunatic asylums, and workhouses; and it was now time that the matter should be effectually dealt with. Mr. Safford having replied, the meeting terminated in the usual manner.

THE SUPPOSED DANGERS OF SEWAGE-FARMS.

DR. ALFRED CARPENTER has replied to a question raised by the Croydon Microscopical Club, as to the possible effect of the ova of entozoa upon human beings through the operation of sewage-farms. He states that the subject is one which has engaged a good deal of his attention ever since sewage-farms were established, and he had given the matter his serious consideration. He has had occasion to express the opinion, that although the dangers feared might arise, they did not. It was found, by reference to the books of the Poor-Law Medical Officers, by inquiries of his own medical friends, and by his own experience, that cases of *tenia solium* were all but unknown among the inhabitants of Croydon. When cases did occur, it was generally (not invariably, of course), among those who had lived some time in India, in some part of the centre of Europe, or in Africa, showing conclusively that the ova developing the disease had been planted in the human frame in other countries. People who made the charges against sewage farms did not know anything about the management of them, and described them in a manner contrary to fact. They supposed that the ova of entozoa would be carried on to the land, applied to the crops, and then consumed as ova by the cattle upon the farm. This idea showed at once their want of knowledge as to what sewage-farming meant. No such contamination could occur, except by accident, such as might happen in anybody's kitchen, where meat which might find its way into the cook's hands with *trichina spiralis*, or other parasites in it, was not properly cooked or was eaten raw. If people cooked their meat properly, no evil could result; and if sewage-farms were properly managed, no danger from entozoa could arise. Of course, the possibility of such an accident was to be guarded against, but it was not sound argument against a sewage-farm. With reference to another point—the destination of the millions of ova of entozoa which undoubtedly do find their way to the irrigation-farm at Beddington—Dr. Carpenter states that he often searched for them years ago, at the out-fall, but never found them. He thought that a good work might be done in solving the question of development by following out a point which he had not hitherto found time to do. He had an idea that the ova of entozoa, placed in other channels, in other conditions as to moisture and temperature, might develop into some other form than that of parasites. He had not found the ova of entozoa; but in every running stream exposed to the air he had never failed to find the blood-red worm, the “naiad”, waving its body about. It was contrary to received opinion that such a development should occur; but whence the “naiad”, and where were the parasitic ova of the entozoa? With reference to this latter question, Mr. H. Lee, the well-known naturalist, has offered to place at the disposal of Dr. Carpenter an apparatus which he has at Brighton, and which can be submitted to the action of a running stream as long as may be necessary. The solution of the problem is important, as tending to prove the fallacy or otherwise of one of the supposed dangers of sewage-farming.

SCOTLAND.

DR. RICHARDSON did not stand, as was anticipated, for re-election as Assessor to the University of St. Andrew's. Mr. Patrick Anderson of Dundee was accordingly elected without opposition.

THE PROPOSED SCHOOL OF MEDICINE FOR DUNDEE.

AT the meeting of the University Council of St. Andrew's University held on the 27th instant, the Committee appointed at last meeting to consider by what means the University of St. Andrew's and town of Dundee might be brought into closer educational relations, reported on the progress made in considering the three proposals before the late meeting of General Council—(1) The foundation of a lectureship in Dundee to be held by some eminent graduate of St. Andrew's; (2) the institution of a medical school in Dundee in connection with the medical faculty in St. Andrew's University; (3) the foundation of a college for science, literature, and philosophy, to be affiliated to the University of St. Andrew's somewhat on the principle of the College of Science in Newcastle, lately founded by the joint action of the University of Durham and of the citizens of Newcastle. Of these three schemes, the last named was the one which seemed to be most approved of by those interested in Dundee. The directors of the Albert Institute had the proposal of founding a College of Science, Literature, and Philosophy under their serious consideration; they were very favourably disposed towards the object in view, and they would soon be ready with a report embodying their views and intentions with regard to the whole subject. When that report should be prepared and approved, the directors of the Institute would be ready to open communications with the University of St. Andrew's with a view to practical action. It appeared that there existed a very general desire on the part of the leading citizens of Dundee to have a college founded for the teaching of science, literature, and philosophy in connection with the University of St. Andrew's, and that certain gentlemen of Dundee, who had taken much interest in the subject, were busy preparing a scheme of the constitution of such a college. On hearing these statements, the Committee agreed to report to the General Council that, in their opinion, the scheme of an affiliated college being that which was viewed with greatest favour in Dundee, should be the one to which the Council should lend its support. After a good deal of discussion, in which the transference of the University of St. Andrew's wholly to Dundee was hinted at, the Committee was reappointed with the same instructions as formerly, or with instructions to prosecute the negotiations begun, and bring up a report to the next meeting of Council.

IRELAND.

THE Obstetrical Society of Berlin, at their anniversary meeting, held on February 13th, elected Dr. George H. Kidd, of Dublin, a Corresponding Member.

THE PURCHASE-SYSTEM IN HOSPITALS.

A DUBLIN correspondent writes to us: It is rumoured that the vacancy in Mercer's Hospital, Dublin, occasioned by the death of Dr. Eames, will not be filled up; but that the money, amounting to £1000, a sum which is always paid to the outgoing surgeon or physician, will be subscribed by the medical officers of that institution to refund the representatives of the deceased physician. Whether this rumour be correct or not we cannot state, but we believe it to be well founded, for the beds at the disposal of the physicians are so few, that one physician is well able to take charge of the patients admitted.

LITHOTOMY.

ON March 26th, Mr. Porter, of the Meath Hospital, performed the median or Allarton's operation on a man about fifty years of age, who had been previously cut by Mr. Macnamara and two calculi removed

about a year since. Mr. Porter would not use the lithotrite, as the patient's bladder was thickened and contracted. On using the forceps and attempting to remove the calculus, it came to pieces, being of a soft mortary consistence. The bladder was afterwards carefully washed out and the *débris* of the stone removed. The portions brought away by the forceps weighed 257 grains, and apparently were composed of phosphates. The writer of this saw the patient on the 31st ultimo, when he was doing remarkably well.

REGISTRATION OF STILL-BIRTHS.

DEPUTATION TO MR. STANSFELD, M.P.

ON Saturday last, a joint deputation from the Parliamentary Bills Committees of the British Medical Association and the Obstetrical Society of London waited upon the President of the Local Government Board at Gwydr House, to request that amendments should be introduced into the Registration of Births and Deaths Bill to make compulsory the registration of still-born children. Mr. Charley, M.P., introduced the deputation. Among those present were Dr. Tilt, Dr. W. Playfair, Dr. Aveling, Dr. Hall Davis, Dr. Lewis (Maesteg), Dr. A. P. Stewart, Mr. P. H. Holland, Mr. Ernest Hart, Mr. Rogers-Harrison, and Dr. G. P. Murray.

Mr. ERNEST HART, as Chairman of the Parliamentary Committee of the British Medical Association, addressed Mr. Stansfeld, and said the deputation had come before him to request that he would insert in the Registration of Births and Deaths Bill, now before Parliament, a provision to render compulsory the registration of still-births, and it would save time if Mr. Stansfeld would state at the outset how he regarded such a proposal.

Mr. STANSFELD said that he was opposed to such registration, if the deputation meant registration purely.

Mr. ERNEST HART said that the deputation desired to have registration of all viable children for the purpose of burial. They would therefore go into the question to show the necessity for it, and the facts they should present would perhaps have the effect of inducing him to alter his views. The subject had been before a great number of the highest authorities, and the opinion in favour of it was unanimous, and this on important public grounds, and not in the sense in which the President had just expressed himself. First among these authorities were the Royal Sanitary Commission, then Dr. Farr, Mr. Baker—both of whom held high official positions which brought them into view of the facts—and Dr. Druitt. The Royal Sanitary Commission said in its report of 1871: "The registration of still-born children, which at present is entirely neglected, might lead to useful knowledge in relation to the causes of death before birth; but it is much more to be desired as a means for diminishing infanticide and criminal abortion."

... The fact of death should be certified by a qualified medical practitioner, and the certificate of registration should be required at the burial of the body." The Commission also thought it desirable that undertakers should be required to keep a register of all bodies, including those of still-born children who died within two months of the natural time of birth, which they undertook to bury; and that the undertaker should be liable to the same penalty (£10) which attached to a clergyman who buried a body without a certificate and neglected to report the fact to the registrar within a certain time. This opinion was strengthened by a letter from the Registrar-General, who said: "Entertaining a strong opinion that infanticide is much more common in this country than has been generally supposed, I cannot shut my eyes to the fact that the perpetration of that crime is much fostered by the present unrestricted system of the burying by sextons of infants said to be still-born in corners of churchyards and cemeteries. Children killed during birth and after birth are doubtless buried as still-born. Many of those who lived a few hours, and are so buried, being thus consigned quietly to a grave in some cases because they are unbaptised, and the incumbent will not read the funeral service; in other cases, to escape the trouble of registering the birth and death, and save the expense of a more formal funeral ceremony."

Mr. STANSFELD remarked that the Registrar-General was opposed to the registration of still-births, but he was not opposed to legislation upon the question of the burials.

Mr. HART pointed out that the Registrar-General entertained a "strong opinion that infanticide is much more common in this country than is generally supposed"; and, moreover, Dr. W. Farr,

of the Registration Office, had strong opinions on the subject. But, after all, the question rested upon facts. When he spoke of a "still-born child", he gave under one definition what might mean many things. It might be a child of any uterine age born without life; and if it meant only a child so born, by nature, there would even then be great reason why births of that kind should not pass without registration. But it had been shown that what were called still-births included also a number of children who were born dead by reason of neglect, of carelessness, and of violence; and when an inquiry cognate to this was pursued before the Infant Life Committee of the House of Commons, it was shown that there existed a trade among midwives to take care that children should be born still—that they should be "still" before birth. That Committee came to the conclusion that two things were necessary before any effective stop could be put to this condition of things. One was, that the law should be made to require the registration of still-births, and that there should be a law passed requiring the registration of midwives. Cases were constantly occurring to show the necessity for supervision over the births of children of a viable age, and over midwives; such a case lately occurred at Bethnal Green, where five children were found in one coffin put away without certificates, and under pretext that they were still-born. An investigation, he believed, was still going on; but it was too well known that the statement was made in such cases that the child was still-born, and this had over and over again been proved to be a "pretext". A case had just been placed in his hand which had recently occurred at Plymouth, where one midwife appeared at a cemetery so constantly with the bodies of children for burial as still-born, that suspicion was excited, an inquest was held, and the child was proved to have lived some time. It could not be doubted, the writer stated, that a great deal of foul play was covered by the present system of registration. Boxes were taken to cemeteries and burial grounds with the flimsiest pretence of a certificate, or even without any at all, and the body was buried without any inquiry. It was useless to expect any diminution of the great indifference to infant life, so much deplored by coroners, judges, and others, until this defect was remedied. Every medical man to whom the Parliamentary Committee of the British Medical Association had written, concurred in the belief that numbers of children were buried as still-born who were not truly "still"-born. He held among these a letter from Dr. Rumsey of Cheltenham, which he would read (a copy of Dr. Rumsey's statement is appended). Mr. Hart said that Mr. Lowndes of Liverpool suggested that where a duly certified midwife or medical man was present nothing like an indelicate question could arise, because they could certify regarding the uterine age of the birth. The deputation proposed that no child of 2 lbs. weight and upwards, or twelve inches long or longer, should be buried without a certificate from a duly qualified medical man, showing that the child was still-born, or certifying to the cause of death. The proposed clause contained an artificial and arbitrary measure and weight, for it was necessary to mark a standard at which a child would be considered viable, and the best authorities agreed that this weight and measure would mark it. He read a letter from Dr. Playfair, expressing the opinion that twelve inches would be a good test whereby to test a six months' child, and from other medical authorities. Dr. Russell, the medical officer of health for Glasgow, had said there would be no difficulty in this matter, but desired to set the age at five months. Dr. Burke, who held in Ireland the like position to that which Dr. Farr held in England, said there would be great advantage in registration of still-births, although in Ireland there would be especial difficulties. Having brought before the Local Government Board these evidences of the unanimous opinions of those who had gone into the question, he would conclude with observing that the medical profession were thus unanimous, because this want of registration of still-births was seen to be the source of a greater amount of crime and mischief than could be imagined, and the great cause was the facility and ease with which still-born children were secretly disposed of.

Dr. TILT said that this question had been much before him for some years, and those with whom he was associated were unanimous in agreement with the views advocated by Mr. Hart. In other countries, registration of still-births was a matter of course.

Dr. WILLIAM PLAYFAIR said that the medical questions in the matter were important; but the scientific views were also of importance to the community. It would be a great gain to obstetricians, to be able to estimate the effect of abnormal number of accidental labours, of long labours, and of instrumental labours. It was an opinion gaining ground among obstetricians that a great many so-called still-births were preventable. Statistics showed that, of general deliveries, four per cent. were still-born; and Dr. Hamilton had shown that under proper medical care there could be seven hundred births without one

loss of life. Deaths in childbirth were owing to the ignorant women who practised among the poor, and at present there was no control over them; but a system of registration would give the results of such practice. The information would be most valuable, for comparisons could be made between country births and town births, between legitimate and illegitimate births; and it would then be possible to tell the number of deaths arising through syphilis, and also how many of the so-called still-born children were alive at the time of their birth. If the profession had the means they now asked of ascertaining scientific facts, they would be placed on a level with medical men of other countries. There could be no practical difficulties in carrying out this registration.

Dr. HALL DAVIS said that the percentage of fatality among the infants born in the Royal Maternity Charity was much smaller than given in the Registrar-General's Report as occurring to the general population. Much of the general infant mortality was no doubt due to the ignorance of the midwives who delivered the poor. Registration would prove how much of this infant mortality was thus caused.

Mr. STANSFELD, in reply, said that the Bill did not contain a still-born clause, for the reason that he was not at that moment satisfied that any such clause as that which had been proposed to him would be necessary to accomplish its purpose. The measure was for the registration of deaths and of living persons; and, though the question which the deputation had raised did not come within the purport of the Bill, it could, no doubt, be brought into it if it were thought proper. The object of the Bill was not to get together a body of statistics for the information and guidance of the profession, although that might be very useful. There were two different classes of objects in this proposed registration of still-births—the one the registration of children born dead, the other to ensure that children alleged to be still-born should not be buried without a certificate. In regard to the first matter, the Registrar-General had proposed a clause for the registration of every child born alive. That was where the Registrar-General differed from the medical profession. He (Mr. Stansfeld) considered that simply for the purpose, even if it could be accomplished, of having complete accuracy of birth-returns, it would be a very serious question whether the Government ought to propose such a thing; and he thought it would be very doubtful if Parliament would accept what the deputation proposed, for Parliament would not be likely to call for the registration of what was not in any real sense "a birth". With regard to the record of these so-called births with reference to weight and dimensions, he regarded questions which would arise in connection with the little objects which never breathed as objectionable. He was not prepared to undertake the responsibility of inserting such a clause; but it was open to any member or members of the House of Commons to propose it, and, so far as he himself was concerned, it should have perfect fairness. If the object were to prevent infanticide, he could not see how the proposed clause would work to that end. It was proposed to say in the Bill that "every birth" and "every death" should be registered; that certain persons should be responsible for such registration. Under this, if any child born alive and died were dealt with as still-born, the person responsible for the registration would incur two penalties, and there would be also a penalty upon the person who buried as still-born a child born alive. One suggestion made by Mr. Ernest Hart struck him (Mr. Stansfeld) as practical and highly necessary—that, besides dealing with the person registering, the undertaker and sexton should also be dealt with. He agreed that both the sexton and undertaker should by some means be made in part responsible, and that means should be taken to prevent the shifting of the body of a child into the coffin of an adult. There was a clear facility for the concealment of crime in such cases, and means must be devised to prevent these occurrences. But the deputation wanted a certificate before the body could be buried. He, however, could not see how any addition could be made to the penalty for what was the capital offence. Moreover, if it were pointed out how a still-born child could be buried, the very proceedings they desired to prevent would be facilitated. The persons who wanted to commit the crime of infanticide were persons who knew how to avail themselves of every point, and would not be likely to be caught in the very wide meshes of a clause of this character. Besides, a registrar could not be expected to sit in judgment on each case which came before him, as to whether it was or was not a still-born child that he was asked to register.

Mr. HART said there was the fact, that particular persons would be applying for the registration of a number of these births, and this would attract attention.

Mr. STANSFELD held that the people who wanted to register would find out a means of doing so without attracting attention, and no clause he had ever seen would facilitate the discovery of these persons.

Mr. HART said the registration would afford a key to what was going on by showing that particular women were constantly registering still-births.

Mr. STANSFELD looked upon the suggestion that there should be a registration of midwives as a most important improvement. This matter, however, did not form part of a Registration Bill. With regard to the proposition before him, he could not see that any clause of the character submitted to him could accomplish the serious purpose the deputation had in view. Its proposal would arouse very strong objections, if it were not shown to be necessary for the purpose of preventing crime. For any less purpose, it would not be worthy of being proposed to the Parliament.

The deputation, after thanking Mr. Stansfeld, then retired.

The following is Dr. Rumsey's statement, referred to by Mr. Hart.

I. Evils to be Remedied.—The non-registration of still-births leads to the following abuses and evils. *a.* It favours the concealment of crime. Many children born alive perish by neglect or mismanagement, if not by destructive interference, soon after birth; and are buried, if at all, as still-born, thus escaping both registration and inspection. *b.* It encourages immorality, owing to the facility with which the corpses of infants, reported as still-born, are now disposed of. *c.* It checks inquiry and vitiates conclusions as to the prevalence of hereditary and congenital disease. Many still-births are due to syphilis, derived from one or both of the parents, and probably many are also due to other constitutional or hereditary diseases. These events, with their causes, being never registered, the amount of fatality from such diseases cannot be ascertained. *d.* It encourages, indirectly, the practice of ignorant and destructive midwifery—there being no authorised machinery for determining whether a child destroyed in the birth ought to have lived. *e.* It causes, as has been frequently shown, an incorrect registration both of births and of deaths; and, therefore, renders fallacious, to an unknown extent, the vital statistics of the nation.

II. Objects of the Measure.—The registration of still-births, if properly organised, would afford a means of detecting, and therefore of preventing infanticide. It would often determine the causes of abortion, and of foetal disease and atrophy. It would tend to check the employment of uninstructed and unprincipled midwives, and to prevent attempts to procure abortion.

III. Principles and Methods of Registration.—The register of still-births should be distinct from both that of deaths and that of births, because the subject of a true still-birth has never lived separately from the mother, and therefore has never died as a separate being. [For the preservation of foetal and infant life, not to mention maternal safety, it is of the highest importance to secure the better education, as well as the license and registration of midwives.] In any case, where it is doubtful whether the birth was still or quick, and therefore in which register it should be entered, inquiry ought to be made by the medical officer of the district. Hence the importance of his possessing a medico-legal qualification. Here also is shown the necessity for a scientific officer to superintend the registration of births, deaths, and sickness, in every registration district, according to Dr. Farr's valuable suggestion. This "registration medical officer" might perform many duties, now unperformed or neglected, to the disadvantage and damage of the community.

It is much to be regretted that no provision for such duties is made by the Public Health Act of 1872, and that the medical officers of health appointed under that Act—compulsorily, though on no uniform or proper system—cannot be employed methodically for the performance of medico-legal duties in the registration department, another evidence of the defective and abnormal character of the medical arrangements so injudiciously made under that ill-advised enactment.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Wednesday, April 2nd.

MEDICAL OFFICERS OF THE INDIAN ARMY.—Sir T. Bazley asked the Under-Secretary of State for India when the new Army Medical Warrant would be applicable to the medical officers of Her Majesty's Indian Army; and if medical officers of the Indian Army who are now on sick-leave in Europe, and receiving the old rate of English pay, would be granted the increased rate of pay from the date of the publication of the Warrant—viz., March 1st, 1873. Mr. Grant Duff, in reply, said that the matter referred to in the first question was under consideration at the India Office and the War Office. In reply to the second question, he said that it was not intended to make any change in the present rate of pay of officers in the Indian Medical Service.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, APRIL 1ST, 1873.

Sir WILLIAM JENNER, Bart., M.D., K.C.B., President, in the Chair.

THE ANATOMICAL RELATIONS OF PULMONARY PHTHISIS TO
TUBERCLE OF THE LUNG.

THE adjourned debate on the Anatomical Relations of Pulmonary Phthisis to Tubercle of the Lung was resumed.

Dr. MOXON supposed that a discussion must at least include some comparison, if not some rivalry, of views. He would, however, not pursue any divergence to an issue, but limit himself to a sketch of the views which he held, and an indication of the points of agreement and of difference between Dr. Fox's views and his own. The points of agreement very much preponderated. Presuming that the distinguishing feature of Dr. Fox's opinion was the reunion between the various kinds of phthisis, Dr. Moxon entirely concurred in that assertion. He believed that all phthisis was tuberculous; and this general agreement in a principle of such importance he considered of much more significance than the variations of the bases of that belief. This belief he had frequently expressed before, and had always taught it in his lectures at Guy's Hospital. Dr. Fox's propositions might be summed up thus:—1. Miliary tuberculosis of the lung had not either the anatomical or histological constancy or peculiarity commonly ascribed to it. 2. In short, it exhibited all the products found in active chronic phthisis. 3. All these other products, constituting caseous pneumonia under various forms, were essentially of the same histological structure, which Dr. Fox thought characteristic (though his thirteenth conclusion denied this). 4. The other characters of chronic phthisis were fairly traceable to the effects of time. 5. Due attention had not been given to the developmental changes occurring in tubercle. In short, Dr. Fox did away with the peculiar nature of miliary tubercle, by affirming its essential substance to exist in all caseous phthisis. He reasserted the identity of all phthisis as based on this peculiar microscopic matter; and finally, he excluded common catarrhal pneumonia entirely from phthisis. The only points of difference between Dr. Moxon and Dr. Fox were, that Dr. Moxon did not believe that the histological properties of tubercle were enough to decide the question of its peculiarity; and that he believed that the general anatomical characters of phthisis formed a sufficient basis for its separation from all other kinds of lung-disease, and its union into one single kind. The practical histological identity of all phthisical disease, however, he thought of great importance; and he hoped that the result of the discussion would be to further the establishment of this view. The weakness of the position taken up to reassert the unity of phthisis was, he believed, the great dependence placed on the histological peculiarity of phthisical disease. The microscope would always defend against division rather than assert unity. Why was a histological peculiarity in tubercle so universally supposed? That supposition itself half begged the question. It turned one away from one class of diseases to which tubercle properly belonged, to another class of diseases to which tubercle probably did not belong. The well known peculiarities of cutaneous diseases might be regarded as one class of peculiarities; the peculiarities of tumours or new growths, another class of peculiarities. Was it not seen at once, that these two pathological classes, skin-diseases and tumours, had differences among themselves respectively of a very different order; so that the criteria by which kinds of skin-diseases were determined were quite different from the criteria by which the kinds of tumours were determined. The criteria between skin-diseases were anatomical, while the criteria between tumours were histological. In proceeding to settle histological criteria for tubercle, and meantime ignoring the anatomical criteria, then pathologists were already deciding that tubercle was of the nature of growth and not of varying inflammatory process. But, he thought, no such decision was allowable. Everything in the recently progressing knowledge of inflammation and of tumour tended to prove that they stood apart from each other, as the actions of vessels and white corpuscles on the one side, and the actions of the tissue-elements on the other; the former constituting inflammation, and the latter tumour. The point to which he wished to direct the attention of the Society was, the serious blow which the notion of tubercle as a specific growth had received from the results of the inoculation experiments. He would simply ask, whether the inoculation experiments did not confirm any position that showed tubercle as naturally arising from the presence in the tissues of slowly withered pus; so that it was not a new and specific thing in itself, but

rather reveals a common and universal property of caseous pus. This proposition was adopted by Virchow very nearly; so far, at least, that he would allow it except for certain cases where general tubercle seemed to arise without discoverable scrofulous product. Dr. Moxon next referred to the case of a child, who first had a tracheal catarrh; this created an irritation of the lymphatic glands, which became chronic, so that the inflamed gland underwent caseation. As the next step, there arose a diffusion of tubercles from the caseous gland into the lung around. Here, then, were three consequent processes. The first, a mere bronchial catarrh, was not specific; but the second and third followed upon it, and the third—tubercle—was held to be specific. But the tubercle was the immediate consequence of the caseous gland, traceable by parallel experiments of inoculation with caseous pus. How then could the tubercle be held to be specific in any proper sense? Where did its specification arise? Was it not rather the immediate and proper result of caseation in any and every human or animal frame, so that all were open to undergo the tuberculation from the first appearance of the catarrh? He believed that thus the specific nature of tubercle was disproved. Tubercle must then be recognised as another phase of inflammation, not a different kind of thing; in effect, when any one got an inflammation, he was already on the way to tubercle under certain prescribable circumstances. Let certain causes come into play upon his inflammatory products, and he became sown with tubercle. These causes were (1) slow rate of process, inducing destruction of tissue and caseation of the remains; and (2) breach through to form a way into the circulation for the withered pus. So far, the view was very much like that given originally, he believed, by Buhl, but known as Niemeyer's. He thought, however, that the views expressed in Niemeyer's admirable text-book were not correct. Dr. Moxon here showed three drawings, giving examples of very early phthisis. In each drawing, the same general appearances were found; and indeed, in all the numerous examples of early phthisis which he had found in more than 3,500 inspections, the same conditions had been revealed. Tubercles of perfect character were present in all the specimens. He would say confidently, that this was always the case, however small the degree of disease in the lung might be, if the disease had not plainly passed into the stage of carnification, so as to be a blackened hardened scar. From such facts, it could but be concluded that the tuberculous character was as constant to the earliest stage of phthisis as to the latest stage; and he must decline to believe that tubercle was an accident to which the subjects of common catarrhal pneumonia were liable, or that phthisis ran a long course, and perhaps all its course, throughout without the presence of tubercle. There was the best evidence that this was not the case. He had examined more than five hundred phthisical bodies, and had always paid particular attention to the question; and he would say confidently that he did not know active phthisis without tubercle. The only exception was that chronic form of phthisis which had been unfortunately called fibroid, in which death often occurred through the indirect results of tubercles that had already terminated their career. Hence it was contradictory to the certain evidence of facts to say with Niemeyer that the early stage of phthisis was catarrhal pneumonia. Rather, however early phthisis was seen, there were the tubercles; nay, the more early chronic phthisis was seen, the more purely tuberculous was it. In short, Niemeyer's error was the assertion that common catarrh was the originator of the caseation. Dr. Moxon's experience was entirely opposed to this. What was the very first and initiatory stage of phthisis? Was it the production of a tubercle? He could not answer that question, because he never saw an example without several clusters being present, some of which were of older date than others, and already dead. But it was certain that the initial stage of chronic phthisis was not a diffused disease, such as catarrhal pneumonia was. Instead of this, it was a small circumscribed patch. He would advance an hypothesis which, he trusted, would go some way towards lighting the relation of the tuberculous process to the apex. He believed that it might be that often in life, throughout the lung, accidental minute inflammatory destructions caused local suppuration, according to their intensity and the feebleness of the resisting power (or the vulnerability) of the lung. When the lung could collapse around the spot, it healed; but where the more fixed zone of the first rib prevented the part from collapsing, there the disease could not heal so well, and the tuberculous consequences of chronic caseation of the little casual patch of pus were set up. Certainly, however it first arose, phthisis did not reach an inch in extent before it had tubercles present in it. The evidence of this was sure. Dr. Wilson Fox had said that the adenoid structure did not distinguish grey granulation from caseous phthisical tubercle, because it was present in both. Then there was no histological distinction between yellow caseous pneumonic tubercle and the grey granulation. If this were agreed to, it went far to disperse the confusion that had enshrouded all the questions concerning

phthisis; and the appearances of phthisical lungs might be considered with the same freedom as the morbid appearances of the skin in cutaneous diseases. Then arises the proposition, that in no disease except this undivided phthisis were there found patches resembling those found in phthisis. Waiving the question whether they should be called pneumonic or tuberculous, Dr. Moxon said that the caseous patches were not found in any other disease than phthisis; so that, examining diseased lungs objectively, and classing them according to the properties of their diseased changes, just as the skin-diseases were examined and classed from their real character, the disease phthisis must be identified by the descriptive characters of the caseous nodules in the lung. The characters were quite capable of being stated and defined. 1. The disease appeared in circumscribed and isolated patches. 2. These extended in the main from above downwards, and were in greatest quantity and oldest above. 3. They were as much deep as superficial. 4. They became caseous, and softened into vomicae. In no other disease but phthisis were these characters found. The other forms of pneumonia—acute lobar pneumonia, pneumonia by extension of acute bronchitis, pyæmic abscess and the various forms of induration—never produced caseous change. Yet there was a widely spread teaching that pneumonia by extension of acute bronchitis was a common source of phthisis; nay, that its repetition constituted phthisis. Dr. Wilson Fox had advanced the statement that the histology of caseous pneumonia of phthisis was like the histology of tubercle, and unlike any other histology, and especially unlike the histology of catarrhal pneumonia. Dr. Moxon would say the same without hesitation; indeed, he had said it often. If this were so, then caseous phthisical pneumonia and catarrhal pneumonia must be viewed with the naked eye and compared by their direct characters. Then surely common catarrhal pneumonia, such as was met with in croup or the infantile bronchial inflammations, or in the peripneumonia notha of the aged, had no resemblance whatever to the caseous pneumonia of phthisis. Its distribution in the lung was quite different; it affected the bases always chiefly, while the caseous disease affected the apices; and it could always be traced to the centres of the lobules, there arising around the ends of bronchial tubes as patches of red hepatisation. These hepatised patches never went on to caseation, and only very rarely indeed to suppuration. One such case occurred in five hundred or six hundred; and even then there were ulcerous suppurations in the basis with an appearance altogether different from the caseous vomicae in the apices in phthisis. Hence, he thought the naked eye experience of phthisis in its relation to bronchopneumonia was conclusively against the idea that the latter was the same as the former, or that the one continued out of the other. If they did so, intermediate conditions should be very frequent, whereas he had never met with them; and the early stages of phthisis should resemble bronchopneumonia, whereas he had shown that the early stages of phthisis always consisted in small clusters of tubercles. Was it, therefore, to be concluded that phthisis was never inflammatory? Certainly not. Rapid phthisis producing large caseous masses always had many characters of inflammation. But this did not conflict with their tuberculous nature. The inflammatory or inactive qualities of the disease occurred within the range of their tuberculous peculiarities. In other words, whether inflammatory or not, they were equally tuberculous. Why should not the peculiarity of tuberculous disease in the lung be viewed as parallel with any peculiar cutaneous disease, in its relation to inflammation? When typical psoriasis had peculiarities quite distinctive, it then was of comparatively slow development. But, if it were intense and active, then it so closely resembled eczema in many characters that the distinction was not to be affected by appearances of any diseased patch of surface, but only by regarding the general outlines of the eruption and the history of the case. It was called or considered an inflammatory psoriasis, but not the less a psoriasis because its activity induced upon it some of the characters common to all acute cutaneous inflammation. And why? Because these characters of inflammation were controlled by and circumscribed within the characters of psoriasis. Just so the tubercles of phthisis, when slowly formed, had their characters perfect, but when produced with the heat and other activity that constituted inflammatory action, they were some of the characters of other forms of inflammatory action in the lung. Yet these characters of inflammation were limited by and subject to the general characters of tubercle in being insulated or circumscribed, in breaking into caseous abscesses and in extending from above downwards. That tubercles of the most purely tuberculous kind—true “miliary tubercles,”—expanded and softened into considerable caseous abscesses, was proved very succinctly in a remarkable case, of which Dr. Moxon showed a drawing. The lung was full of miliary tubercles secondary to a scrofulous pyelitis. The man had lived an unusually long time; and the upper tubercles

had extended and softened so as to form vomicae of the size of peas or horse-beans, and presenting all the characters of the caseous pneumonia erroneously regarded as non-tuberculous. Yet, the universal distribution of the tubercles through the lung, the brain-membranes, kidneys, etc., showed that the case was, indeed, miliary tubercle. With regard to the so-called fibroid phthisis, Dr. Moxon said that it was nothing more than old phthisis, in which a good deal of fibre was necessarily present. Those who erected it into a distinct kind entirely disregarded the fact that tubercles were short-lived; no tubercle lived three months, so that in five or six years or more—and it was given as a property of fibroid phthisis to last such a time—generations after generations of tubercles must have come and gone, doing their natural work in destroying first their matrix and then themselves, and leaving behind them the scar of fibre in which the nature of our bodies always enshrouded the traces of such mischief. But the author of fibroid phthisis, seeing the fibrous accumulation around these ancient remains, could think of nothing but their present state, and, like a translator who only had one tense, rendered the preterpluperfect, perfect, past, and present all alike by his one present tense, just as if one called an old united fracture an osteoid broken leg, or spoke of scars on the skin as fibroid lupus. Dr. Moxon said that what he wished to show was—1. That the views advanced by Dr. Wilson Fox were not of positive force enough to establish the conclusion that he erected on them—yet those views were true; 2. That the very assertion of such views as Dr. Fox had propounded was enough to annul the foundations of the system which divided phthisis into tuberculous and non-tuberculous; 3. That the anatomical characters of phthisis, as seen by the unaided eye, positively sufficient to separate phthisis from all other pulmonary diseases, and to gather together all phthisical cases into one natural group, practically coinciding with the tuberculous phthisis of Laennec and Louis; 4. That there were no intermediate links between ordinary bronchopneumonia and phthisis; 5. That fibroid phthisis was only old phthisis with its age forgotten.

Dr. CAYLEY said that, while no description of the changes which took place in phthisis could be more complete and accurate than that given by Dr. Wilson Fox, he thought that the doctrines which had been based on this description were open to some exception. It was well-known that the so-called adenoid tissue, which Dr. Fox appeared to regard as the most characteristic element of tubercle, and to be the result of an irritative overgrowth of pre-existing lymphatic elements, might be produced in any part of the body by almost any kind of irritation. It occurred, for instance, in the margin of a hard chancre, in a soft body in the early stage of cirrhosis of the liver. And in the lung it might be produced in the interstitial tissue and the walls of the air-cells by a great variety of causes, as the presence of a foreign body, the inhalation of irritating dust, as in grinders' phthisis, as the result of chronic pleurisy, chronic pneumonia, etc. If, therefore, adenoid tissue was to be the distinctive element of tubercle, tubercle could not be distinguished. Many of the more recent writers on this subject gave a very different interpretation of the structure of a grey granulation. Rindfleisch, Wahlberg, in his recent paper on tubercle of the larynx, Schüppel, etc., all described tubercle as consisting in great part of large cells. Professor Schüppel, as was well-known, regarded the multinucleated giant cell as the most essential element of tubercle, and described how it gave off processes which form the reticulum, in the meshes of which the other cells of the tubercle lay; and he considered the adenoid tissue which surrounded and was mixed up with this structure as the product of simple irritation. Dr. Cayley exhibited specimens showing this structure. Dr. Fox regarded these large cells as of secondary importance, because, though met with in tubercle of other organs, they were often absent in tubercle of the lungs. This might, however, be explained by the fact that in the so-called tuberculosis of the lungs true tubercles are often absent. Dr. Cayley thought that the general scope of Dr. Fox's argument was this. Finding in the lungs of children affected with acute tuberculosis, in addition to the grey granulation, a great variety of other changes which he fully described, Dr. Fox seemed to consider that these other changes ought to be regarded as tubercular, because they are found associated with tubercles; and then, finding in the lungs of adults affected with chronic phthisis these other changes to be predominant while the grey granulation was not unfrequently absent, he still considered them to be tubercular, an argument by no means necessarily valid. Dr. Cayley, therefore, thought that, though the question was not yet ripe for a final decision, we were still entitled to maintain, at any rate provisionally, and as at present affording a better explanation of the facts; first, that tubercle does not consist merely of a mass of adenoid tissue, and, therefore, that the presence of such adenoid tissue in the wall of the air cells is no proof that the lung is tubercular, as it may arise from almost any kind of irritation; secondly, that the term tubercle ought

to be restricted to the grey granulation, which does present certain peculiarities of structure which enable us to distinguish it from other inflammatory new formations; thirdly, that in many cases of phthisis the changes in the lung are entirely due to inflammatory processes, and not necessarily attended by the formation of tubercles at all, and in many other cases where tubercles are found coexisting with these inflammatory changes, that the inflammatory changes were the primary affection, and the tubercles were developed secondarily and were very probably produced in the way in which we know they may readily be produced in the lower animals by caseous injection.

Dr. LIONEL BEALE said that in many points he thoroughly agreed with Dr. Wilson Fox; but he ventured to differ from him in the opinion that tubercle was related to lymph-corpuscles, or that it was a sort of adenoid tissue, and that the formation of tubercle was in any way necessarily dependent upon lymphatic vessels. He did not believe that lymphatics were distributed upon the walls of the air-cells of the lung in great number, or that tubercle depended upon the "irritation" of such vessels, or was derived from them or their contents. "Irritation" was the *abracadabra* of pathology, and ought to be dismissed altogether. *Fibrillation, vacuolation, differentiation*, and like learned terms only made people think that we knew a great deal when we knew very little, and helped us also to deceive ourselves. Looking at the matter from the observer's side, Dr. Beale desired to offer a few remarks upon the tubercle-corpuscle. This, he said, was, like pus and cancer, a minute particle of living matter, very distinct, however, from pus, lymph, white blood-corpuscles, and cancer:—not that all specimens of these things could be distinguished from one another—so far from this being the case, there were no characters by which certain of these particles of living matter or bioplasts could be distinguished. It must not, however, be supposed that, therefore, they were identical, or in all respects alike. Things had been called identical which were widely different. All bioplasm was alike in microscopical and many other characters; nevertheless, distinct specific differences were very numerous. Although pus, tubercle, and cancer bioplasts might very closely resemble one another, the life history of each was different. Pus grew and multiplied much faster than tubercle, and tubercle faster than cancer. This difference in the rate of growth accounted for many general differences observed in the results. Besides this, just as there were different kinds of pus and cancer, so there were different kinds of tubercle, but the fact had been only very imperfectly recognised. Pus might possibly result from the rapid growth of tubercle or cancer, but neither of these could be derived from pus. Both tubercle and cancer were, so to say, much nearer the normal embryonal bioplasm of the tissues of the body than pus. Inflammation occurred in the neighbourhood of tubercle-corpuscles, and the so-called "tubercle" probably was in all cases complex consisting partly of special tubercle-corpuscles and partly of bioplasm derived from that of the adjacent texture. As tubercle gradually died, many things were formed. The caseous material was a product of the death of the living matter constituting tubercle. It was, therefore, incorrect, in Dr. Beale's opinion, to speak of tubercular or caseous *infiltration*—as incorrect as it would be to talk of the ground being infiltrated by seed. The tubercle *grew*, and the corpuscles moved into the positions in which they were found; the oldest died, and caseous matter was one of the products of death. In other cases the tubercle might grow very slowly, and give rise to the formation of a low form of formed material more or less resembling fibrous tissue.

Dr. BASTIAN next joined in the discussion. The views which he expressed are contained in his paper published at page 363.

Dr. PAYNE said that he supposed the pivot of Dr. Wilson Fox's argument to be his observations in cases of acute tuberculosis; that is to say, having found the morbid changes enumerated by him in such cases, he concluded that they were there at all events, a consequence of the presence of tubercles; and finding the same changes in the lungs of persons dying of chronic phthisis, he felt justified in concluding that in this disease, also, the morbid changes were due to the presence of tubercles. If this were a misrepresentation of Dr. Fox's argument, he hoped that gentleman would take an opportunity of correcting it. The question would then arise whether the morbid appearances were always due to acute tuberculosis in cases where the patient died of that disease; and it became important to determine what was, in Dr. Moxon's words, "the tense" of the morbid changes. Dr. Payne then suggested some criteria of the relative age of morbid changes in the lung, which he thought should be applied to all such cases; and referred to his own specimens. With reference to the question whether inflammatory changes preceded tubercle, or tubercle caused by inflammatory changes, his own belief was that both these assertions were true of particular cases; and both sequences might be traced even in

the same specimen. Both classes of changes were, in fact, the result of one morbid process, and it was by no means impossible (though not all proved) that they were produced by some actual septic matter or morbid poison, which acted on different tissues in different ways; producing the structure called tubercle in one kind of tissue, and inflammatory changes in adjoining parts. The term tubercle itself he had used in the restricted sense given it by Virchow; but at the same time he thought it might be permissible, as suggested by Dr. Bastian, to drop it altogether.

Dr. DOUGLAS POWELL observed, that the main question in debate was, as to the restrictions to be applied to the terms tubercle and tuberculosis respectively. The facts brought forward by Dr. Fox, and illustrated by his specimens, drawings, and diagrams, were so faithfully and truly represented, that they would be accepted and confirmed by the experience and observation of all who had most studied the subject. But these facts would naturally be regarded by different observers from different points of view, and different inferences would be drawn from them. Dr. Powell accepted Dr. Fox's definition of tubercle as most typically applicable to the grey granulation, and as not essentially including the inflammatory changes with which the granulation was often associated, and he would restrict the term acute tuberculosis to that acute disease, all the local phenomena of which were occasioned by the definite anatomical element tubercle. The striking pathological characteristics of acute (pulmonary) tuberculosis were, that usually a part of a more general disease, its anatomical element, the grey granulation, was developed almost simultaneously throughout the lungs, and any other organ that might be affected, there was found, *post mortem*, very little difference in date between the tubercles in different organs of the body; that these granulations in the lung were in typical cases unaccompanied by any pneumonia. On this point he, with great respect, slightly differed from Dr. Fox; he had often seen, in the acute tuberculosis of adults, the tubercle unaccompanied by any pneumonia, every portion of the lung floating freely in water, although there might be found, on minute examination, some epithelial shedding, such as is common to all active or passive congestions of the organ. Again, in this acute tuberculosis there was no breaking up of lung-tissue, there were no lung-elements in the sputa, the patients did not die of lung-destruction, as in the case of acute phthisis, but of the general disease, and of the obstruction to the minute bronchioles. On the contrary, he agreed with Dr. Fox, that one of the striking characteristics of tubercle was its tendency to fibroid development. On these grounds he thought that acute tuberculosis, as thus restricted, could not be admitted under the definition of phthisis at all, and that tubercle could not be regarded as the essential specific element in phthisis. Dr. Powell fully admitted the local development of tubercle, both in the granulation and the diffused form, as frequently present in the lesions of subacute and chronic phthisis; but this local tubercle was invariably attended with inflammatory changes and breaking up of lung, and he could not regard the tubercle as the element primary or essential to these changes, nor speak of such cases as varieties of tuberculosis. Dr. Powell concluded by observing, that he thought much of the inveteracy of phthisical lesions would be explained without the aid of any specific precedent deposit of tubercle, if we remembered the peculiar construction of the lung as an intricate infolding of a surface continuous with a mucous membrane, and very analogous with it, but richer in lymphatics and blood-vessels. By a mere tussive expiration we could clear out, without danger or difficulty, the products of a nasal or bronchial catarrh, but the products of an equally simple affection of the alveoli could not be so expelled; they accumulated, decayed, irritated the alveolar wall, and set up those proliferative and inflammatory changes which constituted local tubercle—just as the retained secretions of a sebaceous follicle gave rise to the acute pustule. These thickened alveolar walls in their turn degenerated, softened, or suppurated; and in these changes, complex only with the complexity of the surface in which they occurred, we saw the rough but accurate outlines of the many morbid pictures presented to us in the lungs of those dead of phthisis. Taking further into account the constant, ceaseless movement of the lungs, in health and disease, and the free access of air to the diseased tissues, etc., the mystery was to him that such lesions were not even more intractable and destructive.

TESTIMONIAL.—Mr. Arthur F. M'Gill has been presented with a microscope (made by Messrs. Smith and Beck) by the students of the Leeds School of Medicine, and with a marble time-piece by the nurses and household of the Leeds General Infirmary, on his resigning as Resident Medical Officer of the latter institution.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held on Wednesday, the 9th day of April next, at the Office of the Association, 37, Great Queen Street, London, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, 28th March, 1873.

BATH AND BRISTOL BRANCH.

THE fifth ordinary meeting of the session will be held at the Royal Hotel, Bristol, on Thursday evening, April 10th, at Seven o'clock; T. G. STOCKWELL, Esq., President, in the Chair.

The following papers are expected:—1. Cases treated by Weight Extension. By C. Steele, Esq.—2. Excision of Both Superior Maxillæ. By N. C. Dobson, Esq.—3. Case of Epistaxis, with New Mode of applying Compression. By T. G. Stockwell, Esq.—4. Two Cases of Animal Poisoning. By Joseph Hinton, Esq.—5. Notes of Interesting Cases. By H. Ormerod, Esq.—6. The Immunities from Disease of Certain Persons. By W. H. D. Bradshaw, M.D.

E. C. BOARD, } *Honorary Secretaries.*
R. S. FOWLER, }

Clifton, April 1st, 1873.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of the above Branch will be held at the Cock Inn, Sutton, on Thursday, April 10th. The Chair will be taken at 4 P.M. Dinner at 6 P.M.

Papers, etc., are promised by Dr. J. M. Bright, Dr. Philpot, the Honorary Secretary, etc.

HENRY T. LANCHESTER, M.D., *Honorary Secretary*.

Croydon, March 25th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE spring meeting of the above Branch will be held in the Board Room of the Whitehaven and West Cumberland Infirmary, Whitehaven, on Wednesday, April 23rd, 1873; T. S. CLOUSTON, M.D., President of the Branch, will take the Chair.

Gentlemen who intend to be present at the dinner, or to bring communications before the meeting, are requested to inform the Secretary of their intention at their earliest convenience.

HENRY BARNES, M.D., *Honorary Secretary*.

Carlisle, March 29th, 1873.

CORRESPONDENCE.

MEDICAL EDUCATION AND THE COMMITTEE OF REFERENCE.

SIR,—I regret to be obliged to take a somewhat different view from yourself respecting the Report of the Committee of Reference for a Medical Examining Board in England. Whether a thoroughly good medical education would be better obtained by the rigid uniformity and Chinese exactness of nominal qualification to be secured by a Conjoint Examining Board, rather than by a wholesome "differentiation" of system—a legitimate rivalry of teaching and examination between medical corporations and universities—is a distinct question; and there is much to be said for Dr. Lyon Playfair's view of the case, which, indeed, he has himself ably defended.

If Colleges of Physicians and Surgeons can, by uniting, give a joint qualification sufficient for entering on practice, well and good; but why drag down the universities to meddle with what must be a *minimum* qualification? If the examinations, written and oral, are to be spread over two or more days, and to be held at different colleges and institutions, as proposed, candidates at all events will not gain by the grouping of existing institutions, and there is no evidence that the public will derive any special benefit from it, while it is almost certain that the medical corporations would seriously suffer by it. But, set-

ting aside this question, I am prepared to show that the Committee of Reference have acted wisely in omitting from their scheme the subjects of Hygiene and Forensic Medicine. Not that these subjects are of less than the highest importance to every one who claims to be completely qualified for all departments of medical service. But we must not forget that the *minimum* age for obtaining the simple licence to practise is 21; that most students feel it necessary to procure their legal qualification as soon as possible; and that the necessary curriculum of medical education lasts only four years, during which time all the subjects specified by the Committee of Reference have to be studied sufficiently, not merely to enable the student just to pass his examinations, but also to practise safely and usefully on the sick and hurt.

Long and careful observation has confirmed an opinion, often expressed, that to include in the educational *quadrennium* more subjects than those mentioned by the Committee of Reference would be a most mischievous fallacy, leading to pretensions of qualification which in the great majority of instances must be utterly unfounded, deceptive to the public, and discreditable to the profession. Time, as well as industry, is necessary for the completeness of preparation for medical duties. It is doubtless expedient that every student should be at liberty to qualify for ordinary practice at 21. The exigencies of the community demand that no further limitation than is absolutely necessary be placed on the admission of young men to the *Medical Register*. Even now a large proportion of assistants to general practitioners are unqualified and unlicensed, and it is notorious that serious abuses result from this want of qualified aid throughout the country.

As the old apprenticeship system is becoming obsolete, it is the more important that a certain additional time after being licensed at 21 should be passed in work under the control and direction of older and more experienced men. Many useful details of clinical duty and some readiness in the use of remedies, which formerly were learnt during an articulated pupilage, now yield, not improperly, to preliminary scientific studies, as on the whole a better basis for professional qualification. On the present system—though, doubtless, an improvement on the past—time is not afforded for the acquirement of that manual aptitude, that practical training, which were formerly gained in the surgery of the general practitioner or at the parish dispensary, and which even a diligent hospital pupil has rarely a sufficient opportunity of acquiring. What, then, is the obvious deduction from these premisses? The acknowledged defect in preparation for the daily work of the ordinary practitioner can be remedied only by devoting a certain time, *after* the expiration of the required four years, to practical therapeutics, either as house-surgeon in a hospital, or as qualified assistant to a district or workhouse medical officer.

Moreover, this further period of education is also the time for studying those other and higher subjects which some would press into the already loaded *quadrennium*. The foundation being laid by the age of 21, and the legal sanction to practise being obtained, the majority of young men, to whom time and remunerative occupation are objects of importance, ought to be afforded a full opportunity for further preparation, not only in therapeutics, but in the two great departments of public medicine which I have named; and this preparation ought to be compulsory on every medical man who seeks for public employment, unless he should prefer to possess the diploma in State Medicine now granted by the Dublin University, and probably to be hereafter obtained in the British universities. The period for this supplementary education ought certainly not to be less than two years; and if licensed to practise at the age of 21, the candidate might qualify for the civil medical service at 23 (which is the age required in Ireland for the office of dispensary surgeon) by an examination in Medical Jurisprudence, Hygiene, and Psychological Medicine, besides a further examination of a purely practical nature in the therapeutical requirements of public institutions. No one who had not passed this examination and obtained this State qualification should be permitted to hold any public appointment* or office requiring a knowledge of Forensic Medicine and Hygiene. By such a reform in medical education, as I now suggest and have before suggested, the adequacy of the primary qualification would be satisfactorily tested, and the farce of Visitation of Examinations by members of the Medical Council would be dispensed with.

The final qualification for the public service would be conferred after a sort of *Staats-Examen* instituted by Parliament and conducted by an Examining Board to be appointed by the General Medical Council—a Board independent of the medical corporations and universities, al-

* For instance, District or Workhouse Medical Officer, Prison Surgeon, Police Surgeon, Factory Surgeon, Medical Officer of Health, Medical Visitor or Superintendent of an Asylum, Medical Inspector or Surgeon of a Passenger or Merchant Ship, Medical Inspector of Seamen, Visiting Surgeon or Inspector of Hospitals under Contagious Diseases Acts.

though, of course, composed of some of their most distinguished members. No doubt certain corporations would regard such a proposal with jealous hostility, as they did, four years ago, a proposition that the universities should at once exercise their undoubted right to grant diplomas in State Medicine. But the proposed authorisation to perform public medical duties after the age of 23 would in no way diminish the necessity for examination at 21 by the present Licensing Bodies, singly or in combination; nay, it would establish that necessity, by requiring of every candidate for the State diploma that he shall have been registered (or qualified for registration) at least two years previously. Neither need this second qualification supersede any still higher diploma in State Medicine which the universities, following the example of Dublin, might confer on doctors of medicine, an honour which will always be looked upon as the highest medical distinction in the kingdom. My suggestions may be thus summarised.

1. That the subjects of medical education named by the Committee of Reference be alone required for the license to practise at the age of 21.
2. That two more years of special study and practical work be required of the licentiate before he can obtain a State qualification for public medical duties.

3. That Parliament authorise the Medical Council to appoint a Board of Examiners for the civil medical service; and that no candidate be admitted to examination by that Board until the said two years shall have expired, and he shall have attained the age of 23.

4. That all public medical appointments under existing Acts of Parliament shall, for the future, be limited to those who shall pass the proposed examination for the medical civil service; existing tenure of office being always duly respected and guarded.—I am, etc.,

April 1st, 1873.

HENRY W. RUMSEY, M.D.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

SUNDERLAND.—The salary of the medical officer about to be appointed by the Sunderland Urban Sanitary Authority is to be £500 a year, and not £50, as stated in the JOURNAL. Government aid is taken, and the appointment in the first instance to be made for five years.*

SOUTHAM.—Mr. Henry Bowen, of Kineton, has been appointed Medical Officer of Health for the Southam Rural Sanitary District, for one year, at a salary of £50 per annum. The area of the district is 50,803 acres; the population, 10,523.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 27th, 1873.

Hansell, William Charles, Taunton, Somerset
Lindsay, William Vickress, Fulham Place, Paddington
McDonnell, Michael Sweeny, Storrington, Sussex

The following gentlemen also on the same day passed their primary professional examination.

Elliott, Frederick Hawes, University College Hospital
Massingham, John Payne, Queen's Hospital, Birmingham
Webb, Charles Louis, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Currah, George Ingersoll, Falmouth
Eagle, John, King's College Hospital
Severs, Samuel Thomas, Ripon
Stevens, Joseph, Stourbridge

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Wednesday and Thursday, the 12th and 13th of March, the following candidates obtained the License to practise Medicine.

Downing, William Creagh
Eyre, Robert Smyth
Grattan, Edward Shaw
MacInerney, James Richard

The following candidates obtained the Midwifery Diploma.

Downing, William Creagh
Ellis, John Lloyd
Grattan, Edward Shaw
MacInerney, James Richard

MEDICAL VACANCIES.

The following vacancies are announced:—

ABERFOYLE, Perthshire—Parochial Medical Officer: £90 per annum. Applications to H. R. B. Peile, Esq., Catter House, Drymen, by Glasgow.

ABINGDON UNION—Medical Officer and Public Vaccinator for District No. 5: £100 per annum.

ALCESTER UNION, Warwickshire—Medical Officer for the Inkberrow District.

ATHY UNION, co. Kildare—Medical Officer for the Athy Dispensary District and the Fever Hospital.

BELPER RURAL SANITARY DISTRICT—Two Medical Officers of Health: £150 per annum each.

BETHLEM HOSPITAL—Two Resident Medical Students.

BORRISOKANE UNION, co. Tipperary—Medical Officer and Public Vaccinator for the Terryglass Dispensary District: £100 per annum, and fees. Applications to J. D. Dwyer, Esq., Ballyquick, Roscrea.

BRIDGNORTH UNION, Salop—Medical Officers for District No. 3 and the Workhouse: £70 and £27 per annum.

BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury—Resident Surgeon and Apothecary: £80 per annum, with £10 increase to £100, board, lodging, coals, and candles, in furnished apartments.

CAHERCIVEN UNION, co. Kerry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Emlagh Dispensary District: £90 per annum, and fees. Applications to J. P. Fitzgerald, Esq., Kinneigh, Caherciveen.

CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.

CHESTERFIELD RURAL SANITARY DISTRICT—Medical Officer of Health: £550 per annum. Applications to George Haslehurst, Esq.

COCKERMOUTH RURAL, and Cockermouth, Keswick, and Workington Urban Sanitary Districts—Medical Officer of Health: £400 per annum.

COLCHESTER URBAN SANITARY DISTRICT—Medical Officer of Health: £150 per annum.

COOKSTOWN UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Coagh Dispensary District: £75 per annum, and fees.

DONEGAL COUNTY LUNATIC ASYLUM, Letterkenny—Physician: £100 per annum. Applications to Charles J. McMullen, Esq.

DUDLEY DISPENSARY—Resident Medical Officer: £105 per annum, residence and allowances.

EAST PRESTON UNION, Sussex—Medical Officer for District No. 2B.

ELY RURAL SANITARY DISTRICT—Medical Officer of Health: £150 per annum.

INISHOWEN UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cardonagh Dispensary District: £90 per annum, and fees. Applications to John Doherty, Esq.

INISHOWEN UNION, co. Donegal—Medical Officer to the Workhouse: £50 per annum. Applications to Robert Moore, Esq., Cardonagh.

KELLS UNION, co. Meath—Medical Officer to the Workhouse and Fever Infirmary: £110 per annum.

KENSINGTON DISPENSARY—Surgeon.

KING'S COLLEGE, London—Professor of Anatomy.

KNIGHTON UNION, Radnorshire—Medical Officers and Public Vaccinators for the Llanbister and Brompton Brian Districts: £60 and £20 per annum, and fees, respectively. Applications to E. H. Deacon, Esq.

LEDWICH SCHOOL OF ANATOMY, etc., Dublin—Lecturer on the Theory and Practice of Medicine.

LONDON FEVER HOSPITAL—Resident Medical Officer: £200 per annum, residence, coal, gas, and attendance.

MANCHESTER ROYAL EYE HOSPITAL—House-Surgeon and Secretary: £50 per annum, to commence, board, lodging, and washing.

MERCER'S HOSPITAL, Dublin—Physician.

MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Assistant Medical Officer: £150 per annum, board and residence. Applications to R. W. Partridge, Esq.

MONTGOMERYSHIRE INFIRMARY, Newtown—Surgeon.

NENAGH UNION, co. Tipperary—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Toomavara Dispensary District: £100 per annum, and fees. Applications to Michael Meagher, Esq., Monomore.

NORTH DUBLIN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the No. 2 North City Dispensary District: £125 per annum, and fees.

NOTTINGHAM DISPENSARY—Assistant Resident Surgeon: £140 per annum, furnished apartments, coal, and gas.

OWENS COLLEGE, Manchester—Brackenbury Professorship of Practical Physiology and Histology. Applications to J. G. Greenwood, Esq.

POCKLINGTON UNION, Yorkshire—Medical Officers for the Pocklington No. 2, Bishop Wilton, and Sutton upon Derwent Districts: £40, £28, and £24, per annum, respectively.

RADCLIFFE INFIRMARY, Oxford—Resident Dispenser: £80 per annum, board and washing.

RICHMOND (Surrey) URBAN SANITARY DISTRICT—Medical Officer of Health: £210 per annum. Applications to R. A. Smith, Esq.

ST. COLUMB MAJOR RURAL SANITARY DISTRICT, and Newquay and Padstow Urban Sanitary Districts, combined—Medical Officer of Health: £120 per annum. Applications to G. B. Collins, Esq., St. Colomb Major.

SLIGO UNION—Apothecary: £80 per annum.

SPALDING UNION, Lincolnshire—Medical Officer for the Moulton District: £45 per annum.

SUSSEX COUNTY HOSPITAL, Brighton—Physician.—Assistant-Physician.

TRALEE UNION, co. Kerry—Medical Officer for the Tralee Dispensary District.

TYRRE, Parish of—Medical Officer for the New Pittligo District.

WESTMINSTER—Public Analyst: £100 per annum. Applications to W. Rogers, Esq., Solicitor to Board of Works, 25, Great Smith Street.

WESTMINSTER HOSPITAL—Surgeon.—Assistant-Surgeon.

WEYMOUTH UNION—Medical Officer for the Portland District: £80 per annum.

WOOLWICH UNION—Medical Officer to the Workhouse.

WORCESTER AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Medical Officer: £170 per annum, and residence. Applications to C. J. Richards, Esq., 5, Lansdowne Villas, Lansdowne Road, Worcester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

EWART.—On March 26th, at Limefield House, Cheetham Hill, Manchester, the wife of J. H. Ewart, M.R.C.S., L.R.C.P.Lond., prematurely, of a son, stillborn.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Maunders, "Two Cases of Dislocation and Fracture of Head of Humerus"; Mr. Gant, "Three Cases of Double Amputation of the Limbs" (two patients shewn); Dr. Fayrer, C.S.I., "On European Child-life in India."

TUESDAY.—Royal Medical and Chirurgical Society, 8 P.M., Ballot. 8.30 P.M., Dr. Symes Thompson, "On the Elevated Health-Resorts of the Southern Hemisphere, with special reference to South Africa"; Dr. Elam, "On some Results of Treatment in Affections of the Nervous System."

WEDNESDAY.—Epidemiological Society, 8 P.M. Mr. J. N. Radcliffe, "On the late Outbreak of Plague in Persia."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. RANSOME (Bowden).—We shall be happy to publish a reply, if forwarded, as brief as possible.

WE have a copy of a *Weston Mercury*, in which is a paragraph notifying that Dr. Bradshaw is going to read some paper before the Bath and Bristol Branch. This is an unusual course for members to take who belong to the Association, and we think it an undesirable one.

WE beg to suggest to Mr. J. G. Booth (Padiham) to refer the subject in the first instance to the Council of his Board.

PHYSICIAN-LICENTIATES.

SIR,—In answer to a querist (L.R.C.P. Lond.) in the JOURNAL of March 22nd, you state that the licentiate of the College of Physicians in Ireland is the equivalent of the member of the Colleges of London and Edinburgh. To this ruling, I take leave to make exception. Permit me to remind you there is, in each of the three Colleges named, a licentiate, which has its co-equal nowhere, except in its own order. I speak from an educational point of view, and obtain my data from the regulations and prospectuses which are contained in the Educational Number of the JOURNAL for 1872. Here it will be seen, by those interested, that there is a close assimilation in the requirements of the three Corporations, touching previous education, curriculum and terms of study, mode of examination, age of candidate, and fee for diploma. Yet that, without an invidious attempt at signalling special features, where each is fairly abreast with the fancied want of the times, the palm of superiority is visibly to the credit, I think, of the chief Metropolitan College. Moreover, one distinguishing feature, not, I fear, sufficiently apprehended by the student, attaches to the license of the latter body. I allude to the conspicuous privilege which the licentiate enjoys, under its one-faculty diploma, in his being lawfully constituted to practise both medicine and surgery.

From the prospectuses aforesaid, it may be gathered that in two of the three Colleges there is an order of membership. This remains to be created for the Dublin College. With the Edinburgh body, no curriculum and examination being assigned to it, it is, as it were, an elective mid-stage, essential to be arrived at by the licentiate ere his elevation to the fellowship; whereas, in the London College, this order has a connection with the style, manner, and fulness of the examination, years somewhat in advance, and a larger fee; which it debar from taking a poor-law appointment, from dispensing, and from arranging with a chemist, with a view to a share of the profits derivable from dispensing. It is a *sine qua non* for election to the fellowship of this venerable Corporation, whose roll carries many of the greatest names in philosophy and physic; though, as some think, without at this time giving additional honour by the promotion.

Blackburn, March 23rd, 1873.

I am, etc., WALTER GARSTANG.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE SWEDISH LICENSE LAW.

SIR,—Allow me to call your attention to the Swedish License Law. An account of it is given in the *Family Treasury* for March 1873. The Swedish nation is becoming reformed through this law. I am, etc.,

Rochester, March 24th, 1873.

FREDK. J. BROWN, M.D.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

MEDICAL OFFICERS OF HEALTH.

SIR,—Can you, or any correspondent who has entered into contract as health-officer of a rural district, inform me as to how often in the year the authorities (and especially those of the Local Government Board) require the systematic or periodical visits to be made? I ask the favour of information upon this point in reference to a district of large area and small population. I am, etc.,

March 22nd, 1873.

MEDICUS RUSTICUS.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, March 29th; The Manchester Guardian, April 2nd; The Aberdeen Daily Free Press, March 29th; The Bath Express, March 29th; The Birmingham Daily Post, March 31st; The Constitution, or Cork Advertiser, March 28th; The Newcastle Daily Journal; The Eastern Morning News and Hull Advertiser; The North of England Advertiser; The Bedfordshire Times; The Derbyshire Advertiser; The City Press; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Morell Mackenzie, London; Mr. J. W. Langmore, London; Dr. H. Charlton Bastian, London; Mr. Chesshire, Birmingham; Dr. C. B. Radcliffe, London; A Correspondent; Dr. Hollis, London; Dr. J. W. Moore, Dublin; Dr. George Johnson, London; Dr. A. Leared, London; Dr. Kelburne King, Hull; Our Paris Correspondent; Dr. W. R. E. Smart, Penge; Mr. Soutter, London; The Secretary of the Clinical Society; Mr. Gaskoin, London; The Secretary of the Pathological Society; Dr. Myrtle, Harrogate; Dr. A. Sansom, London; Our Dublin Correspondent; Dr. Rumsey, Cheltenham; Dr. W. Ogle, Derby; The Rev. Dr. Haughton, Dublin; Mr. Eyton Jones, Wrexham; Dr. J. Crichton Biowne, Wakefield; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. Balmanno Squire, London; Mr. Crocker, London; Dr. Pierce, Chorlton; Mr. Bremridge, London; Dr. A. Ogston, Aberdeen; Dr. B. Foster, Birmingham; Mr. Teevan, London; Dr. Lauchester, Croydon; Mr. Lloyd Owen, Southsea; Mr. Midwinter, London; Dr. F. J. Brown, Rochester; Mr. Farrar, Boroughbridge; An Associate; Dr. Hawkes, Hanwell; Mr. Pope, Cleobury Mortimer; Mr. Walker, Spring Grove; Mr. A. Godrich, London; Dr. Barnes, Carlisle; Mr. G. F. W. Meadows, Otley; Dr. G. M. Humphry, Cambridge; Mr. Lowndes, Liverpool; Dr. Davey, Northwoods; Dr. Playfair, M.P., London; Dr. Lush, M.P., London; Dr. Dalrymple, M.P., London; Dr. Brewer, M.P., London; Dr. Bryan, Northampton; Mr. Rogers-Harrison, London; Dr. Seaton, Sunbury; Dr. L. E. Desmond, Liverpool; Mr. Heckstall Smith, St. Mary Cray; Dr. Ferrier, London; Dr. Brunton, London; Dr. Holman, Reigate; Dr. Russell, Glasgow; A Member; Dr. Burke, Dublin; Mr. Haynes Walton, London; Dr. A. Ransome, Manchester; Dr. Lionel Beale, London; Dr. Corfield, London; Dr. Joseph Rogers, London; Dr. Acland, Oxford; The Secretary of the Royal Medical and Chirurgical Society; Dr. Edwin Lankester, London; Mr. T. H. Bartleet, Birmingham; Dr. Packard, Philadelphia; Dr. Cayley, London; Mr. Poole, London; Mr. J. C. Booth, Padiham; Dr. Lane, Crossgate; Dr. Eames, Letterkenny; Dr. Trollope, St. Leonard's; Mr. Reed, Ryhope; Dr. Nunneley, Derby; Dr. Southey, London; Dr. Parsons, Dover; Mr. Rivington, London; Dr. Douglas Powell, London; Dr. Mackay, Cromarty; Dr. J. Ford Anderson, London; Mr. Manning, London; Dr. Moxon, London; etc.

BOOKS, ETC., RECEIVED.

Weekly Returns of Births and Deaths in the Punjab. By A. C. C. De Renzy, Sanitary Commissioner.

The First Annual Report of the Committee of Visitors of the Hereford County and City Lunatic Asylum, for the year 1872. Hereford: 1873.

LUMLEIAN LECTURES

ON

THE CONVULSIVE DISEASES OF WOMEN.

*Delivered at the Royal College of Physicians.*By ROBERT BARNES, M.D. LOND.,
Obstetric Physician to St. Thomas's Hospital.

LECTURE I.

The Changes in the Vascular and Nervous Systems wrought by Pregnancy.—The remarkable Influence of Pregnancy in creating and evoking Disease.—Three epochs of special proclivity to Convulsive Disease.—Special provision of Nerve-force and Irritability of Nervous Centres for Parturition, and probable special Hypertrophy of Spinal Cord.—All Generative Acts manifest an Emotional and Convulsive Element.—The factors necessary to produce a Convulsion.—The Eclampsia of Uræmia.

MR. PRESIDENT AND GENTLEMEN,—The graceful account of the foundation of these lectures, given by a predecessor, relieves me from the duty of doing more than to add my humble tribute to the honoured memory of Caldwell and of Lumley. Benevolent and beneficent men they undoubtedly were. The design of their foundation was to promote the cultivation of learning, by holding out the prize of honour to those who should be called upon by the College to impart it. I fear that in my case, at least, their benevolence exceeds their beneficence; and I am even tempted—suffering acutely as I do the pangs of parturition—to question their benevolence. I felt, however, that I had no right to decline a task which you, Mr. President, who rule the College with so much love and wisdom, have thought fit to assign to me. You were swayed, no doubt, by the thought that one who, like myself, has spent many years in the active practice and unintermitting study of a branch of medicine cultivated by only a small number of Fellows, might, even ought, to have gathered up some clinical facts, and made some reflections, which it would not be uninteresting to submit to the consideration of his brethren.

Facts comparatively unfamiliar, and reflections suggested by contemplation from a different standpoint, must almost necessarily be useful, as complementary to the knowledge picked up in our peculiar fields, and as corrective of the conclusions we are apt to draw from our special studies. We can always set each other thinking; and thought is always prolific.

This interchange of experience and ideas is clearly one of the great uses of lectures such as these. If this thought were present—and I have no doubt it was—to the minds of Caldwell and Lumley, how infinitely more useful, even necessary, is such interchange now! how greatly has Time proved their sagacity and wisdom!

If the motto of our College were true in the days of Hippocrates; if it were true at the day when the College was founded; does it not grow truer and truer every day? Life is as brief; but Art—who shall now attempt to measure its infinitude?

The Father of Medicine, a great intellect, himself might master all the medical science of his age; but such a comprehension has never fallen to the lot of his posterity. Grasping what he did, and epitomising it for future ages, one can imagine the old seer, inspired by the vastness of his thoughts, seeking to embody in one pithy and pregnant formula his prescient estimate of the wonderful growth of the art which he practised and taught.

How far that clear intelligence, or the still brighter genius of Harvey, who practised midwifery, would have approved the actual minute, and, still proceeding, subdivision of medical practice, it is now useless to speculate. It is hopeless for any one man so to practise, and so to study all the branches of medicine, as to combine harmoniously and profitably for science, the diverse materials that would accumulate upon him. He would be crushed under the overwhelming load.

There is nothing to be done, then, but to distribute the work amongst any workmen; and on all suitable opportunities to call them together aid in building up the ever-rising, but never-to-be-completed, Temple of Medicine.

Yet it must surely strike those who reflect, that subdivision of medical practice may be carried out to an injurious, even to an absurd, extent. The true medical mind will always refuse to look upon any one organ of the body as anything more than a dependent part of a whole. But the public seems to grow less and less reasonable upon this subject every day. I have recently been honoured by a visit from a lady of typical modern intelligence, who consulted me about a fibroid tumour of the uterus; and lest I should stray beyond my business, she was careful to tell me that Dr. Brown-Séquard had charge of her nervous system; that Dr. Williams attended to her lungs; that her abdominal organs were entrusted to Sir William Gull; that Mr. Spencer Wells looked after her rectum; and that Dr. Walshe had her heart. If some adventurous doctor should determine to start a new speciality, and open an institution for the treatment of diseases of the umbilicus—the only region which, as my colleague Mr. Simon says, is unappropriated—I think I can promise him more than one patient.

The fragmentary way in which medicine is studied, more especially in this town, undoubtedly interposes a serious barrier to the advancement of true knowledge. And it is not difficult to see that it acts injuriously upon the medical mind, disposing those who too exclusively study one branch to underrate the merit, and even the honesty, of those who study a different branch. This extreme splitting-up of medicine renders almost impossible the attainment of a full perception of pathology, or even of the import or any disease or symptom. It destroys the very idea of correlation, of the mutual reaction of different organs, and of the modes by which all the organs may be affected by one common condition.

It is a miserably narrow view to take of the practice of obstetrics, to regard it as simply the art of delivering women in labour. The study of menstruation, of pregnancy, of labour, of childbed, and of the phenomena connected with these conditions, opens up to the earnest practitioner a rich mine of facts illustrative of many of the most interesting problems in medicine. Out of this mine he may extract materials in profusion which he would look for in vain elsewhere.

There is scarcely any department of medicine or surgery upon which the clinical study of obstetrics may not throw the most valuable light. And in many instances this light partakes of the brilliancy of a well-designed experiment. For example, the interesting phenomena of thrombosis and embolism are hardly ever so well traced all through their etiology and pathology, as in many cases of childbed. The history of pyæmia or of septicæmia, or of irritative fever, would be very incomplete without taking into account the puerperal cases.

Many other blood-diseases are produced under the transforming power of menstruation or pregnancy, in a manner to bring before the eye of the clinician some of their most striking features. Thus, leucocythæmia may almost be said to be a disease of pregnancy. One of the most constant effects of pregnancy is a diminution in the proportion of red corpuscles and an augmentation in that of the white corpuscles; and in some cases this double abnormality is carried to the extent of producing the typical leucocythæmia. True, there are still missing links; but is it not bringing us something nearer to a solution of the problem when we start with a healthy woman, and see the disease grow up under the modifications wrought by pregnancy?

So it is with that remarkable disease, acute yellow atrophy of the liver, or malignant jaundice. A considerable proportion of all the known cases have arisen in pregnant women.

Not even surgeons witness more frequent or more instructive lessons as to the effects, immediate and remote, of rapid and profuse, or of repeated losses of blood.

Peritonitis in women must be continually misunderstood or misinterpreted, unless it be studied in connection with puerperal, menstruation, and the diseases of the ovaries and uterus.

The alterations in the constitution of the blood and in the dynamics of the circulation bring about the most remarkable changes in the general system, and in particular organs. Thus, the heart undergoes a normal hypertrophy under the double influence of increased demand to supply the uterus, and the embryo growing at an accelerating ratio, and to overcome the pressure exerted upon the abdominal aorta or pelvic branches. The heart is compelled to beat more powerfully and more frequently; and the inferior obstruction tends to divert the current of the blood propelled from the heart towards the head, causing inordinate tension of the cerebral arteries; hence at times, even during pregnancy, brain-apoplexy, and almost sudden death. And if we continue our observations to the act of labour, when the glottis is closed, the chest fixed, and the return of venous blood from the head is arrested or impeded, we find the tension of the cerebral vessels enormously increased, and extravasation is a more pressing danger. Another effect

of the altered dynamic relations of the circulating organs, and of the attendant altered quality of the blood, marked, amongst other changes which chemistry fails to trace, by loss of red corpuscles, by increase of white corpuscles, by excess of fibrin and of water, and by the empoisonment produced by the ingestion of an increased amount of matter that ought to be excreted, is of necessity greater strain upon the liver, upon the spleen, and especially upon the kidneys. Under this unwonted strain, the liver and the kidneys are often overpowered; they give up their appointed work, or perform it imperfectly. One of the most instructive chapters in the history of Bright's disease is that which relates to the almost sudden rise and rapid progress of albuminuria in pregnancy. Except in the case of the albuminuria consecutive on scarlatina, and in that of acute dropsy which follows exposure to wet and cold, we hardly know any instance where we can observe all the steps of the disease from its beginning. But here, in pregnancy, we may almost see the disease manufactured; we know some at least of the factors essential to its production, and we know, because we start with a healthy subject, that many conditions complicating the disease as observed in man, may be excluded as non-essential factors.

This form of disease, marked by albuminuria, has the most interesting relations to the nervous system; and these relations will form a larger part of the subject of my lectures. Convulsions are not unfrequently observed in association with the scarlatinal albuminuria, and with the albuminuria of advanced kidney-degeneration, to which the name of Bright's disease is more especially applied. But the outburst of convulsions in the albuminuria of pregnancy is far more frequent. Why is this? To account for this greater frequency, is there not some new factor, or at least some common factor, in a state of exalted energy? This is one of the questions which I propose to discuss.

Although many nervous disorders or phenomena in women are closely allied in etiology and nature to convulsion, I propose—not unduly to extend my theme—to limit myself almost strictly to the convulsive diseases. These are:—1. Eclampsia of Pregnancy and Puerperium; 2. Epilepsy; 3. Chorea; 4. Vomiting; 5. Tetanus; 6. Hysteria.

I do not pretend to deal with these diseases exhaustively, but simply to study them in some of their physiological and pathological relations, which seem to have been hitherto imperfectly apprehended, and to endeavour to define upon a rational physiological and clinical basis the principles of treating them.

I take the convulsions of pregnancy and labour first, not because this is a logical or physiological order, but because the conditions under which convulsions break out in pregnancy and labour, and the nervous phenomena, are so striking and so open to observation that they will best serve as a type which will guide to the more ready understanding of the other varieties of convulsion.

There are three epochs, or rather stages in the life of woman, at which she exhibits special proclivity to nervous diseases marked by convulsion. In the first stage, that of infancy, the proclivity is common to both sexes, but still, I believe, more marked in the female. Convulsions in children is a subject beyond my task. It has been treated by Dr. West in this place in a manner at once so masterly, and yet so full of grace, that it were presumptuous indeed to enter upon his domain. It is enough for my purpose, if I recall attention to the peculiar state of the nervous system in infancy. I mean its preponderant development, its special susceptibility to emotional and physical irritation. That this state is intimately connected with the wants of a rapidly developing organism, is one of the elementary facts in physiology. It has a direct application to my argument.

The next stage of proclivity to convulsion begins with the advent of menstruation, and terminates with the cessation of that function. This stage, of course, includes, and is continuous with, that of sexual life or reproductive capacity. It is during this stage that the proclivity to convulsive action is the most strongly marked.

The third stage runs almost imperceptibly on from the second. It is difficult to draw a sharp line of demarcation between them. Theoretically, however—that is, physiologically—the two stages are distinct. The third stage begins with the decay of the reproductive capacity, and is prolonged for an indefinite period, ranging from one or two to five years, or more, but is seldom prolonged into the age of senility.

This third stage may be called the stage of aberrant nervous action. During the two earlier stages the nerve-force is employed, except when disordered by morbid influences, in the work of definite functions. These functions being at an end, and the organs by which they were performed undergoing the involution of decay, there follows a period of anarchy, during which nerve-force, no longer finding useful employment, goes astray in every direction, provoking the wildest and most extravagant manifestations. By-and-by, the stage of adaptation or re-adjustment arrives; the nerve-force generated finds appropriate occupation, and all settles down into comparative order and calm.

The degree of proclivity to convulsive disorder varies greatly in these three stages of life, and in different individuals; so greatly, that we cannot help concluding that, in those who are the most prone to such disorder, there must exist some additional factor beyond the ordinary physiological factors which are common to all. And this we know to exist in some cases in the form of the strumous or the syphilitic diathesis, or in some more subtle condition of hereditary transmission. But in a large proportion of the cases of convulsive disease in pregnant women, we cannot invoke a factor of this kind. All the factors, whatever they may be, are produced under the proper conditions of pregnancy; grafted, as it were, upon a stock otherwise perfectly sound.

If we now inquire into the conditions which raise the nervous system of women into this state of inordinate convulsive and emotional affectability, we are led to the irresistible conclusion that they depend upon influences springing out of the reproductive function. The great convulsive disorders of women are almost strictly limited to the period of activity of the reproductive organs.

Every function requires for its performance a supply of nerve-force directed *ad hoc*. The functions of ovulation, of gestation, of labour, and of lactation, which in turn dominate over the entire organism of women, require a special and additional supply of nerve-force beyond that required for the ordinary functions of nutrition, locomotion, and thought.

The history of the animal kingdom abounds with illustrations of this proposition. I will draw but one from comparative physiology, and that shall be from the physiologist's devoted friend, the frog. In the spring, at the commencement of the breeding season, so great is the nervous excitability of this animal that a slight irritation of the skin, which at another time would produce no obvious effect, will induce almost tetanic convulsions.

It is easy to perceive analogous phenomena, sometimes quite as pronounced, in the human female, at the advent of puberty, at the periods of ovulation, during gestation, and eminently during the act of labour.

It is a fact deserving to be remembered, that during all the three stages of life marked by convulsive proclivity there is an exalted degree of emotional sensibility. We might even generalise further, and affirm that emotional sensibility proceeds *pari passu* with the convulsive liability. Almost always co-existing, it might be said that the two conditions are convertible into each other. Certainly, it may be said that each will often excite the other. Nothing is more common than for an emotion which, under ordinary circumstances, would be completely controlled by the subject, to evoke a fit of hysterical, epileptic, eclamptic, or vomitive convulsion, when the nervous centres are in a state which we may describe as *convulsive tension*. And on the other hand, if the convulsive fit be excited by reflex irritation, it is almost surely followed by an exalted degree of emotional sensibility.

It further deserves to be noted here, that emotion takes a large part in every act or process of the generative function. In short, emotional affectability is the measure of convulsive liability.

Another proposition I would state is the correlative of the preceding one. It may not be quite so obvious in its truth, but I think I shall be able to show that it is equally constant. It is this: an energy which may be compared with, if not identical in nature with, convulsion, is an essential element in the leading acts of the generative function. I have known instances of an epileptic fit being repeatedly induced by the sexual act. I have heard of several other like cases. Voisin mentions one. La Motte knew a woman who, not pregnant, always vomited "*solâ actione coitûs*".

In the female, and especially so in the lower mammalia, the sexual aptitude is strictly periodic, like the ovulation upon which it depends. What idea can we form of periodicity, unless it be that it is dependent upon an accumulation of nerve-force in readiness to be used when the returning occasion arrives?

Then, as to the influence of menstruation, or rather of its *primum mobile*, ovulation. In all ages the frequent association of this function with epilepsy and hysteria has attracted attention. Hippocrates said, "Nubile virgins, particularly about the menstrual periods, are affected with epileptic paroxysms, apoplexies, and groundless fears or fancies." He thus records his observation that the emotional faculty was exalted as well as the convulsive. What was true then is true now.

It is a matter of frequent observation that the first attack of hysteria or epilepsy coincides with the first effort at menstruation, and that a fit is liable to recur at successive menstrual epochs. In girls and women who do not exhibit hysteria or epilepsy, vomiting is a frequent attendant upon ovulation.

Dr. Laycock, who has illustrated this subject with great research and clinical sagacity (*On the Nervous Diseases of Women*, 1840), says, "The catamenia are seldom established without aching and neuralgic pains of

the back and lower extremities, partial anæsthesia (numbness), and tetanic contractions (cramps) of the legs."

In *pregnancy*, again, we see further manifestations of emotional and convulsive susceptibility. The vomiting of early pregnancy is familiar to every one. I shall study some of its more serious aspects in a succeeding lecture. I need not do more than cite the influence of pregnancy upon the mind; how it exalts emotional affectability; how it modifies character; how it even disorders perception and judgment. I will dwell upon what is not so familiar. I have known such an exalted state of reflex or centric irritability in many women, arising in early pregnancy, that the legs were seized with sudden uncontrollable twitchings or jerkings, so that the subjects were afraid to go out into society.

One woman, by no means fanciful, or given to introspection, the wife of a tradesman, active and earnest in business, describes herself "as if she had a galvanic battery within her at work": an apt illustration, marking well the irritability and explosive tension of her nervous centres. In these cases there is no albuminuria. Were this condition, that is, the correlative toxæmia, to arise, these women could hardly escape from eclampsia.

I know women who always are troubled with a cough when pregnant. It is not attended with any bronchial secretion; it is purely nervous; it is of explosive or convulsive character.

Labour.—It is no stretch of hypothesis to describe labour as a series of convulsions: convulsions, it is true, well directed to a specific end. So great is the nervous tension at this crisis that slight peripheral physical, or mental, irritation will easily provoke and maintain a renewal of the so-called "pain". The obstetric practitioner turns this irritability to account when he wishes to accelerate a labour actually begun, or to initiate the parturient process. When this irritability is in excess, or when some other cause impairing the cohesion of the ovum with the uterus is imported, spontaneous abortion or premature labour is the result; that is, if the nervous energy be well directed towards the uterus; otherwise, it finds a vent in the production of convulsions.

To show how nearly an expulsive labour-pain is allied to convulsion, we have but to observe the course of a pain towards the end of labour. A premonitory shudder, the forerunner of the storm, often a rigor, often vomiting, ushers in the pain, just as we frequently observe before the outbreak of a fit of epilepsy. Women have told me that at this moment they felt sure they were on the verge of convulsion. From the moment when the uterine contraction begins, voluntary power to stop the action ends; the patient may, indeed, give intensity to the effort by adding the force of voluntary effort, but she can hardly lessen it. And in a true expulsive pain she is even unable to withhold the aid of the voluntary muscles. This may seem contradictory; but the fact is, that at a certain point the expiratory muscles, which are usually under the control of the will, cease to be so. The glottis is closed; the chest-walls are fixed; the expiratory muscles contract powerfully; the muscles of the neck compress the veins. There is, as in epilepsy, trachelismus; black blood circulates, or is delayed, in the brain. Delirium or temporary unconsciousness supervenes. The resemblance to epilepsy is, for the moment, so close that the two conditions can hardly be distinguished. If in such case a dose of ergot be given, the convulsive character is so intensified as to make the resemblance even closer still. The ergotic contraction may last for ten or even twenty minutes; it is almost tetanoid in its character. Under the strain it puts upon the lungs I have seen universal emphysema occur, spreading from the neck; and the strain upon the vessels may cause rupture and extravasation, apoplexy; and this even when no ergot has been given. This is the history of some cases of sudden death in labour.

How can we account for that enormous supply of nerve-force by which the work of parturition is effected? It is hardly an exaggeration to say that, in many women, there is a larger expenditure of nerve-force in the execution of this function, all spent within a few hours, than they have ever before expended upon muscular exertion for weeks and months together. For many women, the day of childbirth is the only day's hard work they have ever known. What does this imply? It seems to me to be a physiological necessity that to generate the inordinate supply, a corresponding development, a physiological hypertrophy, analogous to that which takes place in the heart, should take place in the spinal cord. This is a distinct proposition from that of Dr. Robert Lee, that the nerves distributed to the gravid uterus themselves are increased in bulk and number. I cannot avoid the conclusion that, since organic development must keep pace with functional activity, the spinal cord really does undergo an increase of development during pregnancy; and that we may find in this increased organic development and power the explanation of the readiness with which it responds to the normal demand of the uterus and embryo for their de-

velopment, to the sudden extraordinary demand for the muscular energy of labour, and to the abnormal waste or diversion of nerve-force under certain morbid conditions.

It is right that I should state that this hypothesis is based purely upon physiological and clinical inductions; that I have no anatomical data upon which to support it. The truth is, we know little of the peculiarities of states of the nervous centres in pregnancy and childbed. The brain is occasionally examined; but chiefly so when symptoms, such as those of apoplexy or embolism, point to some definite pathological change. The spinal cord is rarely examined at all. The subject is worthy the attention of a Lockhart Clarke.

At this point we find ourselves naturally led to ask, why it is that labour-pains do not more frequently pass into epileptic convulsion? The question can be answered with some precision. In the ordinary condition, the healthy correlation of resisting power, of irritation, and of nervous energy is so harmoniously preserved, that all works in an orderly circle. But disturb this correlation, and the nervous energy is wasted or misapplied. What are the chief causes of disturbance? Clinical facts show them to be: 1. Altered condition of the blood; 2. An hereditary or acquired peculiarity in the nervous centres.

Both of these conditions need not co-exist; one of them is enough.

To bring together the factors which combine to produce a fit of puerperal eclampsia, we find them to be:

1. Accumulated irritability of the nervous centres, the product of an altered state of nutrition induced in them by pregnancy, so as to provide a due supply of nerve-force for the work of the uterine muscles and the muscles auxiliary to the uterus.

2. An eccentric stimulus usually conveyed from the uterus to the nervous centres, calling these into action.

When these two factors only exist, a healthy labour may result.

3. But a new factor may be superadded. An example of this we find in that peculiar state of the blood which is marked by albumen in the urine. The blood is literally poisoned. The effect of the circulation of such blood in the system generally, and in the nervous centres, is to increase enormously their irritability. Much slighter causes will now evoke the dormant energies of the cerebro-spinal axis; and the danger is great, that the excess of irritability will run into pathological action. When this toxæmic condition exists in pregnancy, two things are always threatening: the one is premature labour, the other is eclampsia. Either event may be first in order, each may provoke the other. It has been commonly supposed that labour is the immediate cause of the convulsion. But this is only true in a limited number of cases. At any moment a pregnant woman, the subject of albuminuria, may be seized with convulsion without the slightest evidence of an initiatory attempt at labour. The fact is, that the poison in the blood, intensifying the irritability of the nervous centres, disposes them to respond by a storm of nervous energy on any excitation; and thus to anticipate the normal advent of labour. A third, and a negative result may happen, which it will be convenient to dispose of at once. The pregnancy may continue to term, and no convulsion may occur. This event, which experience has amply established, was stoutly denied by the late Dr. Lever, who was one of the first, if not the first, to establish the connexion between albuminuria and puerperal eclampsia. I have heard him affirm, without qualification, that albuminuria always induced eclampsia, and conversely that eclampsia never existed without albuminuria. He also affirmed, as absolutely, that albuminuria was the product of pressure upon the kidneys or the emulgent arteries by the gravid uterus, adducing in proof its frequent occurrence in women pregnant for the first time.

My own observations enable me to set aside both these conclusions. Absolute, universal dogmas in medicine are always dangerous. They are probably always wrong.

Analysing the histories of fifty-three cases of puerperal eclampsia, of which I have preserved notes, I find that in sixteen the convulsions broke out without any antecedent sign of labour; labour being either an epiphenomenon caused by the convulsion, or induced by the medical practitioner. I believe it is scarcely possible for eclampsia to break out, and for the pregnancy to go on. One of two things will almost certainly happen. First, if not delivered, the cause of the toxæmia persisting, the convulsions will be continued and prove fatal by exhausting the sufferer by shock or by direct lesion of the brain; or, secondly, labour will be induced by the circulation, or stagnation, in the nervous centres and uterus, of blood charged with excess of carbonic acid. Such blood acts, as Marshall Hall and Brown-Séquard have shown, as a direct stimulant to muscular contraction. Under its influence—and I am not now speaking from the authority of these great physiological experimentalists, but from my own careful clinical observations—the convulsion occurs first; one feels the os uteri perfectly closed, and no uterine contraction. Presently, when one or more fits

have occurred, when black blood is circulating, uterine action begins. Once started, the nerve-storm seizes the uterus as well as the voluntary muscles; the sphincters relax, the os uteri dilates, and the labour proceeds.

It is only thus that we can account for the large proportion of cases in which labour comes on prematurely at six, seven, or eight months of gestation.

I have, however, seen a case in which uræmic eclampsia broke out in the eighth month, and the pregnancy went on to term.

I have said that the convulsion may be the immediate cause of labour. The converse is also true. Labour may be the immediate cause of the convulsion. Uterine action, with or without the pressure of the head upon the irritable neck of the uterus, acts as an excitor of convulsion. In a certain proportion of cases, the first fit follows upon the dilatation of the cervix, and the contact of the head with the os uteri. The influence of uterine action may be clearly traced. After a fit there is a period of comparative calm, marked probably by stertor, coma, and mental unconsciousness. We hope that the calm will continue; but, presently, we see the patient writhing uneasily as if from abdominal pain; on placing the hand upon the abdomen, we feel the uterus contracting; and then a fit breaks out again. This order of events may be repeated several times. So long as the uterus is quiet there is no fit.

We may test the effect of uterine irritation more directly still. We may ourselves apply the irritation by touching the os uteri with the finger for the purpose of examination, or with the view of accelerating the labour. In many cases a convulsion immediately follows.

And this is an observation I have often made. Is it at times necessary to pass the catheter. So great is the nervous tension, so lively the irritability of the nervous centres, that the merest touch of the vulva induces such resistance—albeit the patient's mind is unconscious—that it may be impossible, without the aid of chloroform, to pass the instrument. Nor is the hyperæsthesia limited to the genital organs. The whole surface of the skin is irritable to an astonishing degree. It is a common impulse, from which some medical men are not free, to seek to exorcise the fits by dashing cold water on the face, by applying blisters or sinapisms to the neck, or calves. A fit is too often the consequence. Irritation of the skin, especially the sudden impression of cold upon the face or chest, by its action upon the respiratory nerves, is a pretty sure way to provoke a fit. I have seen the jar, the shaking of the house, caused by a heavy carriage passing along the street, produce a fit. And when the stage of coma is passing off, when consciousness is returning, and with it emotional susceptibility, almost any mental impression will act like a physical shock, and again a fit is produced.

I detail these observations, not only because of the light they throw upon the pathology of convulsion, but also because of the great practical lesson in treatment which they enforce.

But convulsion in pregnancy or labour may occur without albuminuria. In this case we must invoke an equivalent *tertium quid*, something which lends intensity to the normal physiological erethism of the nervous system. This something may be another kind of blood-affectation, or it may be some altered condition of the nerve-substance associated with the strumous or syphilitic diathesis, or some indefinable hereditary taint.

In another order of cases, the outburst of convulsions is deferred until the natural term of gestation. Here we may suppose one of two things: either the albuminuria did not begin until near this term—and this is probably often the case—or, existing for some time before, the induced irritability of the nervous system was not intense enough, or the stimulus was wanting to start the convulsions. This latter hypothesis is also often true. For albuminuria may exist, beginning in mid-pregnancy, and go on to the end without necessarily inducing either convulsion or labour. Of this I have seen unequivocal examples. The subjects have been tolerably robust, not very impressionable, and they have had the good fortune to escape those exciting influences, moral and physical, which commonly cause the storm to burst.

I have offered the conjecture that the blood-change indicated by albuminuria may arise rapidly, even suddenly. The observations must be very rare in which the urine, being free from albumen one day, has been found changed the next. Naturally, the urine is not examined unless there is a present pathological indication.

In some cases, the albuminuria existed before the pregnancy, depending upon chronic Bright's disease. Of course the pregnancy does not mend matters. The albuminuria persists. But if I may trust the few observations to the point which I have been able to make, convulsion is less likely to ensue than in the rapidly-produced acute form. We may imagine that in chronic Bright's disease a process of accommodation takes place, whilst in acute albuminuria the nervous centres, suddenly invaded by poisoned blood, are unprepared for resistance.

But there is another hypothesis, one which may have some facts to rest upon, but which is decidedly negatived by other facts. It has been said that the convulsion is the first event, and the albuminuria the second; in short, that the convulsion causes the albuminuria.

I have notes of cases which are directly adverse to this hypothesis. I have seen not a few cases in which, either on account of a history of convulsions in a former pregnancy, or because anasarca, headache, amaurosis, the frequent attendants of albuminuria, appeared, the urine was tested, and found to be albuminous. In some of these cases eclampsia broke out, in others it did not.

In a considerable proportion of cases, the appearance of amaurosis, vertigo, anasarca, preceding the fit, affords the strongest presumption that albuminuria has set in. Again, to show that a convulsive fit will not produce albuminuria, we have a number of cases of epileptic fits, even attended by protracted stertor, in which no albumen could be found.

It is interesting in this connexion to remember that, whilst there appears to be no poison of animal origin so efficacious in causing convulsion and labour as that which attends albuminuria, all the so-called zymotic poisons, as those of scarlatina, variola, typhoid, typhus and relapsing fevers, exercise a marked influence in provoking premature labour.

We see, then, in these observations, the conditions under which convulsions are produced. Even Brown-Séquard could not demonstrate on his guinea-pigs the etiology of convulsion with more precision. Given, the two conditions of pregnancy and a peculiar blood-poisoning, and convulsion may be predicated, almost with certainty, so soon as an adequate emotional or peripheral irritation is applied. Take away either of these two conditions, and the probability is that irritation will fail to produce convulsion.

After labour, the albumen commonly disappears rapidly, and with it disappears the liability to the recurrence of convulsion.

OBSTETRIC MEMORANDA.

LIABILITY TO MALPRESENTATION OF THE FŒTUS DURING LABOUR.

THE following cases open up a wide field for inquiry. During the summer of 1872, I was asked by Mrs. M. to attend her in her confinement, which she expected in a few months. She told me that she had already had eight children, all at full time, and that four of the eight had been either breech or footling-presentations—two of each, she thought. About the time she had mentioned I was sent for, and, on making an examination, I found the os half dilated and a breech presenting. All went well, and in half an hour she was delivered of a large male child. On thinking over this case, I remembered that, when a student, I had been sent out from the Maternity Hospital, in which I was taking out my practical midwifery, to attend a woman who, I found on my arrival at her house, had had a breech-presentation in her previous confinement. She was confined soon after my arrival, and, as before, had a breech-presentation.

The object of these observations is to induce others to contribute to the solution of the question, Is a woman who has had a breech or footling-presentation at one labour more liable to the same at her subsequent labours than any other woman of the community? It will be seen that I leave shoulder and all cross-presentations out of the question, as they have been more closely investigated, and definite though not similar causes have been assigned for them, as form of the pelvis, obliquity of the spinal column, irregular action of the abdominal muscles and position of the placenta, etc. We confine ourselves to the reversing of the ovoid. Churchill gives the number of breech cases in 197,318 deliveries, as 3,325, or one in 59½; and the number of footling or knee-presentations in 192,174 deliveries, as 1,831, or one in about 105; so that there must be something more than chance in one woman having three breech and two footling-presentations in nine deliveries, and another having two successive breech-presentations. Statisticians have given us the percentage of every sort of presentation. Most obstetric writers tell us of the forceps having been used, or the perforator several times with, or the Cæsarean section even having been performed, more than once in the same woman; but none, so far as I am aware, have mentioned the fact of a woman having had an abnormal presentation of the foetus in more than one labour. If those of our brethren who have a large obstetric practice will give us the benefit of their experience, we shall soon know whether to answer the above question in the negative or in the affirmative.

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CROONIAN LECTURES

ON

MIND, BRAIN, AND SPINAL CORD,

IN CERTAIN MORBID CONDITIONS:

Delivered at the Royal College of Physicians, March 1873.

By C. B. RADCLIFFE, M.D., F.R.C.P.,

Physician to the Westminster Hospital, and to the National Hospital for the Paralysed and Epileptic: etc.

LECTURE III.

THE subjects to which I would wish to direct attention in the present lecture are two in number. The first is a disorder which often occurs in practice, but which as yet, so far as I know, has escaped distinct recognition—a disorder which I would venture to call *cerebral exhaustion*. The second is a disorder closely akin to this, for which *spinal exhaustion* would seem to be a fitting name—a disorder often disguised under the mask of hysteria so called. In what I have to say there will be little about spinal exhaustion, for the hour allotted to me will be very nearly gone when I have said what I want to say upon the subject with which I choose to begin—namely, cerebral exhaustion; but this matters little in reality, for much of what is left unsaid would be little more than a repetition of what will be said.

CONCERNING CEREBRAL EXHAUSTION.

The symptoms of cerebral exhaustion are numerous and various; but, as I hope to show before I have done, neither vague nor inconstant. In considering them it matters little what plan is pursued, provided they are all included in it. It is, indeed, enough to take them *seriatim*, with little or no regard to any method of classification; and this is really what I propose to do. Or, if I do any more than this, it is merely to put them in certain groups, four in number, in which, without any sufficient reason, perhaps, they have come to arrange themselves practically in my mind.

Failure of memory, and of mental energy generally—sleepiness or the reverse—depression of spirits—and unusual irritability of the temper—are the symptoms, in all probability, which first arrest the attention, and which I would venture to place in the first of the four groups I have mentioned.

The symptom first named—*failure of mental energy, of memory most particularly*—must be looked upon as the symptom of symptoms. Where the patient has no occasion to exercise his mind, this symptom may not force itself upon the attention; but not so in the contrary case. Here, without any questioning on the subject, the complaint made is almost sure to be that the “headwork”, which was once easy, has become all but impossible, and that the little work done is not well done. It is no longer possible to fix the thoughts to the task in hand; the thoughts themselves have lost all vividness, and working in a hurry, working against time, has become a thing scarcely to be thought of, any pressure in this direction producing a state of helpless distress analogous to nightmare, instead of being, as it ought to be, and as it once was, a stimulus to exertion. The feeling is, that rest must be had at any price. Or the mental inactivity may show itself in other ways—in loss of memory, most particularly and most commonly. But it is not necessary to multiply illustrations of the way in which this inactivity may declare itself. In one way or another, more or less obvious and unmistakable, it does show itself in all cases of cerebral exhaustion: the fact is not to be questioned, and it is only with the broad fact that I have to do at the present moment.

Cerebral exhaustion, again, is very likely to show itself in *increased sleepiness or the reverse*. Usually, the brain wants more sleep to enable it to do its work. It is very easy, however, to make a mistake upon this point. Nothing can be more certain than that sleep at all in excess, instead of refreshing, only stultifies; and what at first appears to be cerebral exhaustion may now and then turn out to be in reality no more than this stultification, the natural result of yielding to a lazy disposition to sleep. Still, sleepiness may be, and often is, a marked symptom in cerebral exhaustion, especially where the patient previously was anything but sleepy, and where he now frets at finding that he cannot keep awake as he once did. Or the cerebral exhaustion may show itself in wakefulness rather than in sleepiness—in wakefulness, which often, before advice is sought after, has led to a habit of drug-ging or drinking at bedtime. And herein arises very frequently a grave

complication, for after a time it is not a little difficult to decide whether the symptoms have to do with cerebral exhaustion or with this habit—whether the cerebral exhaustion is a primary disorder which has led to this habit, or merely or mainly a secondary effect of the habit. That cerebral exhaustion is infinitely aggravated by such a habit, there can be no doubt; indeed, the longer I live the more I am convinced that there is scarcely any practice more mischievous than that of having recourse, under the least sleeplessness, to the medicine-chest or the cellar, and that cerebral exhaustion is only one of the many ways in which in the end the system is likely to be compromised by yielding to it.

Depression of spirits is another symptom very commonly met with in cases of cerebral exhaustion—one of the earliest in making its appearance, in all probability. As in insanity, so in cerebral exhaustion, melancholy, more or less marked in degree, is by far the most prominent mental mood. The patient is “out of heart”, to say the least, and very much disposed to give up in the struggle, whatever that may be, in which he is engaged.

Along with depression of spirits there is also very often *unusual irritability of temper*. There is a marked change in this respect—a person previously placid and good-tempered becoming irritable and easily provoked to anger, or an irritable person more irritable. The irritability is unusual—that is to say, it is either an altogether new mood of mind, or else an old mood greatly magnified.

After these symptoms, and forming another equally arbitrary group, those which next claim attention are—a continued craving for food and stimulating drinks, for the latter especially; lessened locomotive power; lessened control over the bladder; lessened sexual activity; inequalities of circulation; and perhaps an aged appearance.

A common symptom in many cases of cerebral exhaustion is, without question, *a continual craving for food and for stimulating drinks, for the latter more especially*. The patient will have it that he must sink unless he be constantly taking food; and often he will go on eating whenever he can, until his stomach resents, in some unmistakable way, this disorderly mode of procedure. Or the craving is, not for food, but for stimulating drinks. And no wonder that it should be so; for the feeling of sinking which leads to it is met by stimulants in a way in which it is not met by food and rest merely, especially in the case where the stomach has been first tired out by the yielding to the craving for food. In many cases, no doubt, there is no such craving as this, and no yielding to it if it exist; and yet, even in these cases, a suspicion of its latency is often suggested by the eagerness of the patient to know, not so much what he may eat, and how much, but what he may drink, and how much. In too many cases, also, there is evident dissatisfaction at being restricted within moderate bounds in this matter. Where these moderate bounds may be is, of course, not always easy to say. Of this, however, I am sure, that they are often overstepped, and that this overstepping has very frequently not a little to do with bringing about cerebral exhaustion and many other grave derangements of the health. As it seems to me indeed, it is impossible to exaggerate the evils arising from the habit of a little exceeding the bounds of moderation in the use of alcoholic drinks, especially when it shows itself in the taking of “pick-me-ups” of various sorts between meals. The case is like spurring a horse needlessly. For a time, perhaps for a long time, all goes on well, and then comes a breakdown in which the spur fails to tell—a breakdown, it may be, in which it may be impossible ever to get up again under any amount of spurring. Altogether, indeed, I am very much disposed to think that occasional downright intoxication is a less grave evil than habitual transgression a little beyond the bounds of moderation in the use of alcoholic drinks. At all events, the fact remains, that a continual craving for food and for stimulating drinks, for the latter especially, is a common symptom in many cases of cerebral exhaustion, and that very often the difficulties of diagnosis and treatment are not a little complicated on this account.

As in neuriasis, so in cerebral exhaustion, a very early and prominent symptom is *lessened control over the bladder*. The patient cannot hold his urine as long or as well as he did formerly; his sleep may be much disturbed and broken for this reason; or he may have to wait a considerable time before the bladder will act. Often, too, the urine is neutral and over-abundant. Much distress may be caused by this state of things, and not unfrequently there may be a suspicion in the mind of the patient that he is suffering from disease of the kidney or bladder, when, as the sequel shows, he is really suffering from cerebral exhaustion. As the sequel shows, I say—for, as this state of exhaustion passes off, the vesical disorder passes off likewise.

Lessened control over the bladder is almost always associated with *lessened locomotive power*. Now and then, however, either of these infirmities may exist without the other, and that, too, in no trifling degree of development. Usually there is no difficulty in detecting the

failure in locomotive power. There is, if no more, the loss of a certain springiness in the gait; there may be as much as an actual copying of the heavy shuffling manner of using the feet which belongs to advanced age. Walking exercise, no longer a pleasure, has become a thing to be dreaded, the mere thought of having to walk often making the legs aching and heavy, and not the legs only, but the head and the whole body also. A stick is felt to be almost a necessary help in getting along. As regards locomotion, indeed, the state of things in cerebral exhaustion is that which suggests, more or less painfully, the idea of old age. Nor is this regarded as a matter of secondary importance by the patient. On the contrary, it is the particular failure to which he is likely to call attention at the very beginning of his story, if he be allowed to tell this in his own way.

In many cases of cerebral exhaustion, also, there is marked *inactivity in the sexual function*. Often, indeed, this function for the time is in total abeyance. The patient is very likely to say that he does not know what has come to him in this respect, even before he says anything about the two symptoms which have been last mentioned—the lessened power over the bladder, and the lessened locomotive power. I remember, indeed, no single case to which I would give the name of cerebral exhaustion, in which marked inactivity of the sexual function was not an early and very prominent symptom.

Inequalities of circulation, as shown in cold hands and feet, in local congestions of this organ or that, and in various other ways, may also be mentioned as deserving a place among the symptoms of cerebral exhaustion. Artificial warmth is felt to be more necessary than formerly, or at least better protection from cold; cold is more apt to be followed by local congestive reactions, in the head, it may be, or anywhere. The vaso-motor system of nerves does its work less perfectly, and a state of undue contraction or undue relaxation of the vessels is the result, the latter state easily following upon the former; slight exhaustion, however brought about, being a sufficient cause for the change in either case, whenever there is a state of things which may be spoken of as cerebral congestion.

An aged appearance is another point which is likely to be observable in persons suffering from cerebral exhaustion. These persons are usually almost always advanced or advancing in years—years which will have their varied and well known marks; but, whatever the age of the patient, whether this be actually advanced or not, what is noticed is that these marks are exaggerated, and, for the particular age, premature also. In cases of cerebral exhaustion, indeed, it is no uncommon thing to find that the patient is several years younger than he appears to be.

As entering into another group, and as marking a somewhat more advanced stage of the disorder, the symptoms which next demand attention are—*malaise at the back of the head and neck*, *vertigo*, *disposition to tears*, *immoderate yawning*, and *bouts of breathlessness and faintness*.

A very frequent symptom in cases of cerebral exhaustion is a feeling of *malaise at the back of the head and neck*. This feeling may amount to actual pain; more generally it takes the shape of weight. Often it is a very distressing symptom, which cannot be forgotten during the day, and which even gives a nightmare-like complexion to the dreams during sleep. Often, too, it is distinctly connected with head-work, and only let this be suspended, and, if not absent altogether, it is all but forgotten.

In very many cases of cerebral exhaustion, also, a feeling of *vertigo* is of frequent occurrence. Any trifling disorder of the stomach is apt to show itself in this way, or any unusual bodily or mental effort or commotion. Very often it happens only or chiefly on getting up in the morning, when for the moment it may be supposed that the brain is receiving a little less blood than it had received while in the recumbent position. Or it may happen in the act of stooping or straining, when the brain may be supposed to be somewhat congested. As a rule, however, it would seem to be necessary to associate vertigo with a bloodless, rather than a bloodshot, state of the brain, and to seek for a remedy in something which will rouse the circulation effectually. Nor is a different conclusion to be drawn from the history of the cases in which there is more or less congestion along with this vertigo; for this is sure to be venous rather than arterial—a consequence, in all probability, of simple want of power in the circulation.

Another symptom often present in the cases under consideration is *undue disposition to tears*. The eyes fill and the lips quiver under the least provocation to such a display of feeling, or without it. In anyone who is naturally very emotional this symptom, of course, means very little, but not so in a person who exhibits other signs of cerebral exhaustion, and who previously had a reasonable amount of control over his feelings. In this case, as a rule, nothing can be more ominous. Imperfect control over the emotions, however, does not always have

this serious significance, even in this case. I have known many patients with jaded brains in whom this symptom was present and prominent who recovered the full command over their feelings as the brain-power returned, and who have not relapsed as yet. Still, unfortunately, the rule would seem to be that cerebral exhaustion has already become a very unmanageable disorder, and that it is tending to pass into that still graver form of brain-disease of which general paralysis is the extreme manifestation, when undue disposition to tears stands out at all conspicuously among its symptoms.

As I am reminded by Dr. Farre, *immoderate yawning* may also deserve a passing notice as a symptom of cerebral exhaustion. Often, no doubt, yawning may be no more than a bad habit, and never, perhaps, is it of marked significance as a symptom. Still yawning may be more than a bad habit, and when it is so, especially if it be at the same time something new to the patient and something which cannot well escape notice, then it may point to a jaded brain—may deserve a place among the symptoms of cerebral exhaustion, that is to say.

In very many cases of cerebral exhaustion, in those perhaps more especially in which an attack of hemiplegia is imminent, there are often marked *bouts of breathlessness and faintness*. The patient while talking suddenly comes to a stop—to a standstill, also, if he happen to be walking at the same time. He feels as if for the life of him he could not say another word or take another step without giving himself time to recover breath. He may feel faint, but it is the want of breath of which he is most conscious, and most disposed to complain. His wind has gone, and any continued effort in talking, or walking, or standing—in standing, most of all, tries him in a way he cannot account for. Often he will not be convinced that his lungs or heart are not seriously wrong, and occasionally what is said of him by his medical advisers is calculated to confirm him in this conviction. He may even be sent to spend the winter in a warm climate for supposed lung-weakness—I have known several such cases—when his disorder was nothing more than cerebral exhaustion about to issue in hemiplegia, and when all that was wanted was, not some sunny and genial spot far away where a good deal of exercise might be taken every day, but rest in an arm-chair at his own fireside. I have known several patients in such case who have derived no benefit from change of climate, so far as their bouts of breathlessness were concerned, but who at once became well in this respect when compelled to keep still by an attack of paralysis. And often and often have I seen the same thing happen—the bouts of breathlessness and all the other symptoms of apparent lung or heart weakness passing off—after an attack of hemiplegia. How this happens it is not easy to say. It may be that one great cause of the breath being affected in this manner is over-exertion from walking or standing, and that this is obviated by the paralysis. And certainly this is no irrational supposition, for the very occurrence of hemiplegia shows that the power of the brain was gravely compromised in the direction of walking and standing. Indeed, it may be supposed that the hemiplegia itself, as well as the bouts of breathlessness, might have been prevented if more care had been taken to economise the powers of a jaded brain in the matter of walking and standing. The latter trouble may certainly be in great measure prevented by doing this. At all events the fact remains, that marked bouts of breathlessness and faintness, independent as it would seem of any grave trouble in lungs or heart, must be included among the symptoms of the disorder of which I am endeavouring to sketch the outline, namely, cerebral exhaustion.

And, lastly, there is a group of symptoms of still graver import—symptoms belonging, as a rule, to a still more advanced stage of the disorder—namely, *epileptiform attacks* of one kind or another; *transitory hemiplegia*, *transitory lightheadedness*, *transitory coma*.

Epileptiform symptoms must certainly be included among the symptoms of cerebral exhaustion. Very often these may be overlooked for a short time, as when they happen under the guise of hidden seizures during sleep, or as transient flashes of *petit mal*—flashes often so transient as to be unnoticeable, unless a competent observer may happen to be looking in the patient's face at the moment. Very often all that is noticeable may be fits of unaccountable sleepiness, followed by forgetfulness, or lightheadedness, or weakness, with numbness or tingling, it may be of a hemiplegic character. Hidden seizures, in a word, would seem to be the rule rather than open seizures; still, not unfrequently the attacks are open enough, with all the most marked characters of the fully developed epileptic or epileptiform paroxysm. As a rule, also, these attacks would seem to be connected with a bloodless rather than with a congested state of the brain. It is, I believe, a mistake ever to connect them with an over-active state of circulation in the brain. The immediate precursor of the perfect form of the paroxysm is a sign which is somewhat difficult to catch—corpse-like

paleness of the countenance. Delasiauve was the first to notice this phenomenon. Trousseau insists upon it as a mark which distinguishes true epilepsy from feigned epilepsy. "Il est une signe," he says, "qui se produit au moment de la chute, qui n'est imitable pour personne; c'est la pâleur très prononcée cadavérique, qui couvre pour un instant la face épileptique. Nous ne la voyons pas, parceque nous arrivons toujours trop tard, alors que la face est déjà d'une rouge très prononcée." And I can fully corroborate the correctness of these statements. In fact, the general form of the epileptic or epileptiform paroxysm, the *haut mal*, begins in the same way as the partial form, the *petit mal*, for it is allowed by all that cadaverous pallor of the countenance is the initial symptom in cases of *petit mal*. Moreover, I can testify to the existence of a corresponding pallor at the same time deep down in the eye; for on several occasions, while happening to be examining the eye with the ophthalmoscope when an attack of *petit mal* has come on, I have seen the pupil dilate and the vascular blush in the fundus become quite pale. This I have seen again and again, for not unfrequently the ophthalmoscopic examination will of itself bring about an attack of *petit mal* where there is much predisposition to it. And, certainly, I know no evidence of a contrary character; none to connect the epileptiform disorder, *haut mal* or *petit mal*, with a congestive state of the brain, either active or passive; none, certainly, in the epileptiform disorder, which has to do with cerebral exhaustion. There may be more or less passive venous congestion; but this really means weakness of the circulation, and confirms rather than contradicts the inference already drawn, that the attack has its origin in failure of the circulation, not in active congestion of any kind anywhere. Indeed, it would appear that the cases of cerebral exhaustion in which there are congestive appearances in the head are, as a rule, not the cases in which this exhaustion declares itself in epileptiform trouble of any sort.

Not unfrequently, also, cerebral exhaustion makes itself known in a still more alarming way, even in *transitory hemiplegia*. It is no uncommon thing for a patient suffering from this disorder to have an attack in which, as in hemiplegia from apoplexy, he completely, or all but completely, loses power and feeling in the arm and leg of one side of the body, and in one side of the face, and in which his speech is lost and his tongue turned in the same way. Usually, however, the attack is not so complete as this, and often it shows itself only in a little numbness or tingling, with just a suspicion only of a loss of voluntary power, in the parts usually affected. In any case it may be difficult *not* to associate a first attack with apoplexy, or softening, or other grave organic mischief in the brain; indeed, it is only after a certain time has elapsed, and the history of the patient supplies proof that the symptoms may again and again pass off speedily, and again and again return, that a certain diagnosis is possible. And even in this case it may happen that an attack which does not pass off may follow several apparently similar attacks which did pass off. I knew, for example, an old gentleman who had right hemiplegia with aphasia for six months before death, from—as it appeared on *post mortem* examination—extensive apoplectic effusion in the left hemisphere of the brain, and who, during the previous twenty years of his life, had no less than twelve distinct attacks of the same sort, only less complete in degree, each of which, after lasting from two to ten days, passed off completely. To some extent, perhaps, the diagnosis of hemiplegic symptoms from cerebral exhaustion may be facilitated by the presence of other symptoms belonging to this disorder, but not always to any great degree, for hemiplegia from apoplexy, or softening, or other grave organic lesion of brain, may also be ushered in by symptoms of cerebral exhaustion: indeed, for the most part, all that can be done is to give the patient the benefit of the doubt, and to wait in the hope that the attack may prove to be transitory; and, in short, all I can say in addition is this—that, in reality, these transitory attacks are much more frequent than is commonly supposed—that many of them come and go very much as epileptiform convulsions come and go, as it were paroxysmally—as if, indeed, there were, what there may well be, in fact, some common cause underlying the hemiplegic and the epileptiform condition.

Delirious wandering is another symptom requiring more than a passing notice. Sometimes—when the patient is old especially—this, indeed, may be a very conspicuous symptom, the state then being not remotely akin to that which culminates in dotage. Usually, however, it is at once more transient and less conspicuous, in which case it may have to do with some epileptiform seizure, hidden or otherwise, or merely with a lessened tolerance for stimulants—a quantity before easily tolerated, if not actually taken with advantage, now giving rise to a state of intoxication. In this direction the head is not so "strong" as it used to be, and for this reason—wine more easily shows itself to be the mocker, which it is so frequently. In the majority of cases, however,

there is reason to believe that this temporary aberration of mind of which I am speaking, especially when recurrent, points to the epileptiform basis of which I have spoken; and that in this respect the history of mental aberration from cerebral exhaustion agrees substantially with that of mental aberration in other forms.

Another symptom of cerebral exhaustion, and the last to which I would wish to direct attention, may be *transitory coma*—a state often only distinguishable from that which attends upon apoplexy, or certain conditions allied to it, by the fact that it may presently pass off completely, to return again and again, and again and again to pass off, as completely it may be. Here, as with the hemiplegia and the delirious wandering already mentioned, there is evidently an epileptiform basis. With the coma, however, more frequently than with the two other states which have been named, there may be a more frequent and obvious connexion with a state of cerebral congestion—a closer connexion with apoplexy—than in the other cases. Still, as Trousseau has pointed out, this congestive state is not always beyond question, and what is only certain is this—that often the coma is to be explained most easily in the way in which the coma of epilepsy has to be explained. But be this as it may, there is a coma connected with cerebral exhaustion which is not so serious in its consequences as the coma dependent upon apoplexy and certain degenerative changes in the brain, and for which the treatment is likely to be different in many respects from that which would be called for in coma associated with cerebral pressure—a state of coma which may pass off without leaving the patient much the worse for what had happened to him. While the coma continues it may be very difficult to pronounce positively as to its nature or cause. My own conviction is, that coma from simple cerebral exhaustion is a common form of the disorder, and that very many cases which end in apoplexy, or other structural changes in the brain, may begin in this way; and most certainly I should give the patient the benefit of the doubt, and deal with the case as if dependent simply upon cerebral exhaustion, as long as I could cling to this view. In a case where there was not very obvious paralysis of one side of the face—where the face, and the two eyes especially, were not drawn sideways; where there was not much stertor and congestion of the face and scalp; where the urine and fæces were retained for a reasonable time; where symptoms of sinking, or asphyxia were slow to declare themselves; where the attack did not happen, as is often the case with apoplexy, in the night—I should always be very much disposed to hope that the coma might prove to be dependent upon cerebral exhaustion simply, and that recovery might be expected, even complete recovery. As long as I could do so, indeed, I would give the patient the benefit of the doubt. What I contend for is, that this transitory coma from cerebral exhaustion is more common than it is generally supposed to be, and that it is of great importance that this fact should be more clearly recognised. Again and again have I seen cases of coma from supposed apoplexy, which had been virtually or actually abandoned as hopeless, which cases have done well in every way when the idea of cerebral exhaustion as a possible cause was realised and acted upon. Again and again I have seen a case of coma of this kind do well, when, in place of keeping the head high with ice applied to it, the head has been lowered, the ice removed, and coffee or tea—the most anti-comatose of all agents—given by injection, with or without a moderate allowance of alcohol, as the case might be. At all events, the fact remains that cases, often mistaken for the worst forms of coma, even for that dependent upon copious apoplectic effusion within the brain, may prove to be no more than a consequence of cerebral exhaustion, which may pass off completely and presently; and what I contend for is, that every case of coma should be read in this way until the contrary conclusion is forced upon the mind by the unsatisfactory progress of the disorder—that the patient should always have the benefit of the doubt, in fact—and that, especially, a long time should be spent in any case in coming to the conclusion that the coma is connected with cerebral pressure, which pressure is to be relieved by violent purging or violent depletory measures of any sort.

From this hasty survey, then, it may be gathered that the various symptoms of cerebral exhaustion *may* be; in the first group—failure of memory and of mental energy generally, sleepiness or the reverse, depression of spirits, unusual irritability of temper; in the second group—craving for frequent supplies of food and stimulating drinks—for the latter especially—lessened locomotive power, lessened control over the bladder, lessened sexual activity, unequal distribution of blood, an aged appearance; in the third group—malaise in the back of the head and neck, vertigo, undue disposition to tears, immoderate yawning, bouts of breathlessness and faintness; in the fourth group—epileptiform symptoms, transitory hemiplegia, transitory delirious wanderings, transitory coma.

Of course all these symptoms are never present in the same case. Of course there is very great apparent dissimilarity in many cases, from the endless differences in the way in which particular symptoms are present or absent, and in which the symptoms actually present are associated. Still, for the most part, there can be no insuperable difficulty in the matter of diagnosis. There is, however, always the possibility that the symptoms may mean more than mere cerebral exhaustion. In other words, the same symptoms may be associated with a state of brain which may pass off quickly, or which may not so pass off. If they pass off quickly—so quickly as to make it certain that they could not have depended upon any organic change in the brain, like apoplexy, or inflammation, or degeneration in one form or another, then they may indicate nothing more than cerebral exhaustion. If they do not pass off then they may indicate a graver state of cerebral exhaustion. That is all that can be said upon the subject, except this—that a state beginning in cerebral exhaustion may end in a graver form of brain-disease. What this state of exhaustion may be I do not pretend to say. I can find no better name for it. And certainly I cannot substitute for it any name implying a dependence on vascular congestion or fulness of any sort—for (as has appeared incidentally more than once in the course of these remarks) there is no good reason for thinking that any one symptom of the disorder points to a state of cerebral congestion, or to an excited over-active condition of the circulation.

There is so much more to be said, that it is difficult to choose what to say and what to leave unsaid. Indeed, all that I can trust myself to do is to say a few words upon one or two practical questions bearing upon the prevention and treatment of cerebral exhaustion, the question of food, the question of walking exercise *versus* rest, the question of head-work or the contrary, and the question of the proper position of the head when lying down.

I confess to being a heretic in matters of diet. Do what I will I cannot bring myself to accept the current belief that butcher's-meat is food *par excellence*, and that all other food is little more than "padding". On the contrary, I feel convinced that views and practices in this respect have changed infinitely for the worse during the last few years, and that herein, perhaps, may be found one main reason why various nervous disorders are so numerous and often so difficult to deal with.

Few persons with any practical experience, I think, will maintain that the diet of "training", which is relatively rich in lean meat and poor in the other constituents of diet, especially in the oleaginous, can be kept up for any length of time with absolute impunity. The fact, indeed, is simply this, that an extraordinary degree of muscular strength is got up, not by the diet simply, but by the whole plan of training, in six weeks or thereabouts, and that, afterwards, the man in training gets out of "condition" every day, perceptibly losing muscular energy and firmness and pluck, and becoming headachy, feverish, and out of sorts in every way.

Few persons, also, will nowadays be prepared to contend uncompromisingly for Bantingism, which is practically the diet of training carried still farther to extremes on the side of meat; and not a few, I take it, will have begun to suspect that there may even be something actually hurtful in the practice. For myself, I will simply say that I have quite come to a conclusion on the subject, and that I very much doubt whether there ever was a fallacy which, to use a common phrase, has more effectually "played into the hands" of medical men—of those especially who are sought after by persons suffering from disorders of the nervous system.

These are extreme cases, but, after all, not so extreme as to be beside the purpose. Often, indeed, I meet with persons who are just in the state of those who have been over-training, who are not "up" to any work, bodily or mental, and who tell you that they cannot, for the life of them, tell why they are so, for they have not been taking it out of themselves by work of any kind, and they have been doing all they could to keep up their strength, drinking beef-tea by the quart, eating meat three times a day, and so forth, and who get well with little else to help them when they begin to eat like other people, taking everything, and not too much of anything, and who do not get well until they begin so to do.

The idea which would seem to have had a good deal to do in introducing this habit in question into favour, is one which is now effectually exploded. It was, that the amount of urea in the urine was the measure of tissue-waste—of waste in muscular action especially—and that this waste *must* be met by a proportionate supply of nitrogenised food, of lean meat in particular, for it was natural to suppose that muscle was best fed by muscle. But a very different conclusion to this is necessitated by the laborious and accurate researches of Ed-

ward Smith, Parkes, and others in this country, and of Voit and others abroad. In point of fact, it is not true that the amount of urea in the urine is the measure of work done in the system—of muscular work especially. "When", says Dr. Edward Smith, "the treadmill is worked for a short period—say one hour and a half—in the absence of food, there is no increase in the *elimination* of urea during that period. When the treadmill is worked with ordinary food, the increase of urea is not more than five per cent. over the quantity which is eliminated by very light work, and with the same food; hence the direct efforts of violent exertion in the production and elimination of urea are not very great under any circumstances. When two different dietaries are provided, varying in nitrogen, but the exertion always remaining the same, there is the greatest excretion of urea with the diet richest in nitrogen. After an unusual dinner—a public dinner, for example—there is a large excretion of urea. In flesh-feeding animals the nitrogen in the urea represents the nitrogen in the food. When in the absence of food an unusual quantity of water is taken alone, there is an elimination of two or three times the amount of urea that would have occurred if no water had been drunk, and much more than if the ordinary food had been taken.* What is influenced by the amount of work, as Dr. Edward Smith points out, is not the amount of urea, but the amount of carbonic acid. It is the amount of carbonic acid, which is in direct proportion to the amount of work done. Thus the quantity of air inspired and of carbonic acid expired are found to be:

In the lying posture	...	...	...	...	...	1.
In the sitting posture	...	...	...	...	...	1.18
When reading aloud, or singing	...	...	...	...	...	1.26
When standing	...	...	...	...	...	1.33
When walking at two miles an hour	...	...	...	...	...	3.10
When walking at three miles an hour	...	...	...	...	...	3.76
When walking at four miles, and carrying 118 lbs.	...	...	...	...	...	5.
At the treadmill...	...	...	...	...	...	5.5
Running at six miles an hour	...	...	...	...	...	7.

the latter figure showing that the air inspired and the carbonic acid expired may be increased at least sevenfold for a short period. What is influenced by the amount of work, indeed, is not the quantity of urea, but the quantity of carbonic acid, the latter being directly proportionate to the amount of work done; and this fact, I take it, is full of significance to those who would take upon themselves to say whether a particular diet is right or wrong—significant as showing, perhaps, that the hydrocarbonous elements of food are, to say the least, quite as indispensable as the nitrogenous.

And most assuredly the actual experience of different people is not to be appealed to in proof of a contrary conclusion. The strapping gillie of the Scotch highlands, the chief staple of whose food is oatmeal, with a little milk, is certainly not wanting in muscular strength and power of endurance; on the contrary, as every one will admit who has had to keep up with him in a hard day's deer-stalking, he is "all wind and limb" when his master for the time being is panting and staggering. Nor is the case of the gillie different from that of the Italian labourer, who is seen at work unloading the small coasting corn-vessels on the beautiful shores of the Bay of Naples, whose food is made up chiefly of Indian-corn pudding or polenta, with a little maccaroni and a little oil. This man may be lazy enough, but when called to work he works well enough, as is sufficiently proved by the light way in which he dances from the vessel over the black sand with the heavy sack on his shoulders, and this not once or twice only, but for hour after hour, in the heat of the day even. Nor is it proved that either gillie or lazzarone are less strong than the South American prairie-ranger, who eats pounds of meat in the course of the day (he can get little else), and who may even spend the greater part of his days in the saddle; nay, it may even be a question whether this man is more active than the gillie or lazzaroni. Left to himself, I suspect, he will sleep for days like a gorged deer-hound, or like the gillie who (as happens now and then) has come in for an unusual feast of venison. I remember once a set of these fellows so fed, who slept through several days of bad weather, and who had to be kicked into a state of wakefulness when the weather changed for the better, and they were again wanted. Of course, whiskey in this case complicated the matter a little; but still, as I thought then I still think, that the excess in meat had, to say the least, quite as much to do in promoting sleep as excess in drink. Their case was too evidently a repetition of that of the gorged deerhound, or of any carnivorous animal who has had the chance of eating his fill; men and animals alike sleeping for days, if left alone—until they begin to be hungry again, in fact. And if the case of the South American prairie ranger were gone into fully, it would be found, I suspect, that the pounds of meat consumed by him have had the

* *Health and Disease.* London: 1861. Pp. 272-273.

effect the very reverse of invigorating—even that which is seen in the gorged deerhound or gillie.

It is certainly possible for people to enjoy excellent health upon the most different kinds of diet. No doubt there are individuals who take kindly to animal food, and others who do not do so. Most probably a properly mixed diet is best for the generality of persons, in this country at least; but all the evidence, as I can read it, is against the notion that meat is to be looked upon as the food which must be had at any price. At all events, I cannot help but think that the present practice of urging persons at all weakly, especially children, to eat as much meat as they can, may have not a little to do in causing the development of many nervous disorders, and in deranging the health in many other ways besides—perhaps (as the inquiries of Dr. Parkes would lead one to expect) in causing disease of the liver or kidney or other gland by over-taxing the eliminating powers of these organs.

It is high time, I take it, now that meat of all kinds is only to be had at almost famine prices, that people, and especially the poor, should be taught to think that animal food is not so essential as they believe it to be. It is high time, for instance, that the English poor should be taught to imitate the French poor in their diet. But I must not dilate as I would fain do upon these matters, nor must I attempt to lay down any definite rules of diet. Indeed, all that I must allow myself to do is to reassert my belief that excess of animal food, relative or actual, is a very important cause of many disorders of the nervous system, and that, in the prevention and treatment of these disorders, it is all-important that the oleaginous and farinaceous articles of diet, rather than the nitrogenous, should be fully supplied. I maintain, indeed, as I have long done that the nerve-tissue (which consists in large measure of a kind of fat), is starved if the hydrocarbons be withheld, and that this withholding is one main reason for the speedy breaking-down in training or in Bantingism; and I further believe that this is not the only way in which the want of hydrocarbons operates mischievously. Indeed, the fact that muscular work shows itself in the amount produced, not of urea, but of carbonic acid, convinces me that the hydrocarbons are necessary for action, as well as for nutrition in nerve and muscle—are necessary, perhaps, in keeping up the electrical charge of nerve and muscle, which, as I believe, has much to do in nervous action and muscular action. Possibly, also, these hydrocarbons may have some work to do as “floating fuel,” though not much; for if much work of this kind had been required of them, it is not easy to believe that the natives of hot countries would have been so ready to stoke themselves with oily matter—the Hindoo with ghee, for example, and the Italian with olive oil.

I am also very much disposed to maintain that too much stress may be laid upon the importance of walking exercise in very many cases, in cerebral exhaustion among the rest. Of this I am confident, that very many cases of the latter disorder come under notice in which over-walking would seem to be no insignificant cause of breaking down in health, and in which little or no progress is made towards recovery until the patient begins to economise his strength in this direction, in standing quite as much as in walking, perhaps more. It would often seem as if the amount of vital power at the disposal of the individual did not allow much head-work and much leg-work together, though quite sufficient to allow of a fair amount of either kind of work singly; and that, under these circumstances, if the head-work must be done, it is expedient to avoid walking exercise rather than to seek opportunities for taking it, and often to settle down in an easy chair and have a nap rather than to walk at all. It is a common thing for a person suffering from cerebral exhaustion to find that he cannot stand or walk except for a short time, and that, if he persists, he soon becomes faint and breathless and unable to talk, though comparatively fresh and well before he began to walk and stand. It is also a common thing, in such a case, for walking exercise, however moderately indulged in, to be followed by inability to keep the thoughts to this point, or by distressing drowsiness or actual sleep, the walking exercise, in short, having brought on head-symptoms which were not present previously. Upon this point I am thoroughly convinced. I am also constrained to believe—indeed, the simple facts of experience leave me no alternative—that, in very many cases, this persistence in walking and standing, when this opposite rule of rest ought to have been observed, has had mainly to do, not only with bringing on, and keeping up a state of cerebral exhaustion, but with pushing matters to the crisis of hemiplegia. I do not remember a single case of hemiplegia, in any form, in which the attack was not preceded by marked failure in locomotive power, and in which the history did not countenance the notion that the attack might have been averted if there had been more prudence in the matter of walking or standing.

The simple occurrence of hemiplegia must show that the brain had become unequal to the full amount of locomotive work demanded of it; and, if so, then there must surely be grave danger that a jaded brain may break down in hemiplegia if it be overtaxed in this direction of this particular work. In a word, I cannot help but look upon this and other forms of paralysis, in which locomotion is compromised, as in the main preventable when people, in whom symptoms of cerebral exhaustion are beginning to declare themselves, are more alive to the necessity of saving their strength in this direction of locomotion. At all events, upon one point I have no doubt, namely this; that in many cases of cerebral exhaustion, both with a view to prevention and cure, it is necessary to check rather than to encourage walking exercise.

I am also disposed to think that rest from head-work may be too much insisted upon in cerebral exhaustion and in other cases of the kind. Often and often I have met with patients with jaded brains who have certainly let their minds lie fallow too long. More than one over-worked barrister, who could scarcely drag on until the long vacation, has complained to me that this vacation was too long, and that it would have been better for him if he had returned to his own work sooner, or if he had changed his work. Mere distraction, even travel, is not enough. Weeds will grow apace, under such circumstances; and soon, very soon, the difficulty is to get the mind under cultivation again. What is wanted generally, even at the beginning, is, not that work should be given up altogether, even for a short time, but that it should be moderated in amount or changed. It is given to few to imitate the example of our present premier who, when thoroughly over-wrought at the end of the session, recruited himself by spending a great part of his holiday in writing *Juventus Mundi*; but the fact is full of significance in the present place. Indeed, the longer I live the more am I convinced that it is a grave mistake to let the mind lie fallow, even for a short time, not only in the particular case under consideration, but in all cases where head-symptoms have to be dealt with—in epilepsy, for example, no less than in cerebral exhaustion. In epilepsy, indeed, I have long maintained that it is the very gravest blunder in practice to suspend education—that the very basis of successful treatment is only to be laid in education. In the case of an epileptic child, I should be altogether hopeless of arriving at a satisfactory result except by building the plan of treatment on this foundation; and the same feeling would influence me considerably, even in the case of an adult suffering from cerebral disorder, let this disorder be what it may, if in one way or another I could not keep his mind from preying upon itself by providing him with some proper occupation. Of course this notion may be carried too far. Undoubtedly harm, much harm, may be done by pressing the necessity for work too strongly; but, practically, this danger will prove to be small in comparison with that of letting the mind lie fallow.

Much might easily be said upon the importance of attending to the position of the head where the object is to conciliate sleep, or the contrary, and in many other cases. The recumbent position has obviously very much to do with sleep. Undoubtedly sleep may happen in the sitting posture, and even while standing; but these cases are exceptional, and the broad rule remains, that sleep has to do with the recumbent, and wakefulness with the sitting and erect, positions. It is certain, also, that sleep in bed is, as a rule, sounder with a low pillow than with a high pillow. If, then, there be a state of wakefulness at night, the head should be kept low; if, on the contrary, undue sleepiness be the state of things then met with, the head should be kept high. Nay, it would even seem to follow that the degree of sleep, and the amount of it, may be regulated by simply taking care that the head is in the right position. The facts would seem to be too obvious to require notice, and yet they certainly have not been realised and applied in practice to the extent which might be expected. It might be expected, for example, that hospital beds would be so constructed as to allow, with a view to the conciliation or counteraction of sleep, of the head being easily depressed or raised; it might be expected that the same want would have been met in one way or other in the construction of ordinary beds; but this expectation as yet is not warranted by the facts. Indeed, certain complicated couches, like those of Alderman or Ward, are the only effectual means of meeting the case in question, and these have really been contrived, *not* for the purpose of meeting this case, but simply for the purpose of putting the patient in that particular position in which he would be most comfortable. It is, however, not for this latter purpose, but for that of conciliating or counteracting sleep, that I am continually making use of these couches and similar contrivances of a less costly description.* In a case of cerebral exhaustion, or in any

* One of these contrivances may be made by an ordinary carpenter in a very

other head-affection where prolonged recumbency is a necessary part of the treatment, I scarcely know how to dispense with one of these couches, or one of these contrivances. On an ordinary bed, such a patient is very apt to sleep too much in the day and too little at night—too little at night because he has been sleeping too much in the day; and, before long, there is no small danger that, for this reason, night-draughts of various sorts may be introduced into the treatment. On the couch, on the contrary, or on the contrivance which takes its place, all these difficulties are, for the most part, fully met. By raising the head in the day time, the patient remains awake sufficiently to be able to sleep at night; by depressing the head at bedtime, the conditions are rendered more favourable to sleep during the night; and, as a rule, *sleep is to be conciliated in this way—an incalculable advantage—without the help of narcotics.* At all events, the facts fully justify these statements. It is possible to fight successfully against either undue drowsiness or undue sleeplessness in this way. In particular, it is possible to fight against undue sleeplessness in this way, and that, too without the equivocal help of narcotics; and, in short, all that I can now do, and must do, is to make plain statements, and leave you to draw your own inferences from them.

CONCERNING SPINAL EXHAUSTION.

When I began, I did not intend to do more than make a passing allusion to spinal exhaustion; and, certainly, at this late moment, I have left myself no alternative. All that I can do, indeed, is to skip the few details into which I had proposed to enter, and to say broadly that the two affections, cerebral exhaustion and spinal exhaustion, are usually associated in a way which makes it difficult to disassociate them altogether; that they have many symptoms in common; and that very many of the peculiar symptoms belonging to spinal irritation—on which disorder what I have to say will be found in the article on the subject in Reynolds's *System of Medicine*—will also be found to belong to spinal exhaustion. The subject is, no doubt, sufficiently intricate, and the diagnosis not always certain; and this must needs be, for as with cerebral exhaustion, so with spinal exhaustion, it may be taken for granted that any grave organic disorder closely related to it, may be simulated by the state of exhaustion—that the exhaustion, in short, may mark an early stage of this disorder—a statement which is tantamount to saying that these several disorders may not be so grave at first as they may seem to be; that they only become organic at a later stage; that, in short, the early stage, though fully foreshadowing in its symptoms the more serious disease which is about to be established, may be nothing more, and not lead to much more, than what may be spoken of as *exhaustion*.

No one, Mr. President and Gentlemen, can be more sensible than I am to the short-comings of the present lectures. Much that I wanted to say I have left unsaid; much that I have said, I well know, might have been more to the point. I can, therefore, only thank you for the patient attention with which you have listened to me, and hope that I may have not spoken altogether in vain, even to those of you who are the least disposed to sympathise with what I have said.

AN IMPROVED MEANS OF PLUGGING THE POSTERIOR NARES.

By A. GODRICH, M.A., M.R.C.S.

I BEG to submit to professional notice an instrument that I have had constructed by Messrs. Louis Blaise and Co., of 67, St. James's Street, for plugging the anterior and posterior nares in cases of epistaxis. I have long been struck by the unsatisfactory means at our disposal in dealing with such cases. There is, in the first place, owing to its large curve, no little difficulty in passing Bellocq's sound, the point of the instrument often hitching on the posterior edge of the floor of the nasal fossa. In the next place, the adjustment of the posterior plug, requiring, as it does, the passing of the surgeon's finger into the fauces,

short time. Three or four ordinary thin deal planks are joined together so as to make a support long enough and wide enough to bear upon it the bed or mattress upon which the patient has to lie; and then, having first sawn across this support in two places—the one in a line corresponding to the bend at the hips, the other in a line corresponding to the bend at the knees; these three separate pieces are connected by hinges, so as to allow them to be moved upon each other as the three separate pieces forming the invalid bedstead are moved upon each other. This jointed support is placed between the bed or mattress and the ordinary bedstead; and, being so placed, the head or knees of the patient can be easily raised or depressed, as they are raised or depressed upon the ordinary invalid bed, by placing underneath it, in the right positions, anything which may serve to keep the joints bent at the requisite angles.

not only causes much distress to the patient, but often entails a more or less severe bite on the operator, as I have found to my cost; and, lastly, when the plug is in position, the string passing from it through the mouth causes so much irritation of the soft palate and fauces, that but few patients have the courage to submit to it.

The instrument consists of a small elastic bag stretched on the end of a hollow style, by means of which it is pushed through the nasal fossa into the pharynx. It is then dilated with ice-cold water by means of the ordinary ear-syringe, the nozzle of which is inserted into a piece of India-rubber tubing tied to the other end of the style. A small piece of thread or twine tied round this prevents the water from escaping. The bag, thus dilated, is now to be drawn well forward into the posterior nares, into which, by its elasticity, it will accurately fit. The anterior India-rubber plug is next to be slid along the style (this is more easily done if the style be previously wetted) into the anterior nares, which it fits like a cork. The cohesion between this plug and the style will, I think, be sufficient to hold both plugs in position; if not, a piece of string tied round the style in front of the anterior plug will ensure perfect security.

When it is necessary to remove the plug, all that the surgeon has to do is to cut the string tied round the piece of India-rubber tubing, when the water will be expelled by the elasticity of the bag, and the instrument may be removed without difficulty.

The instrument, even at its thickest end, where the elastic bag is stretched over the style, is not larger than a No. 6 catheter; and it can consequently be passed through the nasal fossa without the least difficulty, and with very little discomfort to the patient, as I have proved by frequently passing it through my own nose. The style being made of elastic material—in fact, a gum-elastic catheter, and therefore capable of being bent to any curve required—also facilitates the introduction of the instrument. When once the instrument is in position, and quiet, it is almost impossible to tell by the sensations alone that there is any foreign body in the nasal fossa at all; the dilatation of the bag causing but little discomfort, being above the sensitive soft palate and fauces.

In designing this instrument, it has been my object to combine simplicity and cheapness with perfect efficiency. If I have not fully accomplished my object, I ask any one to suggest any alterations that may bring this instrument nearer to perfection, and enable us to do away with our present barbarous and unsatisfactory plan of plugging the nares.

METEOROLOGY IN ITS BEARING ON HEALTH AND DISEASE.*

By J. W. MOORE, M.D. Univ. Dub.,

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IN bygone days Meteorology was limited in its application to appearances in the sky, whether atmospherical or astronomical in their character. Now, however, the word is used to denote a branch of natural philosophy which deals with weather and climate. Its astronomical relations are, to a great extent, severed, whilst many terrestrial phenomena are included within its vast domain, and are studied and explained under some of its many branches. Until the last twenty years, the study of meteorology was confined to individuals, amongst whom we notice the names of Aristotle, Theophrastus, and Aratus, in Greece; Lucretius, Virgil, Pliny, and Cicero, in Italy; and more lately, within the last two hundred years, those of the discoverer of the barometer, Torricelli; and of Fahrenheit, Reaumur, and Celsius, the fathers of thermometry. Later still, were Wells, Dalton, and Daniell, whose names are inseparably connected with hygrometry. Finally, the investigation of the isothermal lines was commenced by Humboldt, and almost perfected by Dové.

Within the last twenty years, however, meteorological societies have been founded, first in America, and, more recently, in several countries in Europe, and have collected a vast amount of trustworthy material, which leading meteorologists, as Dové, in Germany; Buys Ballot, in Holland; Maury, in America; and Lloyd, in our own country, have not been slow to utilise. In 1854, Dr. Lloyd, the present distinguished

* This paper is an abstract of a lecture—one of a series termed "Afternoon Scientific Lectures"—which was delivered before the Royal Dublin Society, on Saturday, March 8th.

Provost of Trinity College, Dublin, demonstrated the cyclonic character of most of the gales experienced in Ireland, and so foreshadowed what is universally known as "Buys Ballot's Law," a law on which the whole of modern Meteorology turns. It may be expressed thus (as applicable to the Northern Hemisphere): "If at the same moment of time there be a difference between the barometrical readings at any two stations within a reasonable distance from each other, a wind will blow on that day in the neighbourhood of the line joining those stations which will be inclined to that line at an angle of about ninety degrees, and will have the station where the reading is lowest on its left hand side." That is to say, if on any day a person stands with his back to the wind, the reading of the barometer will be lower at all stations on his left hand than it is where he is at the time. Currents of air move either in a *cyclonic* course, round an area of low barometrical pressure against the hands of a watch, or in an *anticyclonic* course, round an area of high barometrical pressure, with the hands of a watch. The wind system of the Continent of Europe and Asia is cyclonic in summer, and anticyclonic in winter; while that of the Atlantic Ocean is anticyclonic in summer, and cyclonic in winter. The changeable weather of the British Islands again, is mainly caused by the incoming from the Atlantic of successive cyclonic systems, or areas of barometrical depression.

The principal meteorological data which influence disease and death amongst the population of Dublin are, perhaps, mean temperature, rainfall, and humidity. I purpose to treat of the subject under three headings:—First, the influence of season on thoracic and abdominal affections respectively; second, the influence of season on the progress of epidemics of recent years—namely, cholera and smallpox; third, the influence of season on four principal endemic and epidemic diseases—namely, measles, whooping-cough, scarlatina, and fever. Owing to the absence of a system of registration of disease in this country, we must be content to deal with mortality alone.

At the outset of our inquiry into the influence of meteorological conditions on the death-rate from thoracic and abdominal affections, we may lay down the following propositions.

A.—*In summer the tendency to sickness and death is chiefly connected with the digestive organs—diarrhœa and dysentery being the affections which are especially prevalent and fatal during this season. In winter a similar tendency is noticeable in connexion with the organs of respiration—bronchitis, pneumonia, and pleuritis being the affections which are principally met with at this season.* B.—*In summer, a rise of mean temperature above the average, increases the number of cases of and the mortality from abdominal affections. In winter, a fall of mean temperature below the average increases the sickness and mortality from thoracic affections.*

In proof of the truth of the first of these propositions, from a study of the Registrar-General's returns of deaths in Dublin, since 1864, we find that during the whole of this period the death-rate has been uniformly highest during the first quarter of the year, and lowest during the third quarter, with the exception of 1868—a year of warmth and drought. We may take it, then, that the first quarter of the year is the most deadly, and the third quarter the least so. As to deaths from thoracic affections, it is found that they arrive at their maximum in the first quarter, and at their minimum in the third, and further, that they have a pronounced influence in determining the total mortality, especially during the winter months. With regard to deaths from abdominal causes, it is found that during the same period they reached their maximum in the third quarter, with one exception—1866—and their minimum in the second quarter. In the year 1866, a fearful epidemic of cholera occurred, which was accompanied by a considerable amount of diarrhœa.

So far, the dependence of the thoracic death-rate on season points to a period of low mean temperature, of a high percentage of humidity, and generally of an increased rainfall as coinciding with its maximum; and similarly the maximum of abdominal death-rate followed a high mean temperature, a low percentage of humidity, and generally a smaller rainfall.

Our death-rate is influenced by two factors especially—namely, the presence of an epidemic and the meteorological conditions, and when we find it in an abnormal condition, we may look for an explanation to either of these causes. Thus, in 1866, an epidemic of cholera, which caused 1,186 deaths; and in 1872, an epidemic of smallpox, which proved fatal in 1,350 instances during that year, fully accounted for an increased mortality in these years.

We are told that cold weather is bracing and tonic. Doubtless so it is to the young and strong—to those in robust health and in the prime of life. These classes of the community are invigorated by the cold of winter, and may set the heat of summer at defiance. But far otherwise is it with the very young, the weakly, and the aged. Children under five, and the aged, go down like grass before the scythe when

the keen frost-wind of winter, or the fiery heat of summer, sweeps across the land.

Cholera tends to prevail in the warmer months of the year, especially in August and September. In 1866, the epidemic began to be severe in Dublin, towards the close of August, and it reached its acme in the middle of October, immediately after a rise of some degrees in mean temperature, a very deficient rainfall, and a spell of calm, damp, foggy weather, with a high barometer, and but slight ozone reactions. In December the epidemic died out rapidly, and no deaths occurred later than the 29th of that month, on which day the intense frost of January, 1867, was ushered in by a sudden fall of temperature, amounting to 15° in a few hours. In discussing the influence of season upon the progress of the recent epidemic of smallpox, we cannot, as with cholera, compare the meteorological conditions of the week before with the death-rate of any given week. Smallpox has a definite period of incubation, during which the disease lies dormant in the system, and it seldom kills before some days have elapsed from the earliest development of the symptoms. It is necessary, therefore, to compare the deaths of a given week with the weather of three weeks before. Smallpox is essentially a disease of winter and spring, being checked by a rise of mean temperature above 50°. In connexion with the late epidemic in Dublin, one of the most remarkable evidences of the dependence of the disease on climatic influences is found in the fact that in March, 1871, a well-marked tendency to an epidemic was noticeable. Local outbreaks of the disease took place in various parts of this city, and fatal cases occurred in Cork Street Fever Hospital. By the increasing temperature, however, the disease appeared to be held in check, notwithstanding the importation from England of many cases, until with the advancing autumn it blazed into an epidemic.

I shall now briefly consider the influence of season upon the four principal endemic and epidemic diseases—endemic alas! for their home is ever in the midst of us, and the graphic term, "fever-nest," is a significant and no less truthful recognition of the mournful fact. These diseases are measles, whooping cough, scarlatina, and fever.

With regard to measles, the first thing to be noticed is the periodical epidemic character assumed every second year or so by this disease, and the remarkable tendency to prevail in the second and third quarters of the year, which is shown by it. At present we have to do only with this last peculiarity. In epidemic years, on three occasions, the greatest mortality fell in the third quarter, and in one in the second quarter. The non-epidemic years displayed an opposite tendency, the acme falling in the first quarter on four occasions. In three of these instances this acme was really only the dying out of an epidemic, namely, 1866, 1868, and 1870. Practically, we may disregard these years, and we may look upon measles as essentially a disease of the spring and summer quarters. From a careful analysis of the weekly returns of deaths in Dublin, extending over a period of nine years, I find, that on an average, the highest mortality occurred from measles in the 28th week of the year, and the lowest in the 51st week; and that a temperature higher than 59 degrees, or lower than 42 degrees, is unfavourable to the spread of this disease. Proceeding from these results, we see that the cold spring and summer of 1867 were especially favourable to the spread of the epidemic of that year, and that while, on the whole, the summers of all the epidemic years were comparatively cool, those of the non-epidemic years were hot and dry—namely, 1864, 1868, and 1870.

Whooping-cough, as might be anticipated from the frequency of chest complications attending it, has invariably prevailed most in winter, the greatest mortality generally falling in the first quarter of the year. Three epidemics of whooping cough have occurred during the last nine years, and all of these reached their acme in January and February. It is curious to observe that the epidemics occurred in comparatively mild seasons—namely, those of 1866, 1868, and 1871. Intense cold appeared to check the disease, while moderate cold, on the other hand, favoured its prevalence. The lowest death-rate from whooping cough was met with in the 28th and 29th weeks, or about the middle and end of July, and the mortality from this disease, as a rule, was found lowest in the third quarter of the year. A remarkable fact was further noticed in the case of Dublin, and has been also alluded to by various writers—that another minimum coincides with the 21st week of the year. This is followed by a recrudescence of the disease, which continues for some weeks, and which has been described by Dr. Ballard as the June development of the disease in Islington.

"Scarlatina," observes the Registrar-General of England, "discovers a uniform, well-marked tendency to increase in the last six months, and to attain its maximum in the December quarter, the earlier half of the following year witnessing a decrease." An analysis of the weekly death-rate from scarlatina in Dublin, during a period of nine years, shows that the disease was, on the average, most fatal in the 46th

week, and least fatal in the 24th week. Scarlatina showed a tendency to increase when the mean temperature rose much above 50 degrees, while a fall of mean temperature below this point in autumn checked the further rise of the mortality. Why, then, if a fall of temperature below 53 degrees tended to arrest this disease, does it happen that the mortality is undoubtedly so high in winter? In Dublin it continues very high until the 9th week, and high until the 19th week of the year. Here we are brought face to face with one of the most important factors in all sanitary problems—namely, overcrowding. Scarlatina is not only one of the most contagious diseases in existence, but the *materies morbi*—whatever it may be—remains in an active state for a lengthened period. Hence the difficulty of disinfecting the bedchambers of scarlatina patients. In these facts is contained the solution of the problem. As winter approaches, the instinct is to diminish the sources of ventilation, and among our poorer fellow-citizens—badly clothed and with inadequate supplies of fuel—unrestrained freedom is given to this instinct, but with most deplorable consequences. Every chink and crevice through which the outer air might gain access to the overcrowded tenement is eagerly sought out and effectually closed. It is under these circumstances that scarlatina, favoured by the high and unwholesome temperature of the rooms, runs like wildfire among many families in the poorer parts of the city. But the mischief does not end here, for the contagious powers of the disease are called into full play, and the richer and more affluent quarters of the city suffer in their turn from this dire pestilence. We must not forget, also, that in winter the throat complications of scarlatina are likely to be more severe and fatal than in summer and autumn.

Fever in Dublin may well be described as both an epidemic and an endemic disease. In 1865 and 1866 it prevailed as an epidemic disease, but it is never absent from this city, and so its title to be considered an endemic disease also is clearly established. The first thing to be noticed with regard to fever is its remarkable tendency to prevail in the first quarter of the year. Fever appears to depend especially on the weather. In the consideration of fever it would be desirable to isolate two forms of the disease—typhus and typhoid, or enteric, fever—and with the former we may, for this investigation, group the so-called continued fever. Fever in general has proved most fatal in the 3rd and 4th weeks of the year, and least fatal in the 28th and 29th weeks. The disease was most severe about the period of the greatest cold, and least so early in July. It again appeared to become very fatal in autumn, when the mean temperature fell below 54 degrees. The mortality continued to rise with the falling temperature until January and February were past. Early in March the mortality declined, but rose again at the beginning of May, coincidentally, it would seem, with a lower humidity. The decline was then very rapid, and the minimum was reached in July, and the first half of August. A temperature higher than 54 degrees seems to have a controlling influence on the prevalence of fever, whilst temperatures below 54 degrees seem to favour its development. With regard to typhoid fever, a striking increase was to be noticed in its percentage amount towards the close of the year; whilst, on the other hand, the highest percentage of typhus fever occurred in the seasons of winter, spring, and early summer. The reason for all this is not far to seek. Typhus is intimately related to overcrowding, and bronchial or thoracic affections are amongst its most frequent complications. Typhoid fever is connected with a specific contamination of air or water by sewage matter, and its secondary phenomena are developed generally in connection with the digestive system. Hence a greater prevalence of this form of the disease was to be looked for in the warmer seasons, and more particularly at a time when the first autumn rains had washed into drinking wells, and other sources of water-supply, the decomposing matter which had hitherto remained innocuous.

All these considerations, novel and important as they are, form but one chapter in the study of the relations between meteorology and health. Among other cognate inquiries I would particularise only the works of Dr. Angus Smith on *Air and Rain*, of Dr. Cornelius Fox on *Ozone and Antiozone*, and of Professor Buhl, of Munich, on the *Relation between Typhoid Fever and the Height of the Underground, or Subsoil, Water*. The *Influence of Light on Health*, first shadowed forth by our great countryman, Dr. Graves, has been ably handled by Dr. Forbes Winslow. In his essay on the *Influence of Light*, Dr. Graves wrote this eloquent and touching passage:—"I need not observe that the flowers and leaves of all plants court the light. Indeed, this tendency is manifested sometimes in a very curious manner. This is exemplified in the various flowers which adorn the dark and comfortless abodes of the tradesmen in the Liberties of Dublin. These poor creatures (for however poor the being is, or however confined by the nature of his employment, he never forgets the green freshness and living loveliness

of nature) delight in flowers and birds; and in their windows will frequently be seen a geranium, almost as sickly as its owner, turning its lank and stunted leaves with unvarying constancy towards the light."

"Die Pflanze selbst kehrt freudig sich zum Lichte."—Schiller.

In conclusion, as to the practical bearing of these investigations, we find that some of the diseases we have been considering tend to prevail in the warm seasons of the year—others in the cooler seasons. There is, further, only too good reason for believing that the mortality of many diseases included even in the former class, is increased by overcrowding and its attendant evils, while the influence for evil of this flagrant breach of sanitary law on winter maladies is almost beyond belief. Overcrowding, alas! is but another name for poverty, and poverty means—want of fuel, deficient food, deficient clothing. Is it not incumbent upon us, sanitary reformers and pioneers of preventive medicine, to obviate, so far as lies in our power, the ill-effects of cold? In the case of scarlatina, again, and other infectious diseases, let refuges be provided for the still healthy members of families stricken with disease. As regards summer maladies, too, the providing of wholesome food, the interdicting of unripe fruit and putrid vegetables, the free use of suitable disinfectants in sewers and latrines, and, above all, a pure water supply, will have the happiest results. Of all the diseases, fever, however, is, perhaps, the most preventable, depending, as it does, so largely on overcrowding and bad ventilation. How are we to deal with it from a preventive point of view? The English Registrar-General said on this point:—"Fire is a necessity of life in this climate, and a warm hearth mitigates the severity of winter. Fire is as much required by the poor as by the rich, and a tax on coals, like a tax on salt, presses with undue severity on people of small means." And so it is—our poorer fellow-citizens have to do battle with snow and ice, hail and tempest. Their weapons of defence in this otherwise unequal warfare must be raiment, food, and warmth. Lo, there, on the journey of life, lies the wounded, the helpless wayfarer, cold, and naked and hungry. Be you the good Samaritans.

A VISIT TO A LEPER-VILLAGE.

By ARTHUR LEARED, M.D., F.R.C.P.,
Senior Physician to the Great Northern Hospital.

THE leper-village El Hara is just outside the Donkkela Gate of the city of Morocco. It is of considerable size, and fenced in with earthen walls. There is only one entrance, close to which is the sanctuary of the patron saint, Seedi Ben Nor. On account of this proximity, an objection was made to my going into the village; but a number of the inhabitants soon made their appearance, and were friendly and communicative. Many of them were well developed, well nourished people; and some showed no outward sign of disease. They form a community apart, having a mosque, a prison, and a market of their own. They also cultivate land, and buy and sell like other people. The whole population was stated to be two hundred. Many of them come from long distances—from Haha, from Suse, and even from the Sahara. Many of them are negroes. Some have been resident for thirty years, and there are a few very old people amongst them. There is a Jewish quarter, with a synagogue; but, although there were five Jew residents a few years ago, there was not one at the time of my visit.

Notwithstanding this separation of the leper population, the general opinion amongst the Moors is that leprosy is not contagious. They not only go into the leper-village freely, but will eat and drink, and even sleep in the same room, with those affected by the disease. The lepers themselves are allowed to enter, but not to stay in the city. About the city gate we saw many wretched creatures, in whom the disease was so far advanced that begging, which is vociferously conducted, was their only resource.

In the group which surrounded us at the village, one thing which particularly struck me was alteration of the voice. Many spoke with that characteristic huskiness which denotes that the disease has attacked the windpipe. In some cases, a tubercle or two on the forehead or at the side of the nose was all that rendered it imperative for them to separate from the healthy. One boy had lost the fingers and thumb of his left hand; the little finger of his right hand had also disappeared, and the remaining fingers and the thumb were crippled and useless. Several had lost toes to a greater or less extent. In some cases, there were foul unhealthy ulcers; and in one such instance that I examined, the thick skin of the back of one heel had the appearance of having had a large piece punched out. No application seems to be made to the sores, nor do they try any medicines. Washing at the

sacred well of the saint-house, which is thought to possess virtues, is all that is practised.

One of the lepers, an intelligent Moor, told me that there are seven kinds of leprosy; and the fact that he was surrounded by fellow-lepers, who at times interrupted his description in order to set him right, proved that the division is well recognised amongst them. The first, he said, is the kind which cripples the hands; the second is the tubercular form; the third, that in which the skin is affected, and the hair of the head and the beard fall off; the fourth, that in which the fingers and toes are destroyed; the fifth, that in which the skin becomes like the skin of a fish; the sixth, that in which cough is a prominent symptom, and also severe pains in the chest of a shooting nature; the skin is not much affected; but the disease is accompanied by so much debility, that the patient can at last hardly lift a pound weight; and, when this happens, the patient soon dies. The seventh kind destroys or greatly impairs the sexual power, and in this the skin is also affected. If persons with this form of the disease have children, they are weakly, but the children are seldom affected. It was added that, in the other kinds of leprosy, the sexual functions are intact; and that those who have lost fingers are apt to be salacious.

It is obvious that, in this minute subdivision, mere stages are regarded as different forms of the same disease; and also that certain symptoms have been regarded in the same way. No doubt some of the conclusions are crude and erroneous; yet, as they have been arrived at by the lepers themselves, they seemed to me worthy of notice.

There are more women in this village than men, but this is perhaps due to polygamy. The children of the leprous parents are sometimes, but not usually, diseased. The inhabitants enjoy no exemption from fever or other diseases. The causes assigned for leprosy were overwork and drinking cold water when perspiring, and also that God sends it to punish people for their crimes.

Leprosy is called "Jeddem" by the Moors; and the extensive use in cookery of argan-oil, expressed from the seeds of *Argania Sideroxylon*, is supposed by many to cause the disease; but there seems no good reason for this conclusion. Lepers are met in small parties in every part of the empire. They may be known at a distance by a straw hat with a wide brim, which they are compelled to wear, in order to distinguish them from those free from the disease. When the large number of the Jewish population is taken into account, their exemption is remarkable; but, as stated previously, they are not altogether exempt. I was consulted in the city of Morocco by a young Jew of the better class, who was suffering from the scaly form of the disease.

CASE OF DISSECTING RUPTURE OF THE HEART.

By J. HIGHAM HILL, F.R.C.S.,
Medical Officer to St. Pancras Workhouse.

THE pathological interest of the following case induces me to place it upon record.

S. G., aged 65, a woman of spare habit of body, was on December 6th, while in her usual health, suddenly seized with an acute pain in the region of the heart, followed by considerable dyspnoea and vomiting. She was removed to bed, and my attention was called to her. I found her slightly collapsed, with cold extremities, breathing with difficulty, and inclined to vomit. She still complained of pain in the region of the heart. On examination, I found that the cardiac action was irregular and very weak; there was, however, no murmur. She was ordered to have some brandy and Seltzer water, also a mustard-plaster over the heart, and a hot-water bottle to her feet. Under this treatment she rallied considerably; her circulation improved, and the dyspnoea, sickness, and pain were relieved. She continued in this apparently improved condition for about twenty-four hours, when death suddenly took place, consciousness being retained to the last.

On making a *post mortem* examination, the pericardium was found to be full of blood, which was discovered to have escaped from the interior of the heart through a small rupture in the right auricle. The left side of the heart was considerably hypertrophied, the right side much atrophied, and the cardiac tissue generally in a state of fatty degeneration. There was no valvular disease present.

The chief point of interest in the case is, that the blood, in escaping, had not made a direct passage through the wall of the auricle, but, having broken through the endocardium and a portion of the degenerated muscular structure, had then dissected the wall of the heart for a considerable distance around into two distinct layers, and finally had broken through the outer layer into the cavity of the pericardium.

Both openings were small—the external one two inches nearer the superior vena cava than the internal one. The interspace made by this dissecting process in the wall of the heart was filled with a layer of quite recently coagulated blood. The lungs were healthy, but the liver and kidneys were in a state of fatty degeneration.

ANÆSTHETICS.

THE ADMINISTRATION OF CHLOROFORM.

DR. ERNEST SANSOM, Physician to the Royal Hospital for Diseases of the Chest, writes as follows.

There are many points in the paper on the Administration of Chloroform, by Dr. Henry Marshall, in the *BRITISH MEDICAL JOURNAL* of March 15th, 1873, with which I entirely agree. I believe that the occurrence of panic is apt to make us overestimate the danger of chloroformisation; that many of the deaths attributed to the anæsthetic may have been really due to shock; and that the time has not yet arrived at which we can point to any agent capable of inducing profound narcotism as absolutely free from danger to life. There is one deduction, however, of Dr. Marshall's from which I differ *toto calo*, because I think it endorses a widely spread but erroneous view.

The towel or handkerchief, as an article for the administration of chloroform, Dr. Marshall extols for convenience as well as for insuring a free admixture with air. He concludes, from Mr. Lister's experiments, that "when the towel is used, the amount of chloroform-vapour does not exceed four-and-a-half per cent. of the air inspired, even immediately after fresh chloroform has been added; but the average percentage must be less than four per cent." To this conclusion I emphatically demur. No one can have a higher appreciation than myself of the valuable contributions of Mr. Lister to the cause of science, but I believe that in this particular instance he has been victimised by imperfect experimentation. The method adopted (which I will not quote at length; it may be read in the article on Anæsthetics in Holmes's *System of Surgery*, vol. iii, p. 97) seems to me to be beset with fallacies: and the writer of an exhaustive review concerning anæsthesia, in the *American Journal of Medical Science*, January 1867, p. 176, says with regard to it: "We think common sense will negative any amount of such experimentation."

I have taken some pains to investigate this point, and the conclusions which I derived from my experiments tend to show that the percentage of chloroform-vapour capable of being inspired when the anæsthetic has been poured upon a piece of lint has been greatly underestimated. When 76.5, 38.25, 25.5, 12.75, and 6.375 grains respectively of pure chloroform were poured upon a piece of lint, and 100 cubic inches of air, at a temperature of from 60 to 64 deg. Fahr., were passed over it in each instance, the resultant atmosphere contained 9.9, 8.5, 6.9, and 4.3 per cent. of chloroform-vapour (*Transactions of the Obstetrical Society of London*, vol. x, p. 136). When little more than a drachm, therefore, of chloroform is poured upon lint at ordinary temperature, a patient may inhale an atmosphere containing more than nine per cent.—a dose certainly not free from danger.

I have never seen reason to change the opinion I long ago expressed, that a part of the mortality from chloroform is due to the inhalation of an overcharged atmosphere, when the towel or handkerchief is employed, with insufficient means of admixture with air; and I believe that the tendency of investigation has been to show that the chief mode by which the anæsthetic accomplishes its fatal effect is by paralysing the heart.

SULPHURIC ETHER AS AN ANÆSTHETIC.

DR. JOHN H. PACKARD, one of the surgeons to the Episcopal Hospital, Philadelphia, United States, writes as follows.

The reaction which seems to be taking place, or rather to have already taken place, in England in favour of sulphuric ether as an anæsthetic, has given me, as it has many other American physicians, sincere satisfaction; and, in the hope of aiding what I cannot but consider a good cause, I venture to offer some facts and considerations to those who are investigating the subject. During the past twenty years, the use of anæsthetics has been a matter of constant observation with me, either in my own hands or in those of my professional associates. Until 1864, my custom was to employ ether or chloroform indifferently: two cases then occurred, in one of which death from the latter agent was only averted by means of galvanism, while in the other it actually took place.*

* These cases were reported in the *American Journal Medical Sciences* for January 1865, p. 271.

In the latter, the patient had taken chloroform seven weeks previously, without ill effect. Since that time I have uniformly, except under certain circumstances to be presently noted, used ether, believing it to be not only perfectly safe, but wholly satisfactory as an anæsthetic.

The mode of giving ether is very important. The great object is to let the patient inhale an atmosphere of pure ether-vapour, with as little air as possible. Hence the best plan is to make a large cone, by folding a towel; a stiff new one answers best, with a newspaper or pasteboard around it, to give it additional firmness. Into this a small quantity, say 5ij, of pure ether is dashed. The best article in the American market is that known as Squibb's, or "stronger" ether. The cone is now inverted over the patient's face (he being directed first to breathe out strongly), and kept close to the face except when fresh ether is poured in, until complete insensibility is induced. Two things must be impressed on the patient's mind—viz., to let his last conscious thought be the desire to submit himself to the anæsthetic, and to resolve not to resist his attendants. After one or two inhalations there is a sense of suffocation, which soon passes off, and which the operator should wholly disregard, keeping the cone down over the patient's face relentlessly.

The more or less complicated and expensive forms of apparatus, called "inhalers", descriptions and cuts of which have lately abounded in the English medical journals, are in no wise superior to the simple appliance, always at hand, of the folded towel. For hospital use, a cone of sole-leather, pasteboard, or tin, with a thin layer of sponge as a lining, may be advantageously provided. Some persons become insensible without any struggle; these are generally, I believe, those who have acquired the habit of self-control, and especially those in the higher walks of life.

For operations of short duration, such as the reduction of recent luxations, the opening of abscesses, etc., it is only necessary to keep up the etherisation until the muscles are wholly relaxed: there is then a brief period of complete anæsthesia, which may be taken advantage of, and the patient becomes conscious again directly.

When etherisation is kept up for some time, as in protracted surgical procedures, there is often an epileptiform state induced, which is alarming in appearance, but has never, within my knowledge, had any serious result. A suspension of the inhalation soon restores the state of mere unconsciousness. Once only I have seen this epileptiform condition occur as the very first effect of the anæsthetic; it was attended with complete insensibility, which lasted long enough for me to remove a wen from the eyelid. The patient was a little girl ten years of age, who was crying violently when the cone was put over her face.

The objections to ether are, first, its inflammability. In cases where artificial light must be used, if a burning candle be brought near the mouth of a patient under ether, the vapour in the breath may take fire, and the effects be very serious. In tracheotomy and other operations on the face or chest, and especially in such as may call for the use of the actual cautery—as the removal of the upper maxillary bone—this objection is a very grave one. But if the precaution be only taken to keep the flame a little distance above the ether, it will not take fire, the vapour being very heavy. A second objection is a peculiar trembling of the patient's whole frame, which may embarrass the operator extremely, and which in my experience has been best controlled by the addition of a little chloroform to the anæsthetic.

In cases requiring the operation of tracheotomy, the temporary suffocation already alluded to as coming on after the first few whiffs of ether, may give trouble. I have seen it prove almost fatal in a case of laryngeal tumour. The trachea was instantly opened and the tube inserted; but artificial respiration had to be carried on for nearly an hour, by Dr. Cohen and myself, before we could regard the asphyxia as wholly relieved.

The vomiting apt to occur after etherisation comes on only when the effect is passing off, and may be set aside by reapplying the cone, with a fresh dose of ether, to the face. Chloroform has often produced it in my experience. Before giving any anæsthetic, it is well to see that the patient does not take any solid food for several hours. Death may occur from vomited matters getting into the air-passages and producing suffocation.

One point in regard to chloroform seems to me to have attracted very little notice; and that is, that it may be inhaled without bad effect once or oftener, but may produce death on subsequent administration. Impunity to-day does not argue immunity next week or next month.

My firm conviction is, that if the profession in England give ether a fair trial as an anæsthetic, they will agree with the majority of physicians in this country, that it is as economical and efficient as its more dangerous rival. We have no right to imperil our patient's lives by the use of an agent which has slain over a thousand persons, if other and safer means are available.

THE GENERAL MEDICAL COUNCIL ON EDUCATION AND REGISTRATION. SESSION, 1873.

Wednesday, April 2nd.

Medical Qualification of Women.—A report from the Committee on this subject was presented; and, on the motion of Dr. AGLAND, seconded by Dr. MACROBIN, was ordered to be received and entered on the minutes. It was as follows.

The Committee appointed on March 5th, 1872, at the close of the last meeting of the Council, having considered the subjects referred to them, report as follows. The Council resolved, March 5th, 1872, "That a Committee be appointed to consider and report whether the General Medical Council has power to make rules for the special education of women, such as may entitle them to obtain a Qualification, to be certified by the Council. And that the Committee do further report for what purposes such qualifications, if any, should be granted; what are the most desirable means for educating, examining, and certifying in respect of them, with especial reference to midwifery, the management of medical institutions, dispensing, and nursing."

With reference to the first clause of the resolution, the Committee are of opinion—1. That the Council has no power to make rules for the education of man or woman. 2. The Council has no authority to lay down what will entitle anyone to be registered. 3. The Council is bound to register any qualification specified in the Act, on production of evidence of such qualification, and can register no other. Therefore, if a woman become entitled to any one of the qualifications in Schedule [A], she is entitled of right to be registered in respect of these, but not otherwise. No licensing body can create any new qualification beyond those mentioned in Schedule [A], and if they were to attempt it the Council would be obliged to refuse to register. Your Committee are, therefore, compelled to say that the Medical Council has no power under the Act of 1858 either to make special rules for the education of women, or to give to women a qualification different from that of men, or to supply any national want, should there be such, of women specially certificated for any department or departments of medicine.

With respect to the first part of the second clause of your resolution: For what purpose such qualifications, if any, ought to be granted—your Committee have made inquiries as to the prevailing usages or laws of foreign countries. They find, first, that in Germany, France, and Russia there are special regulations affecting midwives. Secondly, that in France and Russia the practice of dispensing drugs by women is common in public institutions, the women being *Sœurs de Charité*, or belonging to religious orders. In France, the training for this purpose is voluntary and traditional. In Germany, it is compulsory and legal; women who dispense even in religious houses for their own purposes are in Germany necessarily "qualified." Thirdly, that in some parts of Germany, e.g. Carlsruhe and Hesse-Darmstadt, nurses are specially trained under definite instructions. Persons so trained are subjected to various precise regulations, and receive certificates of competency. They further find that special instruction is given in England for the higher class of nurses, by Miss Nightingale's School, at St. Thomas's, and by various affiliated and kindred institutions, especially King's College, University College, Liverpool Workhouse, and the Royal Infirmary, Edinburgh.

The following statement contains such further details on the above points as seem to be requisite for the information of the Council.

Midwives.—Elaborate regulations regarding the education of midwives have lately been made under special instructions from the Government of Russia.* They are of considerable interest on account of the completeness of their aim. The following is a summary of their provisions:

First Year.—Normal Anatomy, including Histology of the Normal Tissues; Physics, expounded in their application to the Physiology of Health and Disease, and the Hygiene of Women and Children; Botany, with reference to Materia Medica and Pharmacy; and Anatomy, especially with reference to Women and Children.

* The Committee are indebted to Miss Florence Lees for an English copy of the document, first given in German to Miss Nightingale by Dr. Von Arneth of Vienna; and to Lord Granville for a copy of the original.

Second Year.—Physiology, Medicine, Chemistry, Pathology, Methods of Investigating Disease, Pharmacy, and Dispensing. Physiology and Pathology shall have special reference to the Organisation of Women and Children, Pregnancy, and the History of Development. Pharmacy is to have special attention devoted to it, as Female Students will be under the necessity of mixing their own Medicines, in villages where only small Druggists exist.

Third Year.—Pathological Anatomy, Histology, Midwifery, the Teaching of the Diseases of Women and Children, will be taught from the beginning clinically; the Clinical Instruction (*klinika*) is confined to the most frequent forms of disease. In the Surgical *Clinic* the Pupils ought to make themselves acquainted with Fractures and Dislocations, also with Wounds, and the art of Bandaging. The study of Nervous Diseases, and those of the Eyes, is important; the first, with regard to the ailments of Women (*Gynæcology*); and the last, to those of Children.

Fourth Year.—Operations in Midwifery, General Practice in Midwifery, Hygiene, Clinical Diseases of Women and Children, Syphilitic and Skin-Diseases. Operative Midwifery must include the use of Forceps, turning, etc., with practical training of the Students. The duty of an expert in Midwifery is confined to the explanation of questions of Forensic Medicine, referring to the female sex and their offspring, e.g. questions relating to Virginity, Seduction, Pregnancy, Miscarriage, the Capacity of Life of the Fœtus, was the Child born Alive or Dead, etc. Hygiene is to be studied principally with regard to the health of the child after birth, and of the woman—during the period of development; during the period of pregnancy; during parturition, and after the cessation of the monthly periods.

Each yearly course lasts eight months, beginning in the month of September and ending in May. The number of the lectures may not consist of less than three a day.

From the establishment of this course of instruction the Russian Government anticipated the following results. 1. The lives of many women in childbirth would be spared, which were lost in Russia from inadequate medical attendance. 2. The lives of many children, and people of all ages, would be preserved among the lower orders, which are lost through superstition and prejudice. 3. An efficient number of properly constituted midwives would be spread over the country. 4. Such a training would make women very useful as nurses in war, where they are needed: not merely for wounds, but the various disorders which life in a camp engenders. 5. If women were properly educated in medicine they would be useful in druggists' shops, etc., and thus the services of many men would be at the disposal of the State, whose places they could fill.

Such is the system in Russia, where so extended a course of education may, from local circumstances, be assumed to be required by the wants of this country. The arrangements in Germany with respect to midwives are part of the old system of organisation for state medicine, of which an account is given in the report to the Medical Council from the Committee on State Medicine, July, 1869. In Germany no one can act as a midwife who has not had a course of instruction as laid down by law; the midwife is required to keep a register of the circumstances of every delivery, and is absolutely under the supervision of the district health officer. A manual* for the instruction of midwives is issued by a special commission appointed to prepare it. The regulations, therefore, aim at a complete supervision and official knowledge of the circumstances of every birth in the country.

In Great Britain there are several Schools of Midwifery at which women are trained. Such schools exist in London, Edinburgh, and Dublin. In London, Queen Charlotte's Hospital, and, until lately, King's College undertook special teaching of midwives. The Obstetrical Society is now attempting to induce midwives to pass their examination and receive their diploma. This diploma, however, is not a licence sanctioned by law.

In Dublin, instruction is given in a systematic manner in connection with Sir Patrick Dun's Hospital, also in the Rotunda Lying-in Hospital, and the Coombe Hospital. Certificates of competency are given to those who pass examinations held under the direction of the Professor of Midwifery in the School of Physic, after attendance on women at their homes, and on lectures delivered thrice weekly. A manual for the instruction of midwives has been prepared by Dr. Churchill. In addition to the Lectures on Midwifery, at the conclusion of the course, lectures are given by Professor Haughton to the midwives, many of them being wives of soldiers, on Climate and Hygiene.

Miss Nightingale has examined into the deficiencies of the instruction in England, and has pressed the "organising a Midwifery School of the highest efficiency in both science and practice;" adding "let no

one think that real midwifery education can be less complete and thorough for a woman than it ought to be for a man. There must be, first, of course, the Lying-in Institution, the deliveries conducted by fully qualified head midwives, of whom enough, perhaps, exist already for the purpose, who will give practical instruction to the pupil midwives at the bedside. There must be a staff of Professors to give scientific instruction in Midwifery, but also in Anatomy, Physiology, and the like; in Pathology and Pathological branches; above all—in Sanitary Science and Practice."

Dispensing Medicines.—The relation of dispensing to the wants, especially of the rural districts, has not yet attracted in this country adequate attention. The improvement which has taken place of late years in the medical advice to the poor has not yet resulted in arrangements for conveniently providing them with medicines. The labour of preparing and dispensing medicines at his own house is still, in most places, imposed upon the medical officer; though in some cases guardians of the poor both give drugs and provide a dispenser at the union, yet this excellent usage is infrequent, and the distance the poor traverse under this arrangement is often a heavy payment for the money value of the drug. In many villages there are now intelligent women trained in habits of accuracy in the management of the post and postal telegraphs. Would it not be convenient for the poor, that these offices, always situated at the most central spots, should be also the rural dispensaries of the Local Government Board. They could be supervised by the district medical officer. Dr. Gordon, Deputy Inspector-General of Hospitals, observes (*Lessons in Hygiene and Surgery*, p. 36) that "one of the ablest and most conscientious dispensers he ever knew" was a lady of a religious order.

Nursing.—1. The systematic training of nurses in Kaiserswerth are too well-known to be more than alluded to. In some parts of Germany, as at Carlsruhe, and in Hesse-Darmstadt, there are government regulations and opportunities for the instruction of trained nurses. There is theoretical and practical instruction. The former is given in lectures during the winter months; the latter, by training in the German hospitals. The lectures are partly physiological, partly practical; including instruction in cooking, and, generally, in the manifold duties of nursing, public and private. Their training completed, they go up for an examination; and, if found worthy, receive a certificate to that effect.

2. Miss Nightingale, in a letter addressed to the Cubic Space Committee, and elsewhere, has discussed fully the importance of training nurses and organising the nursing staff of workhouse and other hospitals.

For a statement of Miss Nightingale's views on the training of nurses, the Council is referred to the report of the Cubic Space Committee, to a letter from H. Bonham Carter, Esq., printed in the Appendix, and her volume *Notes on Nursing*.

IV. RECOMMENDATIONS.—Your Committee have thought it desirable to present this slight sketch of the system existing in other countries. They do not by any means propose to the Council to adopt arrangements which, however necessary among other nations, do not appear to be suited to the conditions of our own. Nevertheless, they believe, that looking at the advancing wants of our increasing population, it is both expedient and practicable to pay more attention in this country than has hitherto been paid to the education of women to be Midwives, Dispensers, and Superintendents of Nurses and Medical Institutions. The Committee are further of opinion, that if women have received a fitting education in any or all of these three departments, they are justly entitled to a certificate of competency in one or all of them.

They recommend that the Committee be empowered—

Firstly.—To enter into communication with any public institution in which there is provision for the education and examination of women as—1. Midwives. 2. Dispensers. 3. Superintendents of Nurses and of Medical Institutions.

Secondly.—To consider and report whether, and in what manner, a Public Register of persons obtaining the qualifications named might be kept.

The Committee desire to impress upon the Council, that they do not, in this report, enter into the question of whether women should, or should not, have special education for ordinary medical or surgical practice, still less how that education, if any, is to be obtained. The Medical Council registers, of necessity, all such diplomas, when legally obtained. It would be bound to report to the Privy Council any body which improperly conferred medical and surgical diplomas on insufficient education. The case now discussed by them is quite different from that of complete medical and surgical education. It is, whether in the advance of population and civilisation a want has or has not been shown in the services for which women are specially adapted; and whether women, when properly instructed, have that recognition

* *Preussisches Hebammen-Buch*, Berlin. 3rd edition, with plates, 1866.

and that justice shown to them, which they may rightly demand. On this question they, purposely with great brevity, now present their opinion. While they are aware that the Medical Council has no power to lay down what will entitle any one to be registered, otherwise than in the terms of Schedule [A], of the Medical Act, they nevertheless consider it within the province of the Medical Council to issue a recommendation as to what would be desirable, for the benefit of the public, in the education of women as Midwives, Dispensers of Medicines, and Superintendents of Medical Institutions, and also as to the mode of registering their qualifications. The Committee, under these circumstances, are of opinion, that in any future Bill for the amendment of the Medical Act, a clause should be introduced, giving power to the Medical Council to register the Qualifications of Women acting as Midwives, Dispensers, and Superintendents of Medical Institutions. The register, they need hardly add, would be separate from the register of Practitioners of Medicine and Surgery. In conclusion, the Committee would call the attention of the Council to the following letter, from the President of the Local Government Board.

"House of Commons, March 21st, 1873.

"My dear Dr. Acland,—You are, I believe, the Chairman of a Committee, appointed about a year ago by the General Council of Medical Education, to report upon the subjects of the granting of Certificates of Qualification by the Council to Women, in respect especially of Midwifery, the management of Medical Institutions, Dispensing, and Nursing. My own opinion is, that the possibility of referring to such certificates, and of relying upon them, would be a very considerable practical advantage in the administration of the Poor Law and Sanitary Acts in this country. It would be of use to me, should you be able to tell me how soon the Report of your Committee is likely to be presented to, and to be considered by the Council.—Truly yours,

"(Signed) J. STANSFELD."

The Committee recommend that a copy of this Report, when received by the Council, be forwarded to the President of the Local Government Board. In conclusion, the Committee suggest that, should their recommendation now made be adopted, it would be desirable to reappoint the Committee for the purposes above indicated.

On behalf of the Committee,

H. W. ACLAND, *Chairman*.

In addition, there was an appendix, containing a letter from Mrs. Maria Firth, together with copies of the regulations on the licensing of midwives proposed by the Obstetrical Society, and of a memorial from the Obstetrical Association to the Council of the Royal College of Surgeons of England; a memorial from Florence F. Miller and others to the Medical Council; an extract of a letter addressed to Dr. Acland by a midwife; an extract of a letter from Dr. Aveling; a letter from Dr. Sinclair to Dr. Stokes, describing the mode of education of midwives and nurses carried out at Sir Patrick Dun's Hospital in Dublin; a statement by Dr. Parkes as to midwives in the army; and a letter to Dr. Acland from Mr. Bonham Carter, M.P.

Dr. ACLAND moved—

"That the Committee on the Medical Qualification of Women be reappointed and be empowered—Firstly, to enter into communication with any public institution in which there is provision for the education and examination of women as—1, midwives; 2, dispensers; 3, superintendents of nurses and of medical institutions. Secondly, to consider and report whether, and in what manner, a public register of persons qualified to act as midwives, dispensers, and superintendents of nurses and of medical institutions might be kept."

Dr. MACROBIN seconded the motion.

Dr. HUMPHRY moved as an amendment, and Dr. PYLE seconded—

"That the Committee be reappointed, and empowered to consider and report whether and in what manner a public register of persons obtaining the qualification of midwives might be kept."

Sir WM. GULL said he felt very seriously upon the matter, but he hardly knew whether he really ought to say that women should be admitted on an equality with men in the medical profession. The matter, of course, was a wide one. He, however, was desirous that this Council should not commit itself to anything definite. He himself had worked extremely hard as a man to get any such position as he might now be thought worthy of occupying. He had earned his place only by close, and careful, and really drudging work. A deal of that drudging work was precisely of the character which now it was proposed to give and to submit to women. Well, all he said was, "Don't be too hasty." Women were very estimable personages—he meant clever, accomplished, self-controlled women were; but was or was it not right to let these ladies come into the profession, with their ability do in the end perhaps more than was anticipated or wished for them by their best friends?

Dr. ANDREW WOOD said that the Council would be travelling out of its proper sphere, and really exceeding its statutory functions, in dealing further with this matter. It was a matter of grave principle, and the Council ought not to think further of it.

Dr. STORRAR said he also thought the Committee had not made out such a case as would warrant the Council to go farther in this matter.

Dr. ALEXANDER WOOD expostulated with the Council that he and his colleagues should be brought to the meeting and paid to a certain extent, and that they should then waste their time. He called this wasting their time, for they had no statutory or legislative right to consider the question at all. The appointment of the Committee was a mistake; the report of the Committee was a mistake; and it would be a still more serious mistake, he thought, to enter the report of the Committee on the minutes of the Council.

Dr. STOKES was in favour of the admission of women to the practice of midwifery alone, and said that His Royal Highness the Duke of Cambridge, in the army, had adopted the principle with great success. He gave an account of the plan followed in Dublin, and said that the instruction of midwives should not be confined to training in hospitals, for the necessities of the poor in their homes produced circumstances which would teach the pupils to draw on their own resources. He hoped that the day would come when the assistance of the male practitioner would be had recourse to only in extraordinary cases. The Poor-law Commissioners in Ireland had in several cases appointed midwives to dispensary districts, who had rendered great assistance to the practitioners. He believed that the Council would act without respect to class interests, and would show that the profession favoured any legislation which promoted the public weal.

Dr. FLEMING said, that he was opposed to the teaching of medicine to male and female students indiscriminately; but in this the report was carefully guarded, and he could support Dr. Acland's proposal to a large extent. He believed that it would be of great advantage to the profession that midwives should be properly instructed, so as to relieve them from the necessity of attending parturient women for hours, and waiting for nature to complete a process which they could neither assist nor prevent. He would have women capable of knowing when danger or emergency occurred of such a nature as to require assistance. He was not sure that there was a general preference for the attendance of women during labours, and this arose from their inferiority, which was prominently brought into notice at the death of the Princess Charlotte. There was an institution in Glasgow for the training of midwives, but the difficulty was to get women possessing a sufficient amount of intelligence and previous education. The question of employing women as dispensers was, he thought, beyond the province of the Council; it was rather one for the Pharmaceutical Society, and similar bodies. The subject of nursing, also, was much in the same position as dispensing. Nurses were trained in Glasgow, and there was a good supply in that part of the kingdom.

Dr. AQUILLA SMITH thought that the amendment narrowed the question too much. The Committee admitted that the Council had no power to register women. The proposed inquiry would bind the Council to nothing beyond the general principle of encouraging the education of midwives and nurses. If it were the fact that women dispensed, would it not be proper that they should have a sufficient education? Dr. Andrew Wood alleged that, if midwives were well educated, they would supplant the medical practitioners; but in Dublin, Dr. Sinclair was most careful in training women to attend natural labours, and to send for medical men in cases of emergency. It was the duty of the Council to protect the public as well as the profession. There were two institutions in Dublin at which nurses were trained, and they had constant employment.

Dr. LEET reminded the Council of the provisions of the 55th section of the Medical Act, respecting the dispensing of medicines.

Sir ROBERT CHRISTISON said, that it had been stated that the Council would be going beyond its duties in entering on the proposed inquiry; but it had already done things not provided for in the Medical Act; for instance, the registration of students. He was not in favour of admitting women to general practice, and would oppose it by every honest means in his power. The Council was too apt to consider what was good in the case of large towns, and to lose sight of the requirements of rural districts. Nothing was more injurious to health and professional enjoyment, in rural districts, than the compulsory attendance on midwifery practice. He had, in an extensive intercourse, heard but one opinion, that it would be a great blessing to be relieved of this duty. He regarded the present as a golden opportunity of relieving the profession of this burden. Instruction had been for some time given to midwives in Edinburgh by the Professor of Midwifery and by the extra-academical lecturers; but this

had not had the effect of maintaining the supply of midwives. He thought that this arose from the insufficiency of their early training. He suggested that the bodies represented in the Council should be asked for information and advice, which might be obtained from the members of those governing bodies who were connected with midwifery practice.

Sir DOMINIC CORRIGAN said that the report was very valuable, and gave much information, but the Council ought to be content with entering it on the minutes.

Dr. MACROBIN assented to the remarks of Dr. Fleming and Sir R. Christison. He did not approve of women entering on the general practice of the profession, but there was a field for them in midwifery, and there was also a great call for properly educated midwives. If a register of midwives were established, a higher class of women than at present would follow the calling.

Dr. ACLAND said, that the Committee must be gratified with the serious way in which the Council had discussed the subject. The opinion of the Council on the merits of the question had been more uniform than could be expected. It seemed admitted by all, that a better class of midwives was required, and the objections made had regard to matters of detail. The question of nursing was but a small matter; it was, whether the Council ought, or ought not, to recognise the efforts to obtain properly trained nurses.

The amendment was put to the vote, and lost, three only voting for it.

The original motion was then carried by a majority of thirteen against seven.

The Committee consists of Dr. Acland (Chairman); Mr. Quain; Dr. Macrobin; Dr. Allen Thomson; Mr. Hargrave; Dr. Quain; Sir W. W. Gull, Bart.; and Dr. Stokes.

Professional Education.—A report from the Committee on the professional part of medical education was presented; and on the proposal of Sir R. CHRISTISON, seconded by Dr. ACLAND, was ordered to be received and entered on the minutes.

On the proposal for the adoption of the report,

Sir W. GULL spoke of the value of examinations, and described the plan followed at Guy's Hospital for giving practical instruction in the same way as anatomy is taught by the demonstrators.

After some remarks from Sir R. CHRISTISON and Dr. STORRAR, the further consideration of the report was deferred.

Thursday, April 3rd.

Dr. PAGET, the President, took the chair at 2 P.M.

Professional Education.—The discussion on the report of the Committee was resumed.

Dr. ALEXANDER WOOD said that the consideration of the subjects embraced in the report had been interrupted by the Medical Bill of 1870, and by the subsequent proceedings with regard to the formation of Conjoint Boards. He did not agree with those who held that education was of comparatively little importance, and that examination was everything. Of course there were two opinions on this matter; he held with neither extreme, and would call to mind that the Council was a Council of Medical Education. He did not, however, advocate interference with the details of studies, which should be considered by the examining boards. The training afforded by education was of great value; and this should be borne in mind in face of the tendency of the present age to provide for everything by examination.

Dr. ANDREW WOOD seconded the motion. He was delighted with some of the statements made on the previous day by Sir William Gull, and wished that the system in force at Guy's Hospital for giving practical instruction were followed in all medical schools.

Sir WILLIAM GULL said that the Council was an educational, not an educating body. It could not superintend medical studies; but it could provide for their efficiency by arranging their order and providing that the examinations were perfect.

Dr. QUAIN proposed, and Dr. ACLAND seconded—

"That the further consideration of the report on professional education be postponed until the next meeting of the General Medical Council."

After some remarks from Mr. QUAIN, Dr. FLEMING, and Dr. BENNETT, the motion was carried.

Report of the Finance Committee.—The report was read, and, on the motion of Dr. QUAIN, seconded by Dr. ANDREW WOOD, was ordered to be received and entered on the minutes. It was as follows.

The Finance Committee beg leave to submit to the Council, in the annexed table, a statement of the income and of the expenditure of the Council during each of the years 1871 and 1872, and of the estimated income and expenditure for the year 1873. It will be seen that the

income of the year 1872 exceeds that of the year 1871 by a sum of £1,169:15:4. This increase of income is due almost entirely to an increase in the amount of fees received for registration during the year. This increase over the amount received during the preceding year is observable in each division of the kingdom. The Committee think it right to indicate at the same time that the income of the preceding year (1871) was less than that of 1870 by a sum of £892:1:7, so that, whilst the income of last year exceeds that of 1871 by so large a sum as £1,169:15:4, it exceeds that of 1870 by only £277:13:9. It will be observed that the expenditure of the year 1872 has been less than that of the preceding year 1871 by a sum of £711:8:8. This diminution in expenditure is due to the fact that the meeting of the Council in the year 1872 was a short one, and to the greater economy exercised in printing. As the result of the increased income and decreased expenditure, there is a balance in favour of the Council on the present year's account of £2,660:3:7. Gratifying as this result must be, the Finance Committee beg to remind the Council that past experience has shown that the income and the expenditure of the Council are liable to fluctuations, consequently the income of the ensuing year may show a decrease, whilst, on the other hand, there very probably will be a considerable increase of expenditure in providing for the visitation of examinations, for the possible removal of the Council to other apartments, and for a reprint of the *British Pharmacopœia*.

RICHARD QUAIN, M.D., Chairman.

The table showed that income for 1871 amounted to £4,397:1:3, and the expenditure to £4,158:1:8; the income for 1872 to £6,106:16:7, and the expenditure to £3,446:13.

On the proposal of Dr. QUAIN, seconded by Dr. PYLE, the report was adopted.

The President then proceeded with the deputation to the Privy Council office. During his absence, the chair was taken by Sir Dominic Corrigan.

Qualification in State Medicine.—Dr. STOKES moved—

"That it is expedient that, in any future medical legislation, power should be granted to register a qualification in State Medicine after such qualification has been granted according to regulations approved by the General Medical Council; that the Registrar be directed to apply to the University of Dublin, for copies of the regulations with respect to State Medicine issued by Trinity College, and forward the same to every member of the Council."

The subject was one of great importance, and had largely engaged the attention of boards of guardians and of the medical profession. The Medical Council had taken a great deal of pains in the matter, and had issued a series of questions to persons in the medical and legal professions, and had collected much information. The subject of preventive medicine has now become as important as curative medicine in regard to the interests of the public, which the Council was bound to guard. The University of Dublin had instituted a qualification in State Medicine; and he trusted that the other boards would follow the example. The Universities of Oxford and Cambridge were, he believed, preparing to do the same thing, and were waiting only for the settlement of the joint examination question. In Dublin, there was no new degree instituted; those only were admitted to the examination who were already doctors of medicine, and who consequently had degrees in arts, and thus the diploma in State Medicine constituted the highest honour that the University could bestow. No curriculum of study was prescribed; and no fee was charged for examination, as it was considered that sufficient had been paid in obtaining the ordinary degrees in medicine and arts; but the examiners were remunerated from the funds of the University.

Mr. QUAIN seconded the motion; which, after some remarks from Dr. A. SMITH, Dr. BENNETT, and Dr. ANDREW WOOD, was agreed to.

On the proposal of Dr. STOKES, seconded by Dr. ANDREW WOOD, it was agreed that a copy of the resolution should be sent to the President of the Local Government Board.

Names Erased from the Register.—It was moved by Dr. ALEXANDER WOOD, seconded by Dr. LEET, and agreed to—

"That a list of all registered practitioners, whose names at any time have been removed from the *Register*, and not reinstated, be printed annually, and sent to the registrars of the various bodies in Schedule [A] to the Act."

Name Restored to Register.—A petition was read from Mr. Hannibal Henry Sheppard to be restored to the *Register*, his name having been erased under the 14th Section of the Medical Act. It was agreed to restore the name.

New Premises for the Council.—Dr. A. SMITH moved, Mr. HARGRAVE seconded, and it was resolved—

"That the Executive Committee be authorised to make all arrange-

ments that may be necessary in transferring the business of the General Medical Council, when suitable premises are obtained."

Restoration of Names to the Register.—It was moved by Dr. ANDREW WOOD, seconded by Dr. SHARPEY, and agreed to—

"That power be delegated to the Executive Committee to restore to the *Medical Register*, if they see fit, the name of any person whose name may have been erased from the *Register* under Section XIV of the Medical Act;" *i.e.*, after failure to answer the Registrar's letter of inquiry within a certain time.

Executive Committee.—Dr. A. SMITH moved, Mr. HARGRAVE seconded, and it was resolved—

"That the powers and duties heretofore delegated to the Executive Committee shall be vested in the said Committee, until the next meeting of the General Medical Council."

It was resolved that the sum of five guineas be given to the Hall Porter at 32, Soho Square.

Vote of Thanks.—Dr. A. SMITH moved, Dr. SHARPEY seconded, and it was resolved unanimously—

"That the cordial thanks of this Council are due, and are hereby tendered, to Dr. Andrew Wood for his services as Chairman of the Business Committee during the present Session of the Council."

Dr. A. SMITH moved, Dr. FLEMING seconded, and it was unanimously resolved—

"That the thanks of the Council are due, and are hereby tendered, to the Treasurers, Dr. Quain and Dr. Bennett, for their important services."

Deputation to the Privy Council.—On the return of the deputation from the Privy Council Office, the President resumed the chair.

The deputation appointed March 28th, to ascertain from the Government whether they are willing to aid the Council in the removal of any legal difficulties that may exist in carrying out the objects of Clause xix of the Medical Act, reported that they had waited, by appointment, on the Marquis of Ripon, Lord President of H.M. Council, and that two other Cabinet Ministers, Earl Granville, and Mr. Bruce, Secretary of State for the Home Department, were present at the interview, and took part in the conference. The conference lasted an hour and a quarter. There was no difference of opinion as to the desirability of the medical authorities in each division of the kingdom combining their examinations, so as to reduce the number of entrances into the profession; but the Lord President was not disposed to introduce into Parliament, for this purpose, a measure which would be limited to conferring on the medical authorities a merely permissive power to combine. His lordship was favourable to the introduction of a measure of this limited kind by some private member of Parliament, but with the understanding that it would not preclude his consideration of a larger measure, if on further thought he should find it expedient.

Visitation of Examinations.—Dr. ALEXANDER WOOD moved, and Dr. QUAIN seconded—

"That the following Report on the Visitation of Examinations be received and entered on the minutes."

Your Committee beg to report:—1. That the motion under which they were appointed, clearly points to a visitation to be conducted by members of the Council, along with special visitors, and they have had regard to this in preparing this report. 2. Your Committee beg to recommend that the arrangements for the visitations, and the appointment of the visitors, and all the details of the arrangements should be entrusted to the Executive Committee. 3. That the various examining bodies be requested before the 1st of May, 1873, to forward to the Registrar of the General Medical Council, a statement, showing the days and hours at which fixed examinations will be held by them, up to May 1st, 1874. 4. That the Registrar be requested to address a circular to each member of the Council within fourteen days after the Council adjourns, requesting him to reply within ten days after receipt, stating whether he is willing to undertake the duty of a visitor; it being understood that every member of Council expressing his willingness, may be liable to serve in any division of the kingdom. 5. That the names of members of Council willing to act so furnished shall be submitted to the Executive Committee, who shall select the visitors, and arrange what examinations are to be inspected by them. 6. That the Executive Committee shall have power to appoint a sufficient number of visitors, not members of the Council, and to make the necessary arrangements for the visitation of examinations by them, conjointly with the members of the Council. 7. That the members of Council and special visitors appointed by the Executive Committee, shall be paid for the discharge of the duties of visitation, and for their travelling expenses and maintenance, at the same rate as has been fixed by the General Medical Council, and approved by the Lords Commissioners

of H.M. Treasury, for attendance at the meetings of the General Medical Council. 8. That the Executive Committee arrange that the reports of the visitations shall be transmitted to the Registrar, in time to be submitted to the next annual meeting of the General Medical Council.—In submitting these recommendations, your Committee have pleasure in recording that they were unanimously adopted at a meeting at which all the members, with one exception, were present.

ALEXANDER WOOD, *Chairman*.

Dr. SHARPEY said that, on further consideration, he had arrived at a different view from that expressed by the Committee. One reason in favour of appointing members of Council in conjunction with the special visitors, was that it would be an act of courtesy to the examining bodies; but this might be met by deputing to any member of Council who was at the place where the examination was carried on, the duty of introducing the visitor. The conjunction of members of Council and special visitors seemed also to have the advantage of allowing explanatory statements to be given by the member of Council who was present. But, on the other hand, there were disadvantages in the appointment of members of Council as visitors in the way proposed. He believed that only a small number could undertake the task.

Dr. ANDREW WOOD objected to the proposed plan as one under which very few members of Council could undertake the duty. It would also add greatly to expense, and would trammel the special visitors in their work. He proposed as an amendment—

"1. That it be remitted to the Executive Committee to appoint a suitable person or persons, for one year, to visit the examinations of the licensing bodies; and to pay such fees as they may think right, and such reasonable travelling expenses as they may from time to time allow. 2. That the inspector, or inspectors so appointed, keep a regular report of their proceedings from day to day; and visit once the examination of each body in Schedule [A], and report on the proceedings of such body to the Executive Committee. 3. That such reports be laid before the Council. 4. That the Council direct their Registrar to require, by authority of the Council, from each examining body, a statement of the days and hours fixed for examinations; and to require all bodies who have no fixed times fixed for examination, to give, if practicable, at least seven days before any examination is to be held, a notification of the time and place, when and where any such examination is to be held."

Dr. SHARPEY seconded the amendment.

Dr. QUAIN said, that the result of visitation by members of Council had been satisfactory, as was shown in the improvement of the examinations. If special inspectors were appointed, it would be difficult to get men to perform the duty, and the Council could not pay each less than £1000 a year. He believed that the work would be efficiently done by a mixed board.

Dr. AQUILLA SMITH objected to paying by salary, or putting the matter out of the hands of the Council.

Sir DOMINIC CORRIGAN objected to voting on the report *en masse*. There were some parts to which he objected, while he agreed with others. It should be discussed paragraph by paragraph.

The PRESIDENT could not assent to the statement that qualified inspectors could not be got for less than £1000 a year. Very competent men, hospital physicians and surgeons of high medical knowledge, might be got to perform that duty for half the sum.

After some remarks from Dr. ACLAND and Dr. ALEXANDER WOOD, the amendment was put to the vote, and lost, four voting for it.

The further consideration of the report was adjourned.

Friday, April 4th.

Dr. PAGET, President, took the chair at 2 P.M.

Visitation of Examinations.—The consideration of the report on the visitation of examinations was resumed.

Sir DOMINIC CORRIGAN proposed, Dr. AQUILLA SMITH seconded, and it was resolved, "That the Report of the Committee on Visitations be considered paragraph by paragraph."

On the proposal of Sir D. CORRIGAN, seconded by Dr. ANDREW WOOD, it was resolved not to approve paragraph No. 1. Dr. ANDREW WOOD remarked, that it was a mere expression of motive on the part of the Committee, and was not a necessary part of the report.

Dr. ALEXANDER WOOD moved, and Dr. STORRAR seconded, a resolution, in conformity with the second paragraph.

Mr. QUAIN considered that the Medical Act did not give the Council any power to delegate the duty to the Executive Committee. He thought, also, that it was not wise to make too great a change. He moved as an amendment, "That the Visitation of Examinations be made as heretofore, and that the Branch Councils be each empowered to

avail itself of the assistance of a person not a member of this Council, for the purpose of the Visitation, if they see fit."

Dr. ALLEN THOMSON seconded the amendment, which, on being put to the vote, was lost, six voting for it. The motion was carried.

Dr. ALEXANDER WOOD moved a resolution in conformity with the third paragraph, which was seconded by Dr. STORRAR.

Sir DOMINIC CORRIGAN believed that it would be impracticable to get returns from all the examining bodies within the time mentioned.

Dr. APJOHN said that there would be no difficulty in the University of Dublin.

Dr. ANDREW WOOD said, that if any of the bodies had no fixed days for examination they could state it.

The motion was carried.

Dr. ALEXANDER WOOD proposed a resolution in accordance with paragraph No. 4. It was quite clear, he said, that the Council ought not to appoint any of its members to be visitors who would refuse the duty. It was comparatively easy for members to visit in their own divisions, but not to pass from one division to another.

Dr. STORRAR seconded the motion:

Dr. A. SMITH proposed as an amendment, "That the Registrar be requested to address a circular to each member of the Council within fourteen days after the 1st of May, 1873, requesting him to reply within ten days after receipt, stating whether he is willing to undertake the duty of a Visitor, it being understood that every member of Council expressing his willingness, may be liable to serve in any division of the kingdom."

Dr. HUMPHRY seconded the amendment, which, after some remarks from Dr. FLEMING and Dr. ANDREW WOOD, was lost, six voting for, and seven against it.

Dr. FLEMING moved as a second amendment, and Dr. MACROBIN seconded, "That the President now put the question to the Council as to who are willing, and who are not willing, to take part in the Visitation of the Examinations."

This amendment was also negatived, four voting for it.

Sir DOMINIC CORRIGAN objected to the latter part of the resolution, and moved, as an amendment, the insertion of the words, "In what part of the kingdom it would be in his power to attend as a visitor."

Dr. HUMPHRY seconded the amendment, which, after some remarks from Dr. RISDON BENNETT and Sir WM. GULL, was carried, twelve voting for it. It was also carried as a substantive resolution.

Dr. ALEXANDER WOOD moved the adoption of the fifth paragraph of the report. The motion was seconded by Dr. STORRAR, and carried.

Dr. ALEXANDER WOOD moved, and Dr. STORRAR seconded, a resolution in accordance with the sixth paragraph.

Dr. STOKES said, that the proposal to appoint visitors who were not members of the Council would be regarded as an argument in favour of those who desired a modification in the constitution of the Council. Repeated inspection, he thought, would be a mistake. When a visitation had been once made, and any necessary improvement effected, matters ought to be allowed to go on in their own course for some time. The Council must bear in mind, that the improvement which had taken place in the students could not be entirely attributed to the visitations.

Sir DOMINIC CORRIGAN said that the resolution was liable to lead persons outside to infer that the members of Council were either incompetent or unwilling to act as visitors. Its adoption would form a good ground for revolutionising the whole Council.

The PRESIDENT called attention to the fact, that the Council had already assented to the appointment of additional visitors.

Dr. ACLAND said, that the aspect of affairs was greatly changed by the appointment of a Conjoint Board in England, which, he believed, would soon be effected. It was impossible that the conjoint schemes should relieve the Council of the duty of visitation, and it was very doubtful whether they would be proper under any circumstances. If a Conjoint Board were formed, the method of visitation must be changed, and he would not like to see the inspection deputed to any one outside the Council. He wished that the system of appointing additional visitors had not come under discussion at the present time.

Dr. ALEXANDER WOOD having replied, the motion was put to the vote and carried, nine voting for, and seven against it.

Dr. ALEXANDER WOOD moved, and Dr. STORRAR seconded, the adoption of the sixth paragraph of the report.

An amendment was moved by Sir WILLIAM GULL, and seconded by Dr. ACLAND, "That the special visitors appointed by the Executive Committee shall be paid for the discharge of the duties of Visitation, and for their travelling expenses and maintenance, at a rate as approved by the Executive Committee. The members of Council to be

paid their travelling expenses." This amendment was negatived, nine voting for it, and ten against it.

Dr. ACLAND moved, as a second amendment, and Dr. STOKES seconded, the omission of the words, "members of Council and," in the first line of the paragraph.

Sir WILLIAM GULL said, that it ought not to go forth that the payment of five guineas a day was remunerative to the members of Council.

Dr. ALLEN THOMSON said, that the Council lost in public opinion, by being paid for attendance. He thought that the members should not seek to be paid for visitations.

Mr. QUAIN agreed with the remarks made by Sir William Gull and Dr. Thomson.

Dr. STORRAR had never been paid for visitation, and had never grudged the labour; but he did not think it would be consistent to ask members of the Council to go beyond their own divisions of the kingdom without payment.

The amendment was then carried, eleven voting for, and ten against it. It was then put as a substantive motion, being further amended by omitting the word "special" before "visitors."

Dr. FLEMING moved as an amendment, and Dr. ANDREW WOOD seconded—

"That the visitors appointed by the Executive Committee shall be paid for the discharge of the duties of visitation, and for their travelling expenses and maintenance, at a rate to be fixed by the Executive Committee."

The amendment was negatived. The original motion was then put and carried, as follows:

"That the visitors appointed by the Executive Committee shall be paid for the discharge of the duties of visitation, and for their travelling expenses and maintenance, at the same rate as has been fixed by the General Medical Council, and approved by the Lords Commissioners of H.M. Treasury, for attendance at the Meetings of the General Medical Council."

Dr. ALEXANDER WOOD moved a motion in accordance with the eighth paragraph, which was seconded by Dr. STORRAR and carried.

The Resolutions of the Report agreed to by the Council were as follows:—"1. That the arrangements for the visitations, and the appointment of the visitors, and all the details of the arrangements, not otherwise provided for by the Council, be entrusted to the Executive Committee. 2. That the various examining bodies be requested to forward, before the 1st of May, 1873, to the Registrar of the General Medical Council, a statement, showing the days and hours at which fixed examinations will be held by them up to May 1st, 1874. 3. That the Registrar be requested to address a circular to each member of the Council within fourteen days after the Council adjourns, requesting him to reply within ten days after receipt, stating whether he is willing to undertake the duty of a visitor, and if so, in what part of the kingdom it would be in his power to attend as visitor; it being understood that every member of Council expressing his willingness may be liable to serve in any division of the kingdom. 4. That the names of members of Council willing to act shall be submitted to the Executive Committee, who shall select the visitors and arrange what examinations are to be inspected by them. 5. That the Executive Committee shall have power to appoint a visitor or visitors, not members of the Council, and to make the necessary arrangements for the visitation of examinations by them conjointly with the members of the Council. 6. That the visitors appointed by the Executive Committee shall be paid for the discharge of the duties of visitation, and for their travelling expenses and maintenance, at the same rate as has been fixed by the General Medical Council, and approved by the Lords Commissioners of H.M. Treasury, for attendance at the meetings of the General Medical Council."

Conjoint Examinations and Medical Legislation.—It was moved by Dr. BENNETT, seconded by Dr. STORRAR, and agreed to unanimously—

"That this Council would approve of the removal by legislation of any legal difficulties which may appear to prevent any two or more of the licensing bodies from combining to conduct conjoint examinations under Section 19 of the Medical Act."

Vote of Thanks to the President.—It was moved, and carried by acclamation—

"That the thanks of the Council are hereby cordially tendered to Dr. Paget, the President, for his efficient services during the present session of the Medical Council."

The session then came to an end, having lasted nine days.

TYPHUS FEVER is increasing in Berlin. The Charité Hospital contains a large number of cases: a week ago, Dr. Zuelzer had about eighty under his care. The hospital barracks, which have been used by the surgeons, are to be appropriated to typhus cases.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 12TH, 1873.

METEOROLOGY AND INSANITY.

IN the Thirteenth Annual Report of the Sussex County Lunatic Asylum, is published a paper on the Effects of Meteorological Facts on Insanity, by the Rev. Thomas E. Crallan, M.A., Chaplain, who, during the four years 1868, 1869, 1870, and 1871, made an attempt towards tracing any possible relations which may exist between meteorological facts and the mental and physical condition of the insane. The object, therefore, of his paper is to show what has been done in this direction, and to state the inferences which seem fairly deducible from the data obtained during that period.

Mr. Crallan has arranged in a diagram all the facts connected with admissions, deaths, accessions of fits among the epileptic, maniacal and melancholic relapses, etc.; and placed them in such a manner as to be easily compared with the wave-lines of temperature, solar radiation, amount of ozone, rain, wind, etc. Special accessions of epileptic fits occurred on two hundred and twelve occasions. Of the accessions of mania during the same period, there were one hundred and twenty-six instances. We will give a brief summary of the results.

Mr. Crallan found, upon examination of two hundred and twelve accessions of fits, that, with five exceptions, they were preceded or accompanied by considerable alteration in atmospheric pressure or solar radiation, or both. And here, he thinks, is the clue sought; for it appears from his records that, when a great fall or a great rise of the barometer, or a great rise or fall of solar radiation, occurs—*i. e.*, a decided change from bright to dull weather, or the opposite, or when both atmospheric pressure and solar radiation are much disturbed—an accession of fits invariably occurs. He is led, therefore, to the inference that it is, after all, not the moon which directly affects the epileptic patients, but the change of the weather; and that it is the coincidence which not unfrequently occurs, of a change of weather with a change of moon, which has led the popular mind into the notion of the moon affecting both the weather and the epileptics.

Again, Mr. Crallan says that there were no cases of *maniacal* relapses to any marked extent which were not immediately preceded by some marked change of atmospheric pressure, solar radiation, or both. With regard to *melancholia*, he found that, with one single exception, the instances of augmented melancholic relapses occurred after considerable disturbance of atmospheric pressure and solar radiation, either in the same or in the opposite direction. He has no doubt left on his mind of the fact that such disturbances are always accompanied by, if not due to, *some alteration in the electricity*. He found that *ten* of these relapses occurred during thunderstorms or heavy gales; but he had no means of judging how far similar conditions might have existed at other times, when these unmistakable manifestations of disturbance were too far off to be heard or seen, but not too distant to affect the health or to produce mental irritation or depression.

Mr. Crallan concludes that, so far as his own observations go, any marked change of atmospheric pressure, solar radiation, or both, either in the same or contrary direction, is almost certain to be followed by an increased number of fits among the epileptics, or by a development of mania or melancholia. Sometimes all these forms of disease will be

augmented at once, sometimes only one; and it is deserving of notice, that very often the maniacal and melancholic patients seem to be affected in opposite ways—the latter being well when the former are excited, and the converse.

Mr. Crallan's paper is a very suggestive one, and is an example worthy of being followed in the various asylums throughout the country. The author has also shown a praiseworthy determination to present his facts as they occurred, without any attempt to twist them so as to support a favourite theory. In fact, the absence of a theory, and the honest discussion of facts as he found them, are characters which render his labour both valuable and exemplary.

It is strange that man alone of the whole animal kingdom, with all his boasted appliances around him, designed by his reason for observing weather-changes, with the view of providing against them, is the least successful in descrying them, from the humblest midge which dances in the air to his very companion, the cat or the dog, or his victim, the ox, of which Virgil says,

"Bucula cœlum

Suspiciens patulis captavit naribus auras."

Delicate plants and their flowers often indicate a coming change even before our meteorological instruments, with perhaps the exception of the electroscope, which, strange to say, is seldom or never used. Linnaeus has enumerated more than forty-six plants, the sensibility of many of which is so great as to render them faithful premonitors of a coming change. He divides them into three classes—the meteoric, the tropical, and the equinoctial.

There can be no doubt that, in certain low states of health, especially when the brain and nervous system are implicated, man becomes much more susceptible of atmospheric changes than when in health. Hitherto our meteorological observations have been limited to noticing the temperature, barometric pressure, amount of rain, the direction of the wind, presence of ozone, solar and terrestrial radiation, etc., without at all providing any means for watching the variations, either in quantity or quality, of *atmospheric electricity*—an omission that is all the more remarkable when we consider how universally ozone, the product as it were of electricity, has commanded attention both at home and abroad. Even the recent and best works on this prolific subject contain little or nothing of the relations subsisting between these two meteoric elements.

Mr. Crallan very honestly remarks that, except during thunderstorms, he has no other means of judging how far disturbances due to the alteration in electricity may have existed at other times, when these unmistakable manifestations of disturbance were too far off to be heard or seen, but not too distant to affect the health or to produce mental irritation or depression. Mr. Crallan need not remain many more days in doubt as to the electrical condition of the atmosphere, inasmuch as a very simple and inexpensive apparatus can be adjusted to any house, either in the form of a conductor, or of a captive balloon with about eighty yards of gilt silk thread attached to it, and connected with one of Volta's condensing electroscopes. In erecting such an apparatus, there are certain precautions to be taken, which a practical electrician like Mr. Apps of the Strand, justly well known for the beauty and perfection of his electrical instruments, would point out. The experiment is worth a trial in the lunatic asylums throughout the country, and, if persevered in for only one year, would yield results which would probably decide an important question in psychological medicine, as to the influence of atmospheric electricity upon the epileptic and the insane, and perchance give a clue to the preventive treatment of fits and maniacal and melancholic outbreaks.

As to the *lunar influence* in producing an accession of fits or maniacal attacks, Mr. Crallan, after detailing the statistics, gives it as his opinion that the supposed influence is due to the coincident changes of the weather which occur at certain quarters. From the time of Aretæus, the moon has always been supposed to have some influence over epileptics: in fact, these unfortunates were imagined to have offended our satellite, who, in her wrath, had afflicted them with

a disease which was called accordingly *sacred*. That the moon should influence our atmosphere, is only natural to suppose, when we consider the enormous power it exerts on the ocean, especially when combined with the influence of the sun; and assuredly this attractive force is capable, under certain circumstances, of altering the electric condition of the atmosphere. *A propos* of the moon and the electrical state of the air, we may mention a fact which we have elicited for the first time, after a careful analysis of more than two hundred fatal thunderstorms spread over the whole of England and Wales during the last fifteen years; viz., that the most fatal storms occurred after the new and full moons, and that the least fatal took place during the intermediate quarters. For instance, the fatality of the storms during each quarter was in the following proportion. During *conjunction or new-moon quarter*, the fatal storms amounted to 38 per cent.; at and after the *first quadrature*, 20 per cent.; at and after the *full-moon quarter*, 26 per cent.; and at and after the *second quadrature*, 16 per cent. = 100. It will also be pertinent to our subject to mention that for more than thirty years Mr. Prince of Uckfield, about eight or nine miles from Hayward's Heath Asylum, has been engaged in meteorological observations, which he has published under the title of *The Climate of Uckfield, in the Weald of Sussex*. We find that during twenty-eight years there were about one hundred and eighty-three days on which thunderstorms were registered, although very few were of a fatal character. He remarks; "It is difficult to understand why certain animals should become so extremely sensitive to the approach of a decided change of weather. Some of them exhibit symptoms of uneasiness long before there are any visible signs, and often, too, when they have not the opportunity of going abroad. Hence it appears probable that any important change of weather is preceded by an indefinite alteration of the electrical condition of the atmosphere, the precise nature of which we are unable to determine."

It becomes, however, our bounden duty to attempt to determine these electrical conditions; and, in order to do so, atmospheric electricity must be studied quite as carefully as the aerial temperature, moisture, or pressure; and, moreover, studied in connexion with disease, and especially that of the nervous system.

The Sussex magistrates, through whose liberal vote Mr. Crallan was supplied with the necessary meteorological instruments, deserve great praise, and their example is worthy of imitation in other Asylums.

STRUCTURE OF VOLUNTARY MUSCULAR FIBRE.

At the meeting of the Royal Society, held on April 3rd, Mr. E. A. Schäfer, the Sharpey Physiological Scholar in University College, gave an account of his researches into the structure of striped muscle, which have yielded most novel and important results on this much-vexed question in histology. Of late years, German observers have been most prolific in their papers on this subject, each succeeding observer adding more to the complexity, while the present research is remarkable for the simplicity of its results. Living muscle, obtained from the dytiscus, was examined under very high powers (a No. 11 Hartnach, equivalent to about one-sixteenth English objective), without the addition of any reagent whatever. The test of its vitality rested in the fact, that the fibres still contracted under the influence of various stimuli. Thus observed, each fibre was seen to have the following structure. It consists of a homogeneous non-granular basis-substance of protoplasm, presenting broad transverse dark bands, alternating with narrower bright bands, along the centre of which is placed a double row of minute dark clots. Imbedded in the protoplasmic basis, and arranged in linear rows, are minute rod-like bodies—which he terms provisionally "muscle-rods"—terminated at each extremity by a rounded knob or head, so that both in size and in form they much resemble bacteria. The effect of striation is produced by the matrix being dim in the region of the slender rod-axes, but bright in the region of the rod-heads, which of course must be arranged in a double row in the centre of each bright stria.

Mr. Schäfer maintained that the striation was apparent and not real, the result of the enlarged rod-heads serving as centres of irradiation of light, the union of their approximated "halves" producing the bright band. That minute globules of matter had this irradiating effect, he had found on examining sections of gelatin, in which drops of oil were imbedded, each oil-globule having a bright halo around it. Hence transverse sections of the muscular fibre showed dark clots on a clear ground, as recently discovered by Kölliker, who believed the clots to be the fibril-ends surrounded by interfibrillary substance. When a fibre contracts the rods are seen to shorten, while the rod-heads proportionately increase in size; and this process will go on until the whole rod-axis has disappeared, and with it the broad dark striæ, nothing remaining but a wide clear tract containing rows of rod-heads. With polarised light, Mr. Schäfer has arrived at quite opposite conclusions from those of Brücke, who maintains that the dark parts or sarcous elements are doubly refractive, and the light stripes singly refractive; for, by using the lime-light and double Nicol, Mr. Schäfer found that the *whole* of the ground-substance was doubly refractive, the rods alone being singly refractive.

In the discussion that followed, Professor Huxley asked for an explanation of every transverse section yielding the same appearances of dark clots on a clear ground, seeing that, viewed longitudinally, the rod-axes were surrounded by dim substance, the whole forming the dark striæ. This Mr. Schäfer explained by the fact of the exceedingly small length of the rods, so that it mattered not at what part of their axis the section was made—the effect of the "halo" produced around each rod-head would still remain in focus. To Dr. George Harley, who asked whether, in contraction, the rod-heads of each muscle-rod approximated, thus increasing the distance existing between the double row of rod-heads in a state of rest, he said that these structures maintained their relative positions to one another during and after contraction; and he argued from this that the contractile element was really contained in the protoplasmic substance in which these muscle-rods are imbedded; that these latter are rather of an elastic nature, and opposed to contraction—their shortening under the act being a mechanical rather than a vital effect. This view, certainly, would make the contractile element of striped muscle to be the same as the single protoplasmic basis of involuntary muscular fibre, or the contractile sarcocoele of an amœba. A similar explanation was afforded to Professor Kölliker, who wanted to know the relation of the "muscle-rods" to the fibrillæ, which had hitherto been believed to be the contractile elements of muscle.

It is difficult to estimate too highly the great importance of these researches, of which the above is but a very brief account; for if they be established, and the like structure be found in the muscles of vertebrata, a considerable revolution will be effected in muscle-histology, as well as much light thrown upon obscure points of muscle-physiology. "Sarcous elements" and "fibrillæ" will cease to have the significance they formerly held; they will be henceforth regarded as particles of muscle-substance, resulting from cleavage in one or other direction, and containing a variable number of the true ultimate elements, the "muscle-rods", which, by the way, Mr. Schäfer has not yet succeeded in isolating. Brücke's "disdiacasts" will cease to exist, as will a host of other structures, the creations of later years by Merkel, Krause, Engelmann, and others.

MR. LOWNE will deliver six lectures on Teratology at the Middlesex Hospital Medical College during the Summer Session.

A CONCERT has been given, in aid of the funds of the Great Northern Hospital, by the Hampstead Amateur Musical Society.

WE are glad to see that a hospital for the poor is now in operation at the Woodhall Spa under the direction of Mr. Cuffe. This is one of the most valuable iodine spas in Europe. Its merits are hardly sufficiently known to English physicians.

THE bequest of Mrs. Robinson of Elterwater Hall, Ambleside, to the Devonshire Hospital and Buxton Bath Charity, will probably exceed £2000. In a paragraph recently published in the newspapers the amount was, by an oversight, stated erroneously to be about £200.

THERE appears to be a difficulty in filling the chair of Pathological Chemistry in the University of Vienna. It has been offered to Hoppe-Seyler and to Kühne, both of whom have declined; and it has lately been decided to offer it to Gorup-Besanez.

DURING the week ending March 28th, there were only 19 deaths from small-pox in Vienna. The average daily number of cases in the hospitals was 180. It is to be hoped, therefore, that the end of the epidemic, now of much more than a year's duration, is not far distant.

MR. H. SPENCER SMITH, Senior Surgeon and Chairman of the Medical Committee of St. Mary's Hospital, London, writes to request us to contradict the report that erysipelas has prevailed there recently. Mr. Smith states that there is no foundation for it whatever. No outbreak of erysipelas has occurred, and not a single operation has been postponed.

THE OUT-PATIENT REFORM ASSOCIATION.

THE Medical Out-patient Reform Association have forwarded a circular, incorporating published resolutions passed at their late general meeting, to the managing boards of the various hospitals, and asking their co-operation.

DR. KIRK.

A TESTIMONIAL of silver plate, consisting of a tea and coffee service and salver, valued together at £120, is being sent to Dr. Kirk at Zanzibar. It is the gift of the Royal Geographical Society.

THE EAST LONDON HOSPITAL FOR CHILDREN.

A SPECIAL appeal is being made by the authorities of the East London Hospital for Children, to enable them to commence the new hospital buildings which are urgently required. We have been very intimately acquainted with, and have watched, this most useful charity, since its foundation, and can confidently speak of the noble work it has hitherto done, and of the important results accruing therefrom to the district. The abject poverty, the pitiable ignorance, and the resulting disease, of this part of London, are quite incredible to those who are not practically acquainted with the locality; and, when it is understood that the diseases of children in very many cases demand immediate attention and skilled advice, such as can only be afforded in comfortable dwellings or in hospitals, the charitable will at once admit the claim of the poor of this wretched district on their support. The requisite funds for the current expenses of the charity are, of course, only in small part gathered in the locality; and, to enable the governors, most of whom have already contributed to the fund, to carry out the new scheme, an extraordinary demand on the liberality of distant friends is rendered imperative; and the East London Hospital for Children has a right to expect a generous response.

EDUCATIONAL EXHIBITION IN VIENNA.

AN exhibition of educational objects was opened in Vienna on March 28th, under the patronage of Dr. von Stremayr, the Minister of Instruction. Among the articles of professional interest, Professor Hyrtl's series of anatomical preparations occupies the foremost place. He exhibits a large collection of injections of the human and animal kidney, placenta, lung, and other organs. Dr. Adam Politzer shows a series of preparations relating to the ear and its diseases; and Dr. Heschl of Grey a collection of one hundred and sixty-eight anatomo-pathological specimens. Drs. Ettingshausen, Eger, and Helfer make interesting contributions in botany and zoology; and the pharmaceutical school of the Austrian Apothecaries' Society furnishes a valuable botanical collection, together with pharmaceutical specimens and numerous kinds of wood.

YELLOW FEVER IN RIO DE JANEIRO.

A SPECIAL meeting of the Imperial Academy of Medicine in Rio de Janeiro was held on January 27th, in consequence of the prevalence of an epidemic of yellow fever. The President, Dr. Rego, explained that his reason for summoning the meeting during the vacation was to obtain its opinion as to the sanitary precautions which in its judgment ought to be adopted, and to give it information as to the measures which he, as President of the Council of Public Health, had undertaken in conjunction with the government. The discussion on the subject was resumed on January 30th, and again on February 17th. On the last named day, the following resolutions were unanimously adopted. 1. That the Imperial Academy of Medicine continue to demand from the competent authority the adoption of measures for the permanent sanitary improvement of the city. 2. That it continue to call the attention of the government to the buildings known as public-houses, considering them, in their present condition, to be true foci of disease. 3. That it repeat the declaration which it has already made, on the necessity for improved drainage and for a supply of water to every house as a means of rendering such drainage effectual. It was also resolved that the Imperial Government should be solicited to extend the area of operation of the City Improvements Company, so as to include certain densely populated suburbs.

GRANGE-OVER-SANDS.

THE inhabitants of this Lancashire watering-place seem, according to the information which reaches us, to be pursuing just now a very suicidal policy in regard to their future interests. Grange is situated on the coast-line of the Furness Railway around Morecambe Bay, but cut off by the railway from the shore. Consequently it has no bathing, no sands, and lacks many inducements for strangers. Inside the rail, a portion of the pre-existing shore has been converted into a kind of ornamental water, below high-water mark. The village is situated on the slopes of the adjoining hill, which comes quite down to the shore and the railway, and has been for years a resort for invalids with bronchial and pulmonary disease, and has been gradually gaining a deserved reputation as a winter residence, owing to the mildness of its climate. The only drawback, for invalids a very great one, is its want of sanitary arrangements. It has no drains but what end in "dumb wells", so characterised by the nuisance-inspector; and water-closets running into pervious cesspools, or, what is worse, into chinks in the rocks, which are of limestone, and broken into wide cavernous openings. At the bottom of the hill, and lying between the railway and old shore, in the middle of the ornamental ground alluded to, is the chief spring and water-supply of the village. With such arrangements of cesspools, etc., it is impossible to suppose such spring can long remain untainted by the percolation of drains and water-closets on the hill-side above; and, indeed, it is already in a very dubious condition. The principal inhabitants a few years ago attempted to obtain the Local Government Act; but opposition was raised on the part of some of the ratepayers. During the past year, it was thought the Public Health Act would meet all the requirements; and the rural sanitary authority of the Ulverston Union, in which Grange is situated, was instigated to move for the consent of the Local Government Board for the formation of a "special drainage-district." This, however, was opposed by the same parties; and thus Grange is in imminent danger of entirely losing its *prestige* as a resort for invalids, for want of proper sanitary regulations. To show the extent to which the inhabitants are blinded to their own interests, they have resorted to the expedient of attempting to remove their guardian, who is a medical man, and who has been re-elected for many years, and is now one of the rural sanitary authority; and, simply because he has advocated sanitary works, they have nominated another individual, one who has thrown over the adoption of the Local Government Act in 1868, and obstructed the operation of the Public Health Act, 1872. In their endeavour to retard progress, they now resort to this mode of giving expression to their determination of having no sanitary improvements in the village. From the report of the

nuisance-inspector, read at a recent inquiry, it will be perceived that something is absolutely needful to be done. Typhoid fever and diphtheria are no strangers to the locality; and to these may be added scarlatina and diarrhoea. There is no doubt whatever that the place is honeycombed with danger; and, if the ratepayers are to have their own way and refuse to have sanitary regulations that have become necessitous, they will drive visitors and invalids away altogether. No medical man will advise visitors to go to a place where the commonest regulations for health are neglected, if he be aware of such neglect. Places, situated wherever they are, advertising themselves as "Resorts for Health", "Torquays of the North", and otherwise offering inducements to visitors to frequent them as sanitary resorts, must be prepared to have every facility for drainage and water-supply, to maintain their position. To suppose that can be done without any outlay is absurd; but, if the outlay be refused, it is only fair to warn the public of the risks they run in going to places where, expecting to recruit damaged health, they may only expose themselves to emanations which may prove more disastrous than those from which they are fleeing.

A PROPHETIC ANTIVACCINATOR.

A STRENUOUS opponent of vaccination appeared some days ago at Bow Street, in the person of Mr. Charles Edward Frost. Having been fined a year ago for refusing to allow his daughter to be vaccinated, he was again summoned, and he repeated his declaration that he would go to prison rather than his child should undergo the operation. He had lost three children through vaccination, and he was determined that this child should live. Moreover, he claimed the "Divine power of prophecy". He had predicted the recovery of the Prince of Wales when told that he could not live, and he now predicted that his child would not have the small-pox. Eventually Mr. Flowers adjourned the case, in order that Mr. Yardley, the vaccinating officer, might endeavour to obtain the consent of defendant's wife to the vaccination; she, however, according to her husband's statement, being as resolute in her repugnance to it as the prophet himself.

METROPOLITAN ASYLUMS.

AT the monthly meeting of the Metropolitan Asylums Board at Spring Gardens, on Saturday, Dr. Brewer, M.P., presiding, Mr. J. A. Shaw Stewart reported the death of the matron of the Stockwell Fever Asylum, from typhus fever, contracted in the discharge of duty. Mr. Wyatt stated that the Hampstead Hospital would be ready for imbecile patients on the 1st of May, alterations to the amount of £3,000 being required, and sanctioned by the Local Government Board, before the place could be turned to this new use. At Leavesden Imbecile Asylum 13 patients had been received, 24 had died, and 5 had been discharged, leaving 1,736 under treatment. At Caterham Imbecile Asylum, according to the report of Dr. Cortis, chairman of the committee of management, there had been 26 admissions, 18 deaths, and 7 discharges, leaving 730 males and 939 females under treatment. At the Homerton Fever and Small-pox Asylums, Mr. Charrington stated that, during the month, 18 fever patients had been admitted, 29 discharged, and 3 had died, leaving 25; while on the small-pox side there were only 6 patients. Mr. J. A. Shaw Stewart reported that, at the Stockwell Asylum during the month, 32 fever patients had been received, 7 had died, and 32 had been discharged, and there were now 32 under treatment. On the small-pox side 19 cases had been received, 6 discharged, and 3 had died, leaving 18.

CHOLERA IN THE AUSTRIAN PROVINCES.

THE epidemic of cholera has ceased in Moravia. During the week ending March 9, there were only 7 cases in the province, of which one died and one recovered. In the following week, there were no new cases; and of the 5 that remained under treatment, 4 recovered and 1 died. From the outbreak of the cholera in Moravia on November 24, there were 1091 cases in fifty districts with a population of 90,632: the number of deaths was 464. In Silesia, 45 new cases occurred in the

week ending March 9; the total number of cases under treatment in the week being 58. Of these 23 recovered and 18 died. To the 17 remaining under treatment there were added in the following week 39 new cases, making in all 56; among which were 25 recoveries and 22 deaths. In Galicia, 164 fresh cases occurred in the second half of February, making with 148 remaining under treatment, 312, of whom 203 recovered and 87 died. From March 1st to 15th, there were 123 new cases, making in all 145, of whom 50 recovered and 63 died. In Bohemia, during the latter half of February, there were in all 33 cases, with 11 recoveries and 17 deaths; and during the first two weeks of March, the total number of cases was 59, with 18 recoveries, and 30 deaths.

KAHN'S MUSEUM.

A FEW days ago, in the Judges' Chambers, before Mr. Baron Martin, Mr. Montagu Williams applied, on behalf of the defendants in the case of the Queen v. Davidson and others, for a writ of *certiorari* to remove any indictment that might be found against them for exhibiting obscene models, into the Court of Queen's Bench for trial. The application, which was supported by an affidavit of the defendant Davidson, the manager of Kahn's Museum in Coventry Street, Haymarket, was made on the ground that, as the exhibition in question was of a scientific and medical character, and as a view of the whole of the models by the jury would be necessary, it was expedient that the case should be tried before a special jury. Moreover, important points of law would have to be decided. Mr. Collette, on behalf of the Society for the Suppression of Vice, strongly opposed the application; but Mr. Baron Martin was of opinion that it was a case which ought to be taken into a superior court, and granted a writ accordingly.

THE REGISTRATION OF DEATHS.

MR. HUMPHREY has concluded the inquest respecting the deaths of four children who were found in the coffin of a female pauper at the Bethnal Green Workhouse. The jury returned the following verdict: "That the three male children died from natural causes; but there was no evidence to show how the female child came by her death." They appended the following remarks. "That the principle of thus burying several children in coffins with grown-up persons is not only a gross fraud upon the families of the said children and the cemetery companies, but tends to open the door to the most alarming infanticide; and the jurors request that the coroner will communicate with the Home Secretary, with a view to make the placing of more than one body in a coffin a misdemeanour, punishable by imprisonment; and that the conduct of Mr. Burridge is most disgraceful and disgusting; and that the conduct of Mr. Walter Burrows, superintendent of labour at the Bethnal Green Workhouse, has been most praiseworthy."

OPHTHALMIA AT THE NORTH SURREY SCHOOLS.

THE managers of the North Surrey Schools have forwarded to the Croydon Board of Guardians a copy of a letter received from Dr. Mouat, Her Majesty's Inspector, with reference to a visit recently made by him to the schools at Anerley; also, extracts from the reports of Dr. Duke, the medical officer, and Mr. Marsland, the superintendent, with reference to the prevalence of ophthalmia at the schools. Dr. Mouat's letter was written in accordance with a request made by the managers that he would put into writing the observations made by him on the occasion of his visit to the schools. It is addressed to Mr. Marsland, and in it Dr. Mouat says: "I have no objection to the managers making a public use of my statement to you and to Dr. Duke, that the amount of care and attention devoted to the matter has produced a considerable improvement in regard to ophthalmia since my inspection in November last, provided they accompany it with a qualification that I consider a great deal more to be necessary in the way of hygienic measures before we can hope to get rid entirely of the disease. I have every reason to hope, from what has already been accomplished, that when the further measures required are made known

to the managers, they will not hesitate to carry them into effect, and that the reproach of the continuance of so formidable a disease as ophthalmia will be entirely removed from the North Surrey Schools at no very distant period." The latest report from the medical officer of the school states, with regard to ophthalmia, that they have not now in the establishment one really bad case, but still a considerable number of light ones, which get apparently well, but which, on being sent down to the schools, relapse, and are sent back again to the infirmary. The medical officer adds, that such cases as these he has determined to keep under his eye a longer time, so as to insure their permanent cure. The superintendent confirms the testimony of the medical officer as to the very mild character of the cases now under treatment, and states that when the lavatories are enlarged and improved he believes that the managers will succeed in eradicating the disease.—Mr. H. F. Limpus, of Windsor, writes to a daily paper as follows. "In visiting the schools of workhouses and other large institutions, I have invariably found ophthalmia and whitewashed walls going together. People whose eyes are not very strong know the effect of walking for an hour or two in the snow, and one can imagine what it must be for these little children to spend the greater part of their time surrounded by nothing but a dead white. Of course, if any board of guardians can bring forward instances of ophthalmia with coloured walls my suspicion will be unfounded; but till then, I shall think that the disease is caused by the blinding glare to which these little creatures are constantly exposed."

FEVER IN THE FLYING SQUADRON.

A PRIVATE letter from the flying squadron, dated from Barbadoes, states that some of the ships' companies are very sickly. Those of the *Narcissus* and the *Doris* are suffering severely from enteric fever, a circumstance attributed to the water taken in at Vigo, dirty bilges, deficient ventilation, and want of attention to cleanliness in other respects. Great attention is said to be paid to sanitary regulations on board the *Topaze*; and the result is that there have been no cases of fever on that ship. The *Doris* had sailed for Bermuda with thirty-eight cases of fever on board. The ships (says the writer) are, without exception, overmanned, and the sufferings, from want of sleeping accommodation, are very great.

PROFESSIONAL INCOMES.

THE Chancellor of the Exchequer has announced his intention of taking a penny off the income-tax. In the course of the debate, Dr. Lush said the Chancellor of the Exchequer had given no reason why the income-tax should be retained in its integrity; he entered his protest against the professional man being assessed in the same way as the possessor of personal property. Considering the large number of influential public meetings recently held in denunciation of the income-tax, the Chancellor of the Exchequer ought to have explained why he deemed it necessary to retain a tax against which there was a growing dislike.

CONTAGIOUS DISEASES BILL.

MR. GLADSTONE has announced that it is not his intention to bring in any Bill on the subject of contagious diseases during the present session. He thought, however, that the question had derived much advantage from the discussion which had taken place on the motion of the hon. member for Cambridge.

SLAUGHTER-HOUSES IN LONDON.

THE House of Commons, on April 2nd, agreed to refer to a Select Committee the questions raised by a Bill which has been introduced by Dr. Brewer, under the title of the "Metropolitan Buildings Act Amendment Bill," and which is intended to repeal one of the most important of the legislative provisions for improving the sanitary condition of the people. By the original Metropolitan Buildings Act, which became law in 1844, it was provided that after thirty years certain specified noxious trades should no longer be carried on in London;

and among these trades the slaughtering of animals for food occupied a prominent position. The concession was apparently designed to afford all persons concerned ample time and opportunity to make such arrangements as would preserve them from loss and the public from inconvenience. Soon after the passing of the Act, however, it became manifest that private slaughter-houses were too great and serious a nuisance to be left without regulation and inspection; and it was provided, by the Metropolitan Market Act of 1851, that after the year following the erection and opening of a new market in a metropolitan suburb, all private slaughter-houses in London should be licensed by magistrates at the Michaelmas Quarter Sessions, and that every person desiring to obtain a licence should give one month's notice to the Board of Works of his district. By the decisions of the magistrates, and by the influence of the Boards of Works, the evils of badly managed slaughtering were kept within some bounds; but the medical officers of health of the various metropolitan districts have had their time largely occupied in the investigation of complaints arising out of the condition of slaughter-houses; and have often had to appear before magistrates to oppose the granting or renewal of licences. Dr. Brewer's Bill proposes to enact "that the slaughtering of cattle or sheep for human food by a butcher in his private slaughter-house duly licensed shall not be held to be the carrying on of an offensive or noxious business," within the meaning of the Act. If the Bill should become law, it would, of course, perpetuate evils which have been endured with patience on account of the prospect of their speedy termination. In 1849, Mr. Simon, then Medical Officer of Health to the City of London, addressed to the City Commissioners of Sewers a report, in which he said that he believed it to be quite impossible so to conduct the process of slaughtering within the City of London as to remove it from the category of nuisances, or to render it harmless to the health of the population; and he believed it to be equally impossible so to superintend the details of its performance as to prevent them, where ill-administered, from rising into considerable and fatal importance among the promoting causes of epidemic and infectious disease. In 1857, after the coming into operation of the Act requiring the licensing of slaughter-houses, a Committee of Metropolitan Medical Officers of Health was appointed to draw up a report of the progress of sanitary measures in the metropolis. In this report it was stated that there can be little doubt that the sanitary advantages which would result from a total prohibition of private slaughtering would outweigh all the inconveniences that might arise from it. In September 1857, Dr. Conway Evans, the Medical Officer of Health to the Strand district, made a special report to his Board of Works upon the subject. This Report contained a table enumerating no less than 1,210 private slaughter-houses then existing in the metropolis. At that time the number in the City had been reduced to 76, and all the slaughtering cellars in the City had been closed. This number has since been still further reduced, and is stated at 50 by Dr. Letheby in his report on the sanitary condition of the City for 1868-69. During the same official year, moreover, no less than 85½ tons of meat were condemned as unwholesome in the City markets, about two-thirds of this quantity having been derived from diseased animals, such as could not have been slaughtered for the purpose of sale in any public abattoir. With the view of meeting the anticipated opposition to Dr. Brewer's Bill, a trade association of butchers has been seeking to obtain petitions in its support. For this purpose a memorial has been addressed by the association to various private persons and public bodies, and, among others, to the District Board of Works of Whitechapel. The Whitechapel Board have referred the memorial to their Medical Officer of Health, Dr. Liddle, who reports upon it that the private slaughter-houses, although somewhat better conducted than they were thirty years ago, are still nuisances and injurious to health; while the extraordinary facilities they afford for the slaughtering of diseased animals, and for the disposal of unwholesome meat, are alone sufficient to justify and demand their condemnation. The Metropolitan Board of Works have resolved to refer the question to the Works and General Purposes Committee for consideration.

LOCAL AREAS.

WE see with great pleasure that Mr. Stansfeld has given notice of his intention to move for a Select Committee of the House of Commons to consider the question of areas of local administration. This is a measure which, as the State Medicine Committee has always urged, should have preceded the Public Health Bill. It would have avoided a large part of the present sources of failure. It is, however, better late than not at all.

SCOTLAND.

CONTRAVENTION OF THE MEDICAL REGISTRATION ACT.

AT the Forfar Sheriff Criminal Court, William Young, Friockheim, was, under the Medical Registration Act, recently fined 21s., without expenses, with the alternative of ten days' imprisonment, for having, though not a registered physician, filled up and sent to the Registrar of Guthrie a schedule certifying that a man named Sturrock died on February 4th, at Bents of Turin, of "dropecy of the kidenies", as the primary disease; and, as the secondary disease, "bronkatis of the lungs and dropecy of the chest, etc.", and signing himself "M.D., etc."

IRELAND.

SANITARY LECTURES.

THE sixth of the course of scientific lectures on public health was given on the 29th ult., by Dr. Alfred Hudson, on the subject of the Liability of Disease. He observed that, in considering the liability of disease, he would have to borrow largely from the physiology of nutrition, and from those writers who had given the clearest exposition of its laws, and of their application to the elucidation of zymotic diseases. By the function of nutrition he meant those continual changes—progressive and retrogressive—of the particles of our bodies, in the course of which new materials were attracted from the blood by the formative process, each organ or tissue attracting what was adapted to its own nutrition, while their effete materials were absorbed into the blood, or resolved by combination with the oxygen in the blood into new and devitalised materials, fit only to be eliminated or cast off by the excreting organs, the carbonised products of disintegration being removed by the lungs and liver, and the nitrogenous by the kidneys, etc. He pointed out various causes that predispose the body to disease, rendering it liable to suffer from contagion: and, after referring to the various theories with regard to contagion, he stated that he believed typhus fever had its origin principally from overcrowding, and was not so much the result of contagion. The importance of the study of predisposing causes in a sanitary point of view rested in a great degree upon three considerations—first, that liability to zymotic disease exists in different persons in different degrees; secondly, that its amount varies in the same person at various times and under various conditions; and, thirdly, that many of these conditions are preventable. He remarked that fatigue was one of the most frequent of the causes that predispose to disease, and that this was shown in the case of soldiers who suffered so much after long marches, often exposed to the worst influences of the weather. Dr. Hudson concluded an able and exhaustive lecture, by stating that the following were some of the conclusions to be arrived at from the facts that had been adduced. 1. That liability to zymotic disease may be considered inherent in our constitution—a law of our nature; 2. That this varies in degree in different individuals at different times and under different circumstances; 3. That these circumstances are partly external or extrinsic, and partly intrinsic conditions; 4. That both are partly preventable and partly non-preventable; 5. That, *ceteris paribus*, liability is least in those in whom healthy blood, healthy tissues, and healthy excretion coexist, constituting perfect nutrition; 6. That it is greatest in those whose blood contains the greatest amount of the products of waste of the tissues and of matters in a state of decomposition introduced into the circulation from without.

BRITISH MEDICAL ASSOCIATION: THE ANNUAL MEETING IN 1873.

A LETTER having been addressed in October last by the President and Secretaries of the Metropolitan Counties Branch of the Association to the President of the Royal College of Surgeons of England, informing him of the intention to hold the next annual meeting of the Association in London during the first week in August, the following reply has been received. A similar letter was at the same time addressed to the President of the Royal College of Physicians, but no answer has as yet been received.

"Royal College of Surgeons of England, March 21st, 1873.

"Dear Sirs,—I am desired by the President to acquaint you, in reference to your letter of the 26th of October last, that the Council of this College, on the 13th instant, resolved that the President and members of the British Medical Association be invited to a *conversazione* to be held at this College early in August next.

"I am, dear sirs, yours faithfully,

"EDWARD TRIMMER, *Secretary*.

"The President and Secretaries of the Metropolitan Counties Branch of the British Medical Association."

THE REGISTRATION OF MIDWIVES.

DEPUTATION TO MR. STANSFELD, M.P.

A DEPUTATION from the Parliamentary Bills Committee of the British Medical Association waited upon Mr. Stansfeld at Gwydyr House, on April 4th, to urge upon him the necessity for steps being taken to obtain the registration of midwives. Among those present were Mr. Ernest Hart, Dr. Aveling, Dr. Ramsey, Mr. Manning (Coroner to the Queen's Household), and Mr. T. Eyton Jones (Wrexham). The deputation was introduced by Mr. Eykyn, M.P.

MR. ERNEST HART said that the deputation came before Mr. Stansfeld with a view of consulting him in the first instance, as the head of the department which administered the Poor-law, and which thus employed a very large number of midwives, as to the existing and pressing necessity for requiring the education and registration of women employed, or employing themselves, in this capacity. Under present circumstances women had, generally speaking, no means of obtaining by training the knowledge necessary for their qualification as midwives. The deputation knew that the question could not be settled by one department; and that the Privy Council, being entrusted with the administration of medical affairs, was also concerned in it; the matter being one of the education, licensing, and registration of persons to act in such capacities. But the Local Government Board had, on the other hand, an immediate interest in the question, as the President had expressed in a letter to Dr. Acland, printed in the minutes of the General Medical Council; and it had also able medical advice at hand in its medical staff. It was estimated by Dr. Aveling that there were throughout the country 10,000 midwives; and in many rural districts they attended from 30 to 60 per cent. of the deliveries. Some were well qualified, although many obtained their qualification from accidental teaching, by observing the proceedings of the medical men with whom they came into contact rather than by any systematic teaching; but the number who obtained their knowledge by systematic teaching was very small; and such systematic teaching as existed was due to the individual philanthropy or isolated action of a few persons. Though no certain standpoint of comparison between the results as to mortality of skilled and of unskilled attendance in delivery was available, yet something could be gathered by comparing the general results of all deliveries by skilled and unskilled attendants, with the results where the poorest classes of women were attended only by trained midwives. The Royal Maternity Charity had none but trained midwives; and the comparison of the deaths from childbed in that institution with those in all England from the same cause were very striking. The mortality from childbed in all England was 1 in 200; while in the Royal Maternity Charity it was, according to the statistics of Dr. Hall Davis, in general 1 in 400, and last year 1 in 900. Now, this was a most important comparison, and gave remarkable facts. The general

experience of medical men showed that in general midwives commenced their business on no more experience than that of having themselves been mothers, or of having attended one or two labours. These women hoped that everything would go on naturally; and they made the patient in a difficult case fight through protracted pains, for they fancied they would lose the reputation they had so easily made if they called in further assistance. As to the means of carrying out what was desired by the deputation, and regarded as essential, the question was one—in the first place, of education; in the second, of examination and licensing; and thirdly, of registration. For precedents, they had had to look either to the Pharmaceutical Act or to the Medical Act. It was provided by the Pharmaceutical Act that, saving existing rights, no one should act as a chemist or druggist without being registered after examination proving that he had been adequately educated. This was a broad and sweeping measure. The Medical Act was less so. It prevented no one from practising. It only provided a *Register* of legally qualified persons, and provided that no person should falsely assume registered medical titles, and that none but registered practitioners should receive public appointments or give various certificates required by the law. The dangers attending ignorance of midwifery were of a character equal to those in professions, the members of which had to submit to examination, licensing, and registration. But the Medical Act afforded the more desirable precedent of the two quoted. The more radical the change, the more difficult to carry it out; and any attempt arbitrarily to exclude from practice all but registered midwives would involve the responsibility of ensuring an adequate supply, which was not to be lightly undertaken. By adopting the precedent of the Medical Act, the law of the survival of the fittest would be brought into play. If a system of educating and training the women were commenced, and none were officially employed but those who were thus trained and registered, the number of trained women would be constantly increasing, and there would be a gradual growth of opinion in favour of the registered as compared with the unregistered midwife. As to the examination and licensing, there was no reason to suppose that the medical corporations would be favourable to granting licences to women as midwives, for it was the wholesome tendency of modern opinion not to give licences in any one part of medical education without the whole, because the placing a person on the *Register* with a partial licence enabled that person to practise all branches of medicine; and it was the opinion of the corporations that the giving of these special licences would encourage the formation of a body of partly educated persons to practise medicine. Thus, as these women could not well have licences from the existing corporations, a special Board of Midwifery should be formed, with centres in the great towns, so as to save poor women from being compelled to travel great distances to be examined. This Board of Midwifery might be irrespective of the medical corporations, and connected with the obstetrical societies of England, Scotland, and Ireland. These were points which he stated to the President as requiring solution. There were various alternatives; and he had perhaps sufficiently indicated that which he thought preferable. Then, as to the education of the women; it was suggested that the means of their education should be adapted to their opportunities; and Mr. T. Eyton Jones of Wrexham had suggested that day in committee, that the union medical officers might be the teachers in the workhouse infirmaries. It could not be concealed that there was a difficulty as to the means of educating so large and scattered a body of poor women, because it would be hard to obtain the teaching without national help to pay for the services of those who taught. In Russia, Prussia, and other continental nations, means were afforded by Government subsidies for teaching these classes of persons. There were about fifteen provincial and metropolitan institutions in this country already in existence where good teaching for midwives might be provided, and their number might easily be increased; but it was not easy to see whence the cost of instruction could be defrayed, unless there were imperial or local subsidies in aid of the education of these poor women. The cost of examination would not be great, and might be defrayed by moderate fees for the licence. There remained the question of supervision; but as to that point he was not entirely in accordance with others, and he should leave it to be dealt with by speakers on behalf of the Obstetrical Society.

Dr. AVELING, as Secretary of the Obstetrical Society, stated that the Council of that Society were unable to attend to-day, but would ask Mr. Stansfeld to receive them on a subsequent occasion.

Mr. JONES (Wrexham), speaking from a very long experience, could say that the midwives with whom the general practitioners came into contact were quite untrained and ignorant, and it was absolutely necessary that instruction should be obtained for them. There were three classes of these women—one class being little educated, who

called themselves midwives; the second being those who waited upon medical men in the capacity of monthly nurses; and the third, those who took to the "profession" of midwives in conjunction with washing and charring. It had been his lot to be called to cases where the child's or mother's life was sacrificed through the ignorance of these women. The medical officers in Wales felt that they would only be doing their duty to the poor if they pressed for the education of these women, and they would be happy to be placed in the position of teaching them, for they knew they would be thus securing better attendance to the poor.

Mr. R. EYKYN, M.P., said that the subject was brought to his attention by a medical man, and he felt so strongly upon it that it was in his mind to prepare a short Bill to meet this very purpose. He mentioned the matter incidentally at a meeting a few days before, and then he was informed of this deputation, and with what had been said he cordially agreed.

Mr. STANSFELD said, that departmentally, this question, as Mr. Hart had signified, perhaps only indirectly, was associated with the Local Government Board; and if it were undertaken, he presumed it would be by the Privy Council. He had a considerable official interest in the matter, however, springing from the fact that it was a matter of common observation by all persons connected with the administration of the Poor-law, that there was a great want of training in midwives—training for the specific duties which they had to perform. He thought, that the statements which had been placed before him were, from a public point of view, conclusive, in favour of the advantages to be derived from the adequate training of the women who performed these important functions, and this training would be a guarantee that the poor would not have their sufferings increased by being placed under incompetent persons. He had, therefore, the very strongest opinion, that it was extremely important that these women should be educated, and he hoped that means would be found to do what the deputation asked. The figures quoted by Mr. Ernest Hart were very extraordinary, and showed that the loss of life through incompetent attendance must be very great, for in the general public statistics, in the whole number attended, of course a large proportion had skilled attendance. However, the question did not need figures, and it must be acknowledged that there must be great loss of life through unskilled attendance. Mr. Ernest Hart had stated very clearly the difficulties, or rather the questions, which arose, as to the best methods of proceeding to remedy these evils. There were the questions of education, examination, licensing, and registration. He believed that it would be out of the question to require the registration of all the midwives who were now permitted to attend cases of delivery, and he thought it should, as was suggested, commence with those who were qualified, and who would come forward to prove their qualification. He agreed with the need of having various centres of examination, and these ought to be as numerous as possible. Whether the proposed Board of Examination should be a special Board for the purpose, or whether there should be various medical bodies represented on it, was a matter upon which he would rather not express an opinion. The question of national assistance towards the teaching was also a question upon which he could not speak. He was glad to have received a deputation from the active members of the profession, showing such a great amount of interest in this subject. It was really due to a scientifically educated profession, and to their own character, to endeavour to help the education of those who worked in a narrower groove, and in a subordinate position, and upon whom the medical profession must at times rely. It was a sign of great promise to see such an interest taken by some of the ablest and most active minds in the profession in this matter. He felt it his own duty to take an interest in the subject, and he should be quite prepared to take any action which might seem advisable. He asked if the deputation had any suggestion to make on that score.

Mr. HART said it was hard to get any authorised body to move practically in such a case. The Medical Council could not easily move in the matter except by advice, for it was not an initiating Board, and the Privy Council would not move unless pressed from the outside. He suggested that the Local Government Department should represent to the Privy Council its own want of trained and registered midwives, and lay before it a *précis* of what had been now set forth, with any suggestions of its own, and ask that body to move in the matter.

Mr. STANSFELD said that was a practical suggestion, and he should be happy to adopt it. He would have a letter drawn up on the subject, and would communicate with Mr. Hart before it was sent on to the Privy Council. He was glad to have received so much information, and would consider what had been said and act upon it as far as he could.

The deputation then thanked Mr. Stansfeld, and withdrew.

THE VOLUNTEER MEDICAL SERVICE EXAMINATION.

WE have been repeatedly requested to furnish detailed information regarding the character of the voluntary medical examination, instituted by Mr. Cardwell in the auxiliary forces' scheme in January, and the works of reference to the subjects required by the Examining Board. The nature of the examination may be at once understood by reference to the clause stating the subjects of examination. This we publish a second time for the use of Volunteer Medical Officers.

Examination of Officers of Volunteers.—Clause 31.

5. Medical officers will be examined by a board consisting of the principal medical officer of the district, and two other army medical officers.

Appendix to Clause 31.—Certificate of Proficiency for Surgeons, Assistant-Surgeons, and Acting Assistant-Surgeons of Volunteers.

We certify that _____, of the _____, who is registered under the Medical Act of 1858, as qualified to practise medicine and surgery in Great Britain and Ireland, is well acquainted with the nature and intended application of the various articles composing the equipment of army hospitals in the field, and with the authorised means for the transport of sick and wounded soldiers, and the proper modes of employing them.

We also certify that he has a competent knowledge of the treatment of the wounds and injuries to which troops are liable in the field, particularly with regard to the special circumstances of campaigning; and that he is acquainted with the duties to be performed by army medical officers in camps and bivouacs, and during marches, as named in Section 21, Sanitary Regulations for Field Service, pages 82, etc., of the Official Code of Army Hospital Regulations.

Signatures of Board of Examining Officers.....

Station.....

Date.....

6. The officers about to be examined will proceed to the place appointed at their own expense.

We understand that the copies of the Sanitary Regulations are at present out of print. We, therefore, reproduce Section xxi required by the Examining Board.

XXI.—SANITARY REGULATIONS FOR FIELD SERVICE.

1. Before an Army takes the field, the Director-General, in addition to the information and advice usually tendered to the War Department, on matters connected with the Hospital arrangements of the Army, shall on the requirement of the Commander-in-Chief, or the Secretary of State for War, give the opinion of the Army Medical Department, in writing, on all matters connected with the country, climate, productions, rations, clothing, shelter for troops, sanitary arrangements, and precautions, and on all other matters bearing on the health of the Army in the field.

2. The Director-General shall recommend for appointment a competent Sanitary Medical Officer, to be attached to the Quartermaster-General's Department, as Sanitary Officer to the Army.

3. The Director-General shall issue to the Principal Medical Officer and Sanitary Officer of every Army on active service, such a code of instructions for their guidance, on all matters connected with rations, clothing, shelter for troops, sanitary arrangements and precautions for preventing disease, in addition to any printed regulations or instructions on the subject, as he may see necessary to meet the specialities of each case.

4. The Sanitary Medical Officer shall accompany the Quartermaster-General, or such Officer as he may appoint, in selecting buildings for occupation by troops, whether as hospitals, quarters, or stables. He shall examine into their sanitary condition, as respects cleansing, nuisances, drainage, ventilation, lighting, water-supply, lime-washing, cubic contents, and into all other matters connected with such buildings as are likely to affect the health of the troops or of sick; and he shall advise the Quartermaster-General, or his deputy, on all such subjects, sending copies of all reports he may have considered it necessary to make, to the Principal Medical Officer. The Sanitary Officer shall point out in his reports every sanitary defect requiring removal, and the number of troops or sick which can be safely accommodated in the buildings.

5. The Sanitary Medical Officer shall further examine into the sanitary condition of towns or villages about to be occupied, and their neighbourhood; and he shall make recommendations for organising a proper sanitary police, to preserve cleanliness and for removal of

nuisances, as well as for the execution of such sanitary measures as he may consider necessary for protecting the health of troops in occupation.

6. Before selecting any site for an encampment, the Sanitary Medical Officer, on being directed by the Quartermaster-General to do so, shall accompany him, or such other Officer as the Quartermaster-General may appoint, on his inspection, and the Sanitary Officer shall give, in writing, his opinion on the salubrity or otherwise of the proposed position, with any recommendations he may have to make, respecting the drainage of the site for a camp, the preparation of the ground, the distance of tents or huts from each other, the number of men to be placed in each tent or hut; the state of cleanliness, ventilation, water-supply; the position and regulation of latrines and slaughtering-places; cleansing and disposal of refuse; burial of the dead and of carcases of animals, etc.

7. The Medical Sanitary Officer shall further superintend the sanitary arrangements of the camp and of occupied towns. He shall see that the surface and vicinity of camps and towns are kept clean and free from nuisances—that defects of the surface-drainage are remedied—that the dead are properly interred, and the carcases of animals and offal are properly buried or otherwise disposed of—that latrines are properly regulated—that the water-supply is preserved in a state of purity.

8. He shall inform himself as to the sanitary condition of hospitals, huts, tents, houses, and other buildings in occupation, and shall recommend, in writing, such precautionary measures for the prevention of disease as he may think fit, whether as regards cleansing, draining, prevention of overcrowding, ventilating, lighting, lime-washing, removal of nuisances, improvement in water-supply, and on all other local matters affecting the health of the troops or the sick.

9. The Principal Medical Officer, or Sanitary Officer, as the case may be, of every Army in the field shall, on being consulted by the Commander of the Forces, give advice, in writing, on the composition of rations, clothing, shelter, sanitary arrangements and precautions for preventing disease, and on all other subjects bearing on the health and physical efficiency of the troops. Even where such advice is not requested, the Principal Medical Officer shall, nevertheless, send, in writing, to the Commander of the Forces, the fullest information on all these subjects, with such recommendations as appear necessary for protecting the health of the troops.

10. The Principal Medical Officer, or Sanitary Officer, of every Army in the field shall, with the sanction of the Commander of the Forces, immediately on the opening of a campaign, as well as at such other times as may appear to him to be necessary, issue such instructions regarding sanitary precautions to be observed for protecting the health of the troops as he may consider requisite for the guidance of the Medical Officers.

11. The Sanitary Officer shall keep up a continual daily inspection of the whole camp, and shall especially inform himself as to the health of the troops, and of the appearance of any zymotic disease among them, and he shall immediately, on being informed of the appearance of any such disease, examine into the cause of the same, whether such disease proceed from, or is aggravated by, sanitary defects in cleansing, drainage, nuisances, overcrowding, defective ventilation, bad or deficient water-supply, dampness, marshy ground, or from any other local cause, or from bad or deficient food, intemperance, unwholesome liquors, fruit, defective clothing or shelter, exposure, fatigue, or any other cause, and report immediately to the Commander of the Forces on such causes, and the remedial measures he has to propose for their removal, sending a copy of all such reports to the Principal Medical Officer of the Army, and he shall report, at least daily, on the progress or decline of the disease, and on the means adopted for the removal of its causes, until it is no longer necessary to do so.

12. When troops are on the line of march, the Sanitary Officer, the Principal Medical Officer, or any Medical Officer appointed by him specially for such duty, or the Regimental Surgeon, as the case may be, shall accompany the Quartermaster-General or the Officer acting under his orders, and collect as much information as possible as to the Medical topography of the district, with special reference to places which ought to be selected or avoided for camping grounds.

During epidemic seasons he shall also indicate the best means of mitigating or preventing attacks of disease on the march.

13. Troops, before proceeding on a march, should have some refreshment, especially during epidemic seasons.

14. The Principal Medical Officer and Sanitary Officer of every Army in the field shall send to the Director-General, at such intervals as the Director-General may determine, full information on all subjects connected with the hygiene of the Army, together with such recommendations for improving this service as the Principal Medical Officer or Sanitary Officer may consider requisite.

15. All Medical Officers, in charge of General Hospitals, Divisions, and Brigades in the field, shall transmit to the Principal Medical Officer of the Army, for the guidance of the Sanitary Officer, full information as to the sanitary state of the troops and Hospitals, and on all matters affecting the health and physical efficiency of the men, at such intervals as the Principal Medical Officer may appoint.

16. Sanitary Officers attached to any Army in the field, or to any General Hospital, at the base of operations, shall draw up a weekly Sanitary Report on the state of the Army or Hospital, to be sent to the Principal Medical Officer of the Army, for the information of the Commander of the Forces, a copy of which will be transmitted by the Principal Medical Officer immediately to the Director-General.

Hitherto, only one or two medical officers have presented themselves for examination. The questions on one of the occasions were approximately as follows:—

Precautions to be taken in selecting camping ground with regard to soil, elevation, incline, protection, etc. The space allotted to camps. The number of men told off to each regulation marquee. The relative position of officers' and men's tents.

Precautions to be taken in securing the health of the men in temporary and permanent camps—such as in the formation and cleanliness of latrines, their position with regard to the camp and the water-supply; the position and superintendence of the slaughter-house. The drainage and development of permanent camps.

The securing of a proper supply of pure water, and the steps to be taken in an unknown country of finding the same, with a description of the different methods of roughly filtering and purifying water. Surveillance of watering places.

Precautions to be taken in keeping the men dry in camp.

The character and amount of diet for soldiers, and its modifications under special circumstances of campaigning. The inspection of diseased meat.

The various affections usually met with in ordinary camps, in camps and ambulances in time of war.

Precautions to be adopted to prevent the outbreak of dysentery, typhus, cholera, pyæmia, hospital gangrene, and the steps to be taken to prevent their increase.

Precautions to be observed in utilising houses and villages for the purposes of hospitals. The equipment of army hospitals in the field, and the uses of the various articles. The contents of the *Field Companion*.

The medical necessities and comforts on the field of battle, with practical questions on the treatment of the wounded in the field.

We recommend the following works to volunteer medical officers intending to present themselves for examination.

A Manual of Instruction for Attendants on Sick and Wounded in War. By Staff Assistant-Surgeon A. Moffit, Instructor of the Army Hospital Corps, Netley. Griffin and Co., London.

Article on Gunshot Wounds in Holmes's *System of Surgery*. By Mr. Longmore, Netley.

A Manual of Practical Hygiene. By Dr. Parkes, Netley.

ASSOCIATION INTELLIGENCE.

CUMBERLAND AND WESTMORLAND BRANCH.

THE spring meeting of the above Branch will be held in the Board Room of the Whitehaven and West Cumberland Infirmary, Whitehaven, on Wednesday, April 23rd, 1873; T. S. CLOUSTON, M.D., President of the Branch, will take the Chair.

Gentlemen who intend to be present at the dinner, or to bring communications before the meeting, are requested to inform the Secretary of their intention at their earliest convenience.

HENRY BARNES, M.D., *Honorary Secretary*.

Carlisle, March 29th, 1873.

NORTHERN BRANCH.

THE spring meeting of the above Branch will be held in the Athæneum, Sunderland, on Thursday, April 24th, at 2 P.M.

Dinner at the Palatine Hotel, Borough Road, at 4 P.M. Tickets, exclusive of wine, 6s.

Gentlemen who desire to read papers, or who intend to be present at the dinner, are requested to communicate with the Secretary, at their earliest convenience.

G. H. PHILIPSON, M.D., *Honorary Secretary*.
Newcastle-upon-Tyne, April 8th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

THE next meeting of this section will be held in the Council Room of Queen's College, Birmingham, on Tuesday, April 15th, at 7.30 P.M.

WILLIAM HINDS, } *Honorary Secretaries*.
LAWSON TAIT, }

Birmingham, April 8th, 1873.

YORKSHIRE BRANCH: SPRING MEETING.

THE spring meeting of this Branch was held at the Infirmary, Huddersfield, on March 19th. The Chair was occupied by the President, C. G. WHEELHOUSE, Esq., and thirty-five members were present.

New Members.—The following gentlemen were elected. J. B. Lyth, Esq., Sheffield; J. S. Cameron, M.D., Huddersfield; A. E. Wilmot, Esq., Escrick; E. J. H. Booth, Esq., Mirfield; F. C. G. Ellerton, Esq., Lindley.

Papers.—The following papers were then read.

1. Dr. Shann, on a case of Pneumonia, occasioned by a veal-bone which had transfixed the Oesophagus.

2. Dr. Clifford Allbutt, on the Connection between Intercostal Neuralgia and Angina Pectoris.

3. Dr. Burnie, on the Treatment of Puerperal Fever.

4. Mr. Jessop, on the Excision of the Ankle-Joint.

5. Mr. Knaggs, on a case of Inversion of the Uterus.

6. Mr. Rhodes, on a case of Melanosis.

7. Dr. Cameron, on a case of Irritation of the Sympathetic Nerve, illustrating the action of Nitrate of Amyl.

8. Mr. Brewer on some cases of Injury to the Head.

Dinner.—After the meeting, twenty-five members dined together at the George Hotel.

NORTH WALES BRANCH: INTERMEDIATE GENERAL MEETING.

AN intermediate general meeting of this Branch was held on Thursday, March 20th, at Ruabon, under the presidency of R. C. ROBERTS, Esq. There were fifteen members present, besides visitors. The President invited them to his house to partake of luncheon, where also the professional business was conducted.

Presentation to T. Taylor Griffith, Esq., Wrexham.—It was moved by Dr. A. E. TURNOUR (Denbigh), seconded by Dr. W. WILLIAMS (Mold), and carried unanimously—"That a photographic likeness of Thomas Taylor Griffith, Esq., F.R.C.S., Wrexham, be taken by some eminent artist, and presented to him by the members of the Branch as a mark of the high estimation and sincere regard with which they hold him, and that the presentation be made at the next annual meeting at Rhyl."

Mr. GRIFFITH said he would comply with the wishes of the meeting by sitting for his likeness, and in feeling terms thanked all present for their kind notice of him.

The PRESIDENT opened the business by a short address, and cordially welcomed the members to Ruabon.

New Members.—The following new members were elected. Robert Poole Griffith, L.K.Q.C.P., Portmadoc; John Lloyd Roberts, Esq., Denbigh; William Burton, L.R.C.P. Edin., Ruabon.

Communications.—The following communications were made.

1. A paper on the Sphincter Ani. By T. T. Griffith, Esq., Wrexham.

2. Dried Specimens of Poisonous Indigenous Plants. By R. Lawton Roberts, M.B., Ruabon.

3. Paper on Ten Years' Experience in Midwifery Practice. By T. Eyton Jones, Esq., Wrexham. This led to a long and interesting discussion, in which Mr. Griffith (Wrexham), Dr. Williams (Mold), Dr. Turnour (Denbigh), and others took part.

4. Effects of Ergot of Rye upon Infantile Life. By A. E. Turnour, M.D., Denbigh.

5. On Public Health Act, and Appointments of Medical Officers of Health. By D. Kent Jones, Esq., Beaumaris. This subject elicited a long discussion, no definite course being attained.

Dinner.—At the conclusion of the meeting, the members proceeded to the Wynnstay Arms Hotel, and at a little after 3 P.M. partook of an excellent dinner, the invited guests being Rev. Thomas Meredith, Rev. John Michael, Rev. John Morgan, — Kenrick, Esq. (all of Ruabon), etc.

ABERDEEN, BANFF, AND KINCARDINE BRANCH : ORDINARY MEETING.

A MEETING was held in the Music Hall Buildings, Aberdeen, on March 5th, 1873. Present, eleven members and one guest; Mr. WILIAMSON (Aberdeen) in the Chair.

Alteration of Hour.—The hour of meeting was fixed in future for 8 P.M.; the chair to be taken punctually at a quarter past eight.

Malformed Heart.—A heart whose aorta arose from the right, and pulmonary artery from the left ventricle, was exhibited by Dr. Alexander Ogston.

University Report.—After discussion, the report, as printed in the BRITISH MEDICAL JOURNAL of February 15th, was agreed to, with the following alterations. 1. That in the first, second, third, fourth, sixth, and seventh recommendations, the words "University court" be read without the addition of the words "or other competent body," etc. 2. That to the seventh recommendation be added the words "except in those cases where professors of the University are at liberty to teach more than one branch."

Guarana Committee.—The convener of this Committee reported that, owing to the want of co-operation of the members of the Committee, sufficient information on the action of guarana had not been obtained.

Reduplication of the Second Sound of the Heart.—Dr. ANGUS FRASER read a case of this phenomenon, which he attributed to aortic disease. Considerable discussion on the case followed.

Popliteal Aneurism.—Dr. KEITH (Aboyne) communicated a case of popliteal aneurism cured, after many other means had failed, by total stoppage of the circulation in the femoral by means of a tourniquet.

CORRESPONDENCE.

MR. CORRANCE M.P. AND THE PUBLIC HEALTH BILL.

SIR,—I shall be obliged if you will permit me to inform Poor-law medical officers, that Mr. Corrance will, at an early date after the Easter holidays, call the attention of the House to the mode in which the provisions of the Public Health Act, 1872, have been carried out by the inspectors of the Local Government Board, and will move a resolution thereon.

Mr. Corrance is desirous of obtaining accurate knowledge from rural district medical officers as to what combinations have been made, the area and population of districts, and also a statement of cases where the district medical officers having been elected health officers, the Local Government Board has refused its sanction to their appointments.

Mr. Corrance has requested me to obtain this information for him. I shall, therefore, be obliged to those gentlemen who will kindly furnish me with the same at their earliest convenience.

I am, etc.,
33, Dean Street, Soho, April 8th, 1873.

JOSEPH ROGERS,
Chairman of Council of the Poor-law
Medical Officers' Association.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

LECTURER ON PATHOLOGY.—The Linacre Lecturer in Medicine (Dr. Bradbury) gives notice that he will lecture on pathology, in the Old Anatomical Schools, on Tuesdays, Thursdays, and Saturdays, at 9 A.M., during the Easter Term, commencing on Tuesday, April 22nd. The fee for the course will be three guineas.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 3rd, 1873.

Armstrong, Robert Stow, St. John's, Bedford
Brodribb, Charles Aikin, Bathurst Street, Hyde Park
Clarke, George Mouat Keith, Gerrard Street, Soho
Evans, Henry, Croydon
McCourt, Patrick, Fatfield, Durham
Whitefoord, Adam John, St. John's Wood Terrace

The following gentlemen also on the same day passed their primary professional examination.

Carey, John Thomas, Guy's Hospital
Grimwood, Harry Charles, King's College

As Assistants in compounding and dispensing medicines.

Burgess, Harry Charles, Swindon, Wilts
Prettejohn, Robert Froude, Sidmouth, Devon

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK RURAL SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

ATHY UNION, co. Kildare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Athy Dispensary District: £120 per annum, and fees. Applications to Frederick Haughton, Esq., Levinstown, Athy.

BARONY PARISH, Glasgow—House-Surgeon, Poor-House at Barnhill: £300 per annum, house, coal, gas, and water. Applications to Peter Beattie, Esq., 38, Cochrane Street, Glasgow.

BIRMINGHAM GENERAL DISPENSARY—Assistant Dispenser: £75 per annum to commence.

BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury—Resident Surgeon and Apothecary: £80 per annum, with £10 increase to £100, board, lodging, coals, and candles, in furnished apartments.

BURNTISLAND, Fifeshire—Parochial Medical Officer.

BURY (Lancashire) RURAL SANITARY DISTRICT—Medical Officer of Health: £300 per annum.

COOKSTOWN UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Coagh Dispensary District: £75 per annum, and fees.

DRIFFIELD UNION, Yorkshire—Medical Officer for the Kilham District: £16 per annum.

DUDLEY DISPENSARY—Resident Medical Officer: £105 per annum, residence and allowances.

ELY RURAL SANITARY DISTRICT—Medical Officer of Health: £150 per annum.

ESSEX COUNTY GAOL, Chelmsford—Surgeon.

HEMSWORTH RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum.

HINCKLEY URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.

LANCASHIRE LUNATIC ASYLUM, Lancaster—Assistant Medical Officer: £100 per annum, board and lodging.

LEDWICH SCHOOL OF ANATOMY, etc., Dublin—Lecturer on the Theory and Practice of Medicine.

LIVERPOOL ROYAL INFIRMARY—Medical Superintendent: £200 per annum; or, if wife should be appointed Matron, £260 per annum jointly, board, washing, etc. Applications to Edward Gibbon, Esq.

LIVERPOOL ROYAL SOUTHERN HOSPITAL—Junior House-Surgeon: £84 per annum, board and lodging.

LOCHBROOM—Parochial Medical Officer: £100 per annum, and dwelling-house.

MERCER'S HOSPITAL, Dublin—Physician.

MEXBOROUGH URBAN SANITARY DISTRICT—Medical Officer of Health: £40 per annum.

MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Assistant Medical Officer: £150 per annum, board and residence. Applications to R. W. Partridge, Esq.

NORTH DUBLIN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the No. 2 North City Dispensary District: £125 per annum, and fees.

NOTTINGHAM DISPENSARY—Assistant Resident Surgeon: £140 per annum, furnished apartments, coal, and gas.

OWENS COLLEGE, Manchester—Brackenbury Professorship of Practical Physiology and Histology. Applications to J. G. Greenwood, Esq.

ST. PETER'S HOSPITAL FOR STONE, etc.—House-Surgeon.

SUSSEX COUNTY HOSPITAL, Brighton—Physician.—Assistant-Physician.

TORRINGTON UNION, Devon—Medical Officer for the Torrington District: £70 : 11 per annum.

TYRRE, Parish of—Medical Officer for the New Pitsligo District.

WEYMOUTH UNION—Medical Officer for the Portland District: £80 per annum.

WORCESTER AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Medical Officer: £170 per annum, and residence. Applications to C. J. Richards, Esq., 5, Lansdowne Villas, Lansdowne Road, Worcester.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*REED, James T., L.R.C.P.Ed., appointed Medical Officer and Public Vaccinator for the Ryhope and Tunstall Districts of the Sunderland Union; and also Medical Officer of Health for the same districts. Population, 5000. Salary as Officer of Health, £25 per annum.

SCALE, George John, Esq., appointed Senior House-Surgeon to the Royal Infirmary, Liverpool, *vice* M. J. Cleaver, M.B., resigned.

SINCLAIR, Robert, M.B., C.M., appointed Resident Medical Superintendent of the Dundee Royal Infirmary.

*SMITH, Thomas, Esq., appointed Medical Officer and Public Vaccinator for the Worth and Crawley Districts of the East Grinstead Union, and for the Ifield District of the Horsham Union, Sussex, *vice* T. H. Martin, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATH.

*BARTLETT, William, Esq., Surgeon, at Ladbroke Lodge, Notting Hill, aged 65, on March 31st.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

THURSDAY.—Hunterian Society, 8 P.M. Mr. Smee, "On Crystals obtained from the Atmosphere"; Mr. Waren Tay, "A Specimen of Valvular Disease of a Lamb's Heart"; Mr. Bryant, "A Case of Extirpation of an Ovarian Tumour and Fibrous Tumour of the Uterus."—Harveian Society of London, 8 P.M. Mr. Benson Baker, "On Fibrinous Concretions in the Large Vessels."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. CAMPBELL (Harvard University, Boston) writes to say that the information lately published in the *Pall Mall Gazette* (BRITISH MEDICAL JOURNAL, December 14, 1872), as to the completion of arrangements by which the Harvard University adopted the New England Female Medical College as a female medical department of that University is incorrect. The Female Medical College has accumulated property to the extent of about 90,000 dollars.

AN EXPLANATION.

SIR,—As I see in last week's issue a paragraph in which my name occurs in an apparently unpleasant comment, I beg to make an explanation. The paragraph in the *Weston Mercury* appeared unknown to me; and, on inquiring at the office, the editor told me that, seeing a circular announcing the meeting of the Branch Association at Bristol, he had extracted what he considered local news, the same as the week previously he had announced the election of another medical man and myself as members of the Association. Your comment would lead anyone to think that I, as a member, had inserted the paragraph. Puffing in any form, or the desire to see one's name in print, are things I dislike, and consider them not merely *infra dig.* to members of the Association, but also to medical men generally; I write, therefore, to repudiate any connection on my part with the paragraph commented on, and hope you will give equal publicity to this explanation.

I am, etc., DELAMARINE BRADSHAW, M.D.

Weston-super-Mare, April 8th, 1873.

MEMORIAL TO THE LATE DR. ORMEROD OF BRIGHTON.

In a letter which we have received on this subject, there appears to be some soreness on the part of some gentlemen in Brighton who think they were not sufficiently consulted in the first instance as to the origination of this testimonial; but it may be hoped that this will not prevent them from cordially joining in furtherance of an object of which they approve.

DRUITT TESTIMONIAL FUND.

MR. HAYNES WALTON begs to acknowledge the following contributions to the above fund since February 14th.

	£	s.	d.		£	s.	d.
Dr. Lucy Sewell (America)	5	0	0	Dr. John Sutherland (Nor-	2	0	0
Mr. Frederick Mayhew	3	3	0	wood)	2	0	0
Dr. C. B. Suckling (Birm-				Dr. Walter Bryant	1	1	0
ingham)	3	3	0	Dr. John Mann	1	1	0
Dr. Little	2	2	0	Dr. Alexander Silver	1	1	0
Dr. J. Sabben	2	2	0	Dr. Morris Tonge (Harrow)	1	1	0
Dr. G. R. Carter (Deal)	2	2	0	Mr. H. J. Foulds (Derby)	1	1	0
Dr. Greene (Bristol)	2	2	0	Mr. W. Taylor	1	1	0
Mr. Lynch	2	0	0	Dr. Kidd (India)	1	0	0

This is the last announcement.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

A VOLUNTEER MEDICAL OFFICER.—We think that the Volunteer Medical Officer has no legal priority of claim, as regards other medical men, to attend members of the permanent staff, and thereby secure the War Office allowance. The Government grant is for the purpose of aiding the sergeants to pay their medical man, whoever he may be; and thus the allowance stands very much in the light of an addition to their pay. It rests with the members of the permanent staff, as we take it, to choose their own medical man and arrange with him as to his fees; at the same time, the Volunteer Medical Officer may think himself morally entitled to be consulted. We fear that, if applied to for medical advice, he would not long be anxious to urge his claims in his capacity as a volunteer surgeon. He would ultimately, most probably, be called upon and expected to attend the members of the staff and their families for nothing, because he dare not receive, as a just return for his services, the remuneration of twopence a week per head; and, if he demand a larger fee, he does so only as a private practitioner, and quite irrespectively of his position as surgeon of the regiment. We advise volunteer surgeons generally to have nothing to do with the twopence, and to afford medical advice to the permanent staff and their families only while on duty. There is no just call on them beyond this; and sergeants, with the aid offered them by the War Office, are as well able, paid and pensioned as they are, to remunerate their medical men as most labourers and many artisans are in the habit of doing.

PATHOLOGY OF LITHATES.

SIR,—Pressure of work has prevented me from replying to the letter of March 1st, signed "Urates". It was distinctly stated, in my letter of February 22nd, "that the urine was tested microscopically and otherwise"; that is to say, the deposit cleared up upon the addition of heat or alkalies, and under the microscope it gave the ordinary forms of lithic or uric acid crystals. I take it, subject to correction, that the pathology of the disease is fairly accounted for in the symptoms as described—that the digestive and other functions of the system were not in a healthy state to perform their duties; but how far the disease extended I should be glad to have explained. The patient is now better, though not thoroughly recovered.

April 5, 1873.

I am, etc., LITHATES.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

"DRUNKEN ASSISTANTS."

SIR,—With "Delta", I deprecate drunken assistants; yet I am prepared to sympathise with them, from the fact that they are tempted to inebriation by the peculiar temptations of their situation, the salaries of assistants being insufficient to provide them with a home of their own; and, moreover, their excessive confinement greatly induces them to seek the pleasures of intoxication. The confinement of indoor assistants, as far as my experience goes, is simply intolerable. I have been confined so much, that I have not had an evening a week to spend either at a social party or a literary entertainment. Under these circumstances, is it any wonder that assistants plunge headlong into drunkenness? Had I not been a thorough teetotaler, I should have certainly yielded to this vice. I know an assistant whose principal was just as unsympathetic as mine; and one day the unfortunate fellow "got over the bay", and was turned off at once. For the sake of humanity, let principals be a little more sympathetic, and believe that they have to do with persons who are not altogether of a monastic temperament. Assistants love social comforts and liberty as much as most. Hoping principals will see the cause, and try to remedy the evil,

I am, etc., A TEETOTALER OF TWENTY-THREE YEARS' STANDING.

March 1873.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, April 5th; The Manchester Guardian, April 9th; The Aberdeen Daily Free Press, April 5th; The Bath Express, March 5th; The Birmingham Daily Post, April 7th; The Western Mercury and Somersetshire Herald; The Shepton Mallet Journal; The Hull Packet; The Daily Bristol Times and Mirror; The Constitution, or Cork Advertiser, April 4th; The Newcastle Daily Journal; The Eastern Morning News and Hull Advertiser; The North of England Advertiser; The Bedfordshire Times; The Derbyshire Advertiser; The City Press; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. C. B. Radcliffe, London; Dr. W. R. E. Smart, Penge; Dr. Robert Barnes, London; Dr. J. Ford Anderson, London; Dr. George Johnson, London; The Secretary of the Hunterian Society; A Volunteer Medical Officer; Our Dublin Correspondent; Dr. G. H. Philipson, Newcastle-upon-Tyne; M.R.C.S. Eng.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. John Ogle, London; Dr. Rumsey, Cheltenham; Dr. J. W. Watkins, Newton-le-Willows; A Member; Mr. S. Coupland, London; Dr. F. T. Roberts, London; Mr. D. Kent Jones, Beaumaris; Dr. J. R. Watt, Ayr; Dr. Kelly, Taunton; Dr. Humphry, Cambridge; Mr. T. Smith, Crawley; Mr. Lawson Tait, Birmingham; Our Edinburgh Correspondent; Dr. Marion Sims, New York; Dr. Campbell, Boston; Dr. Dawson, New York; Dr. Clifford Allbutt, Leeds; Dr. Taaffe, Brighton; An Associate; Mr. Cuffe, London; Dr. Bradbury, Cambridge; The Secretary of the Devonshire Hospital, Buxton; etc.

LUMLEIAN LECTURES

ON

THE CONVULSIVE DISEASES OF WOMEN.

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LECTURE II.

Epilepsy in Pregnancy and Lactation; Cases.—Chorea and Ague in Pregnancy; Cases; Conditions determining the Convulsion.—The Influence of Ovarian Nisus.—Vomiting in Pregnancy; Three Groups of Cases; Complication with Poisoned Blood.—Tetanus.—Whooping-Cough.—The Rise of Convulsive Diseases in Pregnancy puts to test the various Theories of the Genesis of these Diseases.—Influence of the Shock of Convulsion in inducing Structural Change in Nervous Centres; in altering Periodicity or Susceptibility.

MR. PRESIDENT AND GENTLEMEN,—Since our last meeting, one of the two women whom I described as suffering during pregnancy from uncontrollable spasmodic twitchings or "jumpings" of the legs, has been delivered, labour having come on prematurely. The fact is interesting, in illustration of the law of augmented centric nervous irritability. The immediate provoking cause of the labour seemed to be a distressing cough which the patient caught a week before at Hastings. The commotion caused by the cough destroyed the harmony or balance of nerve-supply and demand; and the irritation, beginning under its influence, was propagated to the part of the cord which rules over the dynamics of parturition. When the nervous centres are in a state of exalted tension, irritation telling upon any part of the brain through the emotions, or of the cord through reflex action, seems liable to spread and involve the whole cord. And if one part, as in pregnancy, be especially irritable, this part will be excited to its special action. Or we might express it in another way. We may imagine the spinal cord to be a conductor along which an impression made at any point is transmitted rapidly to the rest, testing and calling into action any part which is in an especially excitable condition.

Thus, as in the present case, cough excites labour; but under other conditions of special influence, as of blood-poisoning, or of proclivity from hereditary disposition, a cough might set up convulsion.

This law of the propagation of excitation from one part of the spinal cord to another part in a state of peculiar susceptibility, is admirably illustrated in a remarkable clinical experiment recorded by Harvey. "It seems to me," says our immortal physiologist, "on deep investigation, that the throes of childbirth, just as sneezing, proceed from the motion and agitation of the whole body. I am acquainted with a young woman who, during labour, fell into so profound a state of coma that no remedies had power to rouse her; nor was she, in fact, able to swallow. When called to her, finding that injections and other remedies had been employed in vain, I dipped a feather in a powerful sternutatory, and passed it up the nostrils. Although the stupor was so profound that she could not sneeze, or be roused in any way, the effect was to excite convulsions throughout the body, beginning at the shoulders, and gradually descending to the lower extremities. As often as I employed the stimulus the labour advanced, until at last a strong and healthy child was born without the consciousness of the mother." It is in the highest degree probable that in this instance there was albuminuria and uræmia. But how well must Harvey have been acquainted with the reflex function, when we see him thus turning it to practical account to accelerate the course of labour.

But the practical unity of the cerebro-spinal axis is not seen alone in the action of physical peripheral irritation; it is equally demonstrated by the influence of the mind. It is familiarly known to obstetric practitioners that depressing emotions experienced during labour will often stop the "pains," and that a feeling of confidence and courage will impart to them activity. It is greatly through the blotting out of the sentiment of fear, that chloroform acts so like a charm in promoting the healthy course of labour in women of delicate and susceptible organisation.

There is yet another illustration of the law we are now discussing, which I may be excused for introducing. It is seen in that vivid sym-

pathy which springs up between pregnant women. Thus, if a woman far advanced in pregnancy assist at the labour of another, she seems herself to catch every pain that seizes upon her suffering sister; and cases are known—I have recently seen one—where labour has in this way been actually excited. I have read somewhere, but I cannot lay my hand upon the reference, that the same thing is observed amongst pregnant mares and cows, so that those who have the charge of pregnant animals take care to separate from the rest any one which may be taken in labour.

I will now take up again the thread where I laid it down at the close of last lecture. Pursuing the method adopted at the beginning, I propose to work out the remaining relations of pregnancy and labour to convulsions, before discussing convulsion in the non-pregnant state.

Although there is no condition to parallel that marked by albuminuria in the proclivity to convulsion, yet we find other conditions which strongly predispose to similar outbreak. The very difference in nature of these conditions supplies further evidence of the truth of the fundamental law, that in pregnancy there is a special and intense accumulation of nerve-force.

EPILEPSY.

I shall best illustrate the relations of epilepsy to pregnancy by brief reference to cases.

CASE I.—A young woman had had three labours at term, and three abortions; all the children were born dead excepting one, and that lived only seven weeks. She had not, as far as could be ascertained, had fits before marriage. The history and present evidence of syphilis were distinct. She had been delivered a week. Convulsions had appeared during pregnancy, and fits were frequent after labour. She started convulsively on any noise or movement, showing a highly sensitive state of the nervous centres. There was no oedema; no albumen in the urine. There was general debility.

CASE II.—F. F., aged 32, had had three children and two abortions, the last child three years ago; she was seven months pregnant. She had several fits when suckling the last child; she had been only three days delivered when the first fit occurred; she had had fits in increased frequency since being pregnant; she lost consciousness. She looked anæmic; the pulse was small; there was oedema in the feet and legs; venectasia of legs; palpitation. The urine contained no albumen; its specific gravity 1.014.

CASE III.—G., aged 26, had one child one year and ten months old; she came under my care at the London Hospital. She had previously been under the care of my colleague, Dr. Andrew Clark, who had advised her to wean after six months' suckling. The fits broke out a month after labour, lasting four minutes. Since weaning she had a fit once a month only. She had not menstruated since labour. Palpitation was very distressing; she had "flushes to the head" preceding syncope; moaning followed, but there were no spasms now. The pulse was weak; there were increased impulse of heart, and slight anæmic sound. She had intense inflammation of the neck of the uterus. Under treatment for this, and taking acetate of iron, she got much better. The fits returned when she left off her medicine, and were "kept off" by taking it. In three months she menstruated regularly. Having been free for some time, whilst menstruating she was struck by her husband; this brought on a fit, and the menstruation ceased suddenly. The fits then returned, with sickness and headache. Soon after this she was lost sight of.

CASE IV. *Anæmia from protracted lactation; epilepsy.*—M.S., aged 36, has had four children, the last eighteen months ago, and was still suckling. She had a fit, the only one, last week; was two hours unconscious; was told she was "convulsed." She had nothing of the kind after previous labours; had suckled a previous child for two years. She had great pain under the left breast; short breath; some prolapsus and subinvolution of the uterus.

CASE V.—A pluripara, had had epileptic fits at rare intervals when not pregnant. She had a convulsion just before delivery. The urine was acid; specific gravity 1020; it contained no albumen, the full proportion of urea, and a little sugar.

CASE VI.—On the 9th June, 1869, I saw a young woman who had been married about a year. She had been delivered on the 2nd inst. of a live child, after an ordinary labour. Next day she had an epileptic fit; the face remained much congested for three days, but there was no return of fits. The urine was not albuminous. At times she was delirious. On the third day after my visit there was a sudden attack of secondary hæmorrhage, from the effect of which she died. She was apparently a healthy young woman. No history of previous nervous disorder could be elicited, but her husband, a young man, was seized with a paralytic stroke a little time before her labour. The shock of this event had caused her considerable agitation.

CHOREA IN PREGNANCY.

CASE I.—E. D., aged 22, came under my care at St. Thomas's Hospital. She had had two children, and suckled both for twelve months; she was now between three and four months pregnant. She had rheumatic fever at seventeen; chorea appeared three or four months afterwards, and reappeared with each pregnancy in the early months; she got better on quickening. The movements were all on the right side. After taking zinc and iron for a month she became much better as to the choreic movements, but still complained of headache. There was still some systolic murmur.

CASE 2.—C. E., aged eighteen, seven months gone in her first pregnancy, had a fright when three months gone; she had chorea when a child, five years ago, not since until the fright; then the "jumpings" and chorea came on, and continued ever since. She had typhoid some time ago, and was anæmic. The uterine souffle was heard as a strong whistle in left hypogastrium.

The relation between a fit of ague and convulsion is too striking to be overlooked. Pregnancy and labour seem to exercise the same influence in causing a relapse as they do in the case of chorea.

CASE I.—In 1863, I saw, with Mr. Corner of Poplar, Mrs. W. She had had several children. She had had ague in more or less distinct form for two years. She was delivered five weeks ago, and is suckling the child, but the milk is not copious. She seemed doing well, when five days ago she was seized with a marked ague-fit. This left her much prostrated; appetite impaired; heart's action feeble; no intumescence of liver or spleen. We advised removal to a high gravelly soil. She took quinine, then cobweb, which, Mr. Corner said, was followed by marked benefit.

If we now analyse these cases, we find, amongst other lessons which they teach, the following.

1. There is the fundamental state of nervous tension or erethism due to pregnancy and labour.
2. There is a degraded state of the blood, often vaguely called anæmia, but which is more strictly a form of toxæmia.
3. In some cases, to a degraded state of the blood is added a morbid diathesis, which in all probability involves a peculiar organic modification of the nervous centres.
4. Then there comes an emotional or physical shock, or a peripheral irritation, which, acting upon a system prepared to explode, determines the convulsion.

Thus in Case I there was the syphilitic diathesis—a condition well known to be capable of evoking, or leading up to, epilepsy in men. But in this case labour was necessary to determine the convulsions.

In Case II, epilepsy followed on the exhaustion produced by suckling. It is in cases of over-suckling that we see most strikingly the influence of exhaustion—say, of anæmia. The thin blood, deficient in red corpuscles, can hardly afford proper nourishment to the nervous centres. But the term "anæmia", or "spanæmia", imperfectly describes the kind of blood-impairment found in these cases. It would lead us away too far from our present theme to examine the reasons which seem to me to prove that a state of pure spanæmia, or simple dilution of the blood, can hardly exist. Blood which, from its poverty, is incapable of nourishing the organs, and of stimulating them to the adequate performance of their functions, necessarily soon becomes contaminated by excrementitious matters. Spanæmia, then, implies toxæmia. Excretion is always imperfectly performed. Almost any animal poison in the blood seems to possess the property of unduly exciting the nervous centres. There is hardly a fever which does not manifest evidence of cerebrospinal irritation, by delirium, or by that form of convulsion known as *subsultus tendinum*. The poison of spanæmia is different from the specific poisons of fevers; but, like them, it irritates the nervous centres, and, like them, it is likely to cause various irregular involuntary muscular actions, recognised as spasms, cramps, twitches. To return, then, to our case of epilepsy, provoked or evoked by over-suckling. It is a type of a considerable class. The mother goes through perhaps one or two pregnancies and lactations without serious ailment; but under repeated wear and tear, as in this case, at the third lactation, she breaks down. The blood is degraded, the nervous centres are ill-nourished; but, the function of lactation going on, there is maintained an inordinate centric irritability. Under these conditions, convulsion is near at hand. If there be present a convulsive diathesis, it is pretty sure to break out. If she have at any time been "subject to fits", it is almost certain that they will reappear now. That convulsions should occur, even where they had never occurred before, and where we can trace no evidence of convulsive diathesis, affords very strong presumptive evidence of the independent adequacy of the conditions which we are discussing to produce them.

It may be objected that, when pregnancy and labour are past, there

is no longer equal necessity for that preponderant activity of the cerebro-spinal axis which I have invoked. But there are abundant facts to prove that lactation, which, like pregnancy, imposes upon the mother the double duty of supporting two beings, really does imply a corresponding increase of nervous energy. Nor is this all. Throughout this work—of itself sufficient to tax the mother's powers to the utmost—the ovarian stimulus is commonly acting. In married women, especially, the ovaries can hardly be kept in abeyance: they are always struggling to renew the cycle of the function of reproduction. The effort at ovulation frequently determines menstruation in spite of lactation; and even where the blood-flow—the outward manifestation of ovulation—does not occur, there is reason to believe that ovulation, more or less complete, goes on. This state, added to the excitation of the sexual act, causes a constant renewal of exaggerated cerebro-spinal irritability. Hence it is that we see, in some cases, a periodical recurrence of epileptic fits, although there may be no visible menstruation. Illustration of all this is seen in Case III, in which epileptic fits recurred monthly.

It is remarkable, as bearing upon this argument, that protracted lactation, apart from ovarian excitement, is not nearly so likely to lead to nervous exhaustion, or to convulsion or insanity. Thus it is no uncommon thing for women who lose their husbands whilst they have a child at the breast, to go on suckling for an indefinite time. While they concentrate all their emotional and other nervous expenditure upon this vicarious duty, the ovaries are kept in subjection, and there is no excessive development of spinal irritability. Thus I have known poor women, badly fed, hardly worked, continue to suckle for two, three, and even seven years; exhausted, it is true, in strength, but free from convulsion or insanity. The nervous diathesis was wanting.

But it is in pregnancy, when the tension of the nervous centres is at the maximum, that we see the most striking proclivity to epilepsy. I do not know a recorded case in which this is more forcibly shown than in one which I saw several times with Dr. Sharpe of Norwood, the history of which he has drawn up for me. It is altogether one of the most interesting I have ever known, and I wish I could read it in detail. The main features are as follows.

Mrs. T. Many of her blood-relations were strumous or phthisical; her grandfather died of apoplexy; her father had hæmoptysis, and was dying of Bright's disease; her elder brother had been epileptic from birth, and died at thirty-two. She herself was healthy, although she had never menstruated when she married at eighteen. Her first pregnancy ended in labour at term, and she suckled for ten months, when menstruation returned. During the next five years she aborted four times, generally at eight or ten weeks, suffered much from hæmorrhage and great prostration, and great mental anxiety. The sixth pregnancy went to term; she nursed for eleven months, when she became pregnant again, and aborted at six weeks. Two years after this, being pregnant again, six weeks after a day of much fatigue, she had a fit in the night while asleep. She was unconscious for a long time; had a succession of fits; aborted after two or three. It was ten months before she recovered from this illness. During these ten months she menstruated regularly, having a slight fit before each period, on recovering from which she would find herself unwell. At the end of these ten months she was pregnant again, and at once "took fits", and had them frequently during the whole pregnancy, which lasted nine months. When labour came on, fits came on. She had no fits after this child was born. She nursed it for thirteen months, having plenty of milk. For three years there was no pregnancy, and she remained very well. Then, being pregnant for the tenth time, she had no fits; was delivered at term; was nursing, when at the end of seven months she had a fit, and found herself pregnant for the eleventh time. During this pregnancy she had many fits at varying intervals, went to term, had no fit during labour, but they broke out immediately afterwards, severe and protracted, she being semi-comatose between. She nursed for twelve months. When pregnant for the twelfth time, she aborted at six weeks, had much hæmorrhage, and fainted, but "had no fits." This account Dr. Sharpe, in my opinion, rightly doubts. He suspects that the two "faints" were two fits. In about eighteen months after this she was pregnant for the thirteenth time, and went on very well for three months, when she "quickened", having had the day before a very severe fit. A fortnight after this, she found her right leg paralysed. She took to bed, having fits from time to time until she was five months and a half gone, when the fits became very severe, and the coma so prolonged as to cause great anxiety; the paralysis of the leg continued. Labour was induced by rupturing the membranes. She had no fits during the labour or in childbed. She continued pretty well, except that the paralysis remained, and is now pregnant for the fourteenth time. She had another slight fit at the beginning, one at the end of four months, and one at the end of the fifth month.

Such is the record, not yet complete, of this "strange eventful history." It illustrates, in several repeated series of experiments instituted by Nature, almost all the points upon which I have dwelt.

1. There was probably an hereditary predisposition to nervous disease. But Dr. Sharpe specially records that this woman is the reverse of hysterical; she is a woman of surprising bodily and mental energy, of steady, determined will, ruling her own household firmly, and, having still energy to spare, rules those of sons-in-law as well.

2. She never had fits unless when pregnant, except during the ten months between her eighth and ninth pregnancies, when she had a slight fit at each monthly period.

3. The menstrual or ovarian nixus produced fits, shown by periodicity of recurrence during lactation and pregnancy.

4. She had fits during the climax of coition, but never except when pregnant. This last fact or experiment affords striking evidence of the increased efficacy of irritation during the inordinate spinal erethism of pregnancy.

5. The increasing preternatural irritability of the spinal cord is manifested in the repeated abortions following the first pregnancy.

6. These abortions and the protracted lactations induced a gradual blood-deterioration, the effect of which culminated, after six years of reproductive troubles, in the first epileptic fit during the nervous tension of pregnancy.

The urine, examined at four different times, never showed any albumen. The case was one of pure epilepsy.

Although, as in this case, epilepsy will frequently excite abortion, it is not nearly so likely to bring on labour as eclampsia, showing that the blood-poison in the latter case is a special cause in augmenting the irritability of the nervous centres.

VOMITING IN PREGNANCY.

The morning sickness of pregnancy is proverbial. It requires no treatment. Up to a certain point it even seems to fulfil a useful physiological purpose. It is usually the first evidence of the cerebro-spinal erethism produced by pregnancy. Its action may be compared to that of a safety-valve discharging the superabundant nerve-force, which might otherwise result in convulsion, abortion, or other mischief. Its constant occurrence in the morning seems to imply that at this time there is a maximum of central nervous irritability, so that comparatively slight peripheral causes will then act with more effect. There are many facts which lend support to this hypothesis. The immediate irritating cause I believe to be the stretching of the uterine muscular fibre under the eccentric pressure of the growing ovum, and the turgescence of the uterine vessels. In many cases, after three or four months, the balance is restored, and the vomiting either ceases or is so moderate as to be easily tolerated. It is remarkable, however, that in not a few cases vomiting appears to set in almost from the moment of conception. These cases may be explained by the facts—(1) that conception has taken place, as it most commonly does, at a menstrual epoch—that is, when there is an exalted central nervous tension; (2) by the stimulus or irritation of coition.

In some cases I have seen, the vomiting was so distressing, so prostrating, within the first three months, as to bring the patient to the most critical position, and even to prove fatal.

In other cases, the vomiting, less urgent at the beginning, being continuous, and increasing in severity, brings the patient into danger at the fourth, fifth, sixth, or seventh month.

In yet other cases, the first half of pregnancy may have been got over without much distress. The vomiting may have even stopped altogether; when, about the sixth or seventh month, it becomes uncontrollable, quickly exhausting the patient, even threatening her life.

These three groups of cases demand separate consideration. The first group, that comprising cases of severe vomiting within the first three months, includes cases of women who have borne several children, as well as primiparæ; although probably the primiparæ are the majority. In these, the preponderating condition is the extreme convulsive tension of the nervous centres. The subjects are generally "nervous," susceptible to emotional and physical impressions. In some, there are predispositions of a kind similar to those which operate in the production of convulsions. In some, and this may be especially predicated of those women who have already borne children, there is probably blood-deterioration. Sooner or later, indeed, blood-deterioration surely supervenes; but the influence of this does not appear necessary to produce vomiting in primiparæ in the first month.

In the second group, including cases of continuous vomiting increasing in severity, the initial conditions are those which mark the first group. But very soon another condition arises: obviously, continuous vomiting implies impaired or arrested nutrition. The influence of this seems to be to increase the irritability of the nervous centres. It is a

matter of observation that, if the strength can be roused, the susceptibility is diminished. But this is not all. The condition is not simply the negative one of want of nutrition. If food be not supplied from without, the starved system feeds upon itself. Absorption goes on actively. The proceeds of tissue-change find their way into the blood, and empoison it. At this point the danger is extreme. The blood-poison still further increases the irritability of the nervous-centres; it oppresses the brain; delirium supervenes; and utter prostration is at hand. Every fit of vomiting acts as a shock, and leaves the system more open to the next attack. At this point the slightest emotional impression, the gentlest touch on the skin, the offer of food or drink, will act as they will upon the sufferer from tetanus. At this stage diarrhœa is not uncommon. It bears further evidence of toxæmia. The indications of danger are—extreme emaciation; a pulse small, easily put out, exceeding 130 in the minute; hollow, staring eyes; hippocratic aspect; and delirium. I have not seen a patient recover in whom the last symptom had persisted for a few days, supervening on the rapid pulse. The vomiting may now subside; even premature labour may take place; but the patient will sink notwithstanding.

In some cases, and the observation applies particularly to these first two groups, the urine is albuminous. This was pointed out by Sir James Simpson. Where this complication exists, the case bears close affinity to the class of albuminuria or uræmic eclampsia. Or the albuminuria may be a secondary result of the vomiting brought about by the poisoned condition of the blood. But the fact is that this complication is exceptional, and therefore not essential.

In the third group of cases—that in which the vomiting becomes obstinate in the latter stages of pregnancy—the etiology is sometimes pretty clear. For example, I have seen cases in which, in the latter half of pregnancy, the uterus has rapidly, almost suddenly, undergone excessive distension. The cause of distension has been the undue secretion of liquor amnii or the growth of twins. At this time vomiting has set in. The explanation I would offer is this: normally, the uterus grows *pari passu* with the development of the embryo. The adaptation is so well balanced that there is no strain. But if the contents of the uterus be suddenly augmented, the harmony of correlation is destroyed. The uterus cannot suddenly grow to keep pace with the eccentric pressure within; its fibres are stretched, in some cases torn, and vomiting results. Stretching of the uterine fibre is enough to cause vomiting, even without pregnancy; *a fortiori*, it is enough when the irritability of the nervous centres is exalted by pregnancy.

In these cases I have seen the vomiting cease almost abruptly, and recovery commence from the moment the uterine tension was taken off by puncturing the membranes and emptying the uterus. In other cases, there are unmistakable evidence of blood-poisoning. Jaundice attends, sometimes preceding, sometimes apparently induced by, the vomiting. Whenever the blood is charged with matter which ought to be excreted by the liver or kidneys, vomiting is pretty sure to be aggravated. The most striking example of cholæmic vomiting is that connected with acute atrophy of the liver.

Again, I have seen cases of obstinate vomiting where a dead foetus or a diseased placenta probably supplied the poisonous element. Perfect relates a case of obstinate vomiting for several days during the retention of the head of the foetus *in utero*. A retained placenta, or clots giving rise to the invasion of the blood by septic matter, cause vomiting. This phenomenon is, indeed, a frequent result of the absorption of septic matter during childbed.

In a case that terminated fatally through exhaustion and irritative fever, the patient had been addicted to drinking. I shall again have occasion to refer to the pernicious influence of this habit in increasing the disposition of women to vomit.

It will now be useful to trace roughly some of the common features of resemblance or of relationship between the different forms of convulsive disease which occur in pregnancy. In this comparison or analysis we ought to include the relationship of syncope, vertigo, migraine, apoplexy, paralysis, delirium, insanity. They often form links of one chain or of different chains. Syncope and vertigo should be studied in their frequent relations to epilepsy; apoplexy in its occasional relations to uræmic eclampsia; paralysis in its relations with apoplexy and epilepsy; and insanity in its relations with epilepsy, eclampsia, and chorea. A vast field of inquiry is here before us. I scarcely dare to touch it. But I think I see enough to justify me in asserting that all these diseases, or symptoms, or pathological results, must be studied together in order that their true individual and cognate significance may be understood. Leaving aside the deeply interesting subject of puerperal insanity in its more usual forms, I may call to mind that all the convulsive diseases may culminate in mania or dementia.

What is it, then, that determines epilepsy in one case, vomiting in a

second, chorea in a third, tetanus in a fourth? We must of necessity invoke a peculiar antecedent condition of the nervous centres, lying dormant, probably quite unknown or unsuspected, until it declares itself under the magical ordeal of pregnancy. In the case of epilepsy this is almost certainly so; and this is proved by those cases in which the subject had previously been known to be epileptic herself, or to have come of epileptic parents. That pregnancy should reproduce epilepsy in those known to be predisposed to it is strong presumptive evidence that there has been a similar predisposition, although hitherto latent, in those in whom epilepsy appears for the first time during pregnancy.

In the case of chorea, this dormant morbid something is even more clearly proved. In a considerable majority of the cases in which chorea has broken out in pregnancy, the disease had existed in childhood. Pregnancy could only be regarded as a renewing cause.

But the postulate of an antecedent condition is most indisputably settled by the case of ague. We cannot conceive the possibility of ague being evolved solely out of the conditions of pregnancy. We know that other debilitating causes may also act in reproducing ague in persons who have once been under the influence of the paludal poison.

But it is not so clear that an antecedent predisposing cause is necessary to the production of eclampsia, or obstinate vomiting or tetanus. In some cases of eclampsia, at any rate, it has been impossible to trace a history of convulsive affection, or to establish hereditary taint; whilst, in many instances, the convulsion has begun and ended with one particular pregnancy, the recovery being perfect, and leaving no mark of special nervous diathesis behind. Obstinate vomiting, I believe, is more common in women of known so-called nervous or susceptible temperament; but I have not been able in some cases to make out any presumable nervous proclivity.

The influence of loss of blood in producing convulsions has often been dwelt upon, and an essential factor has been thought to be found in anæmia. I am persuaded that clinical observation will not support this hypothesis—at least, not in its general application.

The convulsive movements sometimes, but by no means constantly, observed in subjects dying from hæmorrhage, differ materially in character from the ordinary epileptic fit. The observations of animals bled to death have only a limited application. Yet it appears to be chiefly from such observations that the advocates of this theory have drawn their conclusions.

Probably few practitioners who do not practise obstetrics, and not even, it appears, many who do, have seen several cases of bleeding to death. It has been my fortune to see a considerable number. In most of them death was preceded by general tremor, a kind of universal shuddering; consciousness was sometimes not abolished, and in none was there trachelismus or congestion of the face. There was often vomiting, always distressing dyspnoea, and the pulse was rapid, scarcely felt, or even extinct. These signs constitute a picture differing essentially from convulsions.

In the following case the convulsion more nearly resembled epilepsy than usual. A woman pregnant with her eleventh child had profuse flooding from placenta prævia. Two or three convulsive fits followed the hæmorrhage. Next day she was very prostrate, but there were no more fits; no abdominal pain, but still frontal headache. On the fourth day her tongue continued colourless, and there was still intense frontal headache. She recovered. Here, possibly, there existed the epileptic diathesis.

In all these convulsive disorders the nutrition of the nervous centres is affected by some abnormal state of the blood; but the abnormal state is not the same in all. In epilepsy, in chorea, in hysteria, and, up to a certain stage, in vomiting, the alteration probably consists chiefly in that degradation which results from the impoverishment caused by excessive demand, and in the empoisonment of defective excretion. In eclampsia, supervening upon this, there is undoubtedly a special empoisonment by the elements of urine.

For the evolution of any one of these convulsive disorders, the development of a peculiar tension of the *vis nervosa* seems to be a fundamental condition; for, unless pregnancy supervene to produce this peculiar condition, neither epilepsy, eclampsia, vomiting, nor chorea, would, in most cases, ever appear.

Intimately, I might say inseparably, associated with exalted reflex irritability, is a peculiar tension or irritability of the psychical organs.

Convulsion may be determined by irritation starting either from the centripetal nerves, or from the brain.

Marshall Hall's contention that convulsion may also have a centric origin, must, I would venture to submit, be received with some qualification. It is very true that some poisons carried in the blood to the spinal cord, as well as to the rest of the body, will so exalt the irritability of the cord, that convulsions are easily determined. But it may

be questioned whether the *primum mobile*, the exciting cause of the convulsion, starts from the chord. Strychnine will enormously exalt the central irritability; but, so long as the animal is kept perfectly free from emotional or peripheral irritation, there may be no convulsion. This, Dr. Marshall Hall has shown me himself.

Strychnism resembles the excessive centric irritability of pregnancy; and, more nearly still, that greater irritability seen in tetanus. And in strict connexion with our theme, we must not forget that true tetanus is one of the convulsive diseases of pregnancy. In hot countries, as in the West Indies, in India, and in the Southern States of America, it is not uncommon in connexion with abortion and labour. Mr. Waring (*Indian Annals*, 1855), recorded 232 cases observed in India. Its occurrence has generally been thought to be sufficiently explained by comparing the condition of the uterus after labour to a surgical injury. But this, according to our view, is only a partial explanation. It accounts for the source of the peripheral irritation only.

The *tetanic state* consists in intensely exalted irritability of the spinal cord, a condition which may be regarded as a morbid exaggeration of the normally increased irritability of pregnancy. I have often seen in labour evidence of such extreme reflex and emotional irritability that I have expressed it to myself as tetanoid. But I have not seen a case of true tetanus in a pregnant woman which I could identify with what I have seen of tetanus after surgical operations, or of so-called idiopathic tetanus. Sir James Simpson (*Selected Obstetrical Works*, 1871), collected twenty-eight cases of tetanus connected with abortion or labour. In some of these there was no unusual lesion; in some there had been hæmorrhage; in some there had been plugging of the vagina to arrest hæmorrhage, and this has appeared to cause peculiar irritation. One observation made by Simpson is undoubtedly true. It is, that tetanus in women is extremely rare independently of pregnancy. Dr. Wiltshire has related (*Obstetrical Transactions*, 1872), two cases, both in pregnant women. Of the twenty-eight cases collected by Simpson, only six recovered. Both Dr. Wiltshire's died. Here I am tempted to mention a case of tetanus induced in an infant by whooping-cough. It will serve as an illustration of the influence peripheral irritation brought to bear upon the nervous centres of a child, naturally irritable, and brought to still higher tension by a morbid poison, may exert in causing convulsion.

Whooping-cough in an infant inducing tetanus.—On January 16th, 1866, I met Mr. Giles, now of Henley-on-Thames, on the case of a boy, aged nine months. He had been weaned two months, and was taking cows' milk and Robb's biscuits. He had had whooping-cough three weeks, having taken it from his mother. During the last three days a singular train of nervous symptoms appeared: first trismus, then emprostotonos, the hands touching the feet, then the body arched back into opisthotonos. The fits seemed the first expression of the impulse to cough, the coughing coming on soon after the fit. Anything in a spoon excited cough or fit. The child was not much wasted, but there was some degree of anæmia; the bowels had been out of order, the stools pale. Calomel and rhubarb had corrected this condition. He had had belladonna. We recommended goat's milk, solution of perchloride of iron, and gave a favourable prognosis. The child recovered.

Such a case must be studied in connexion with the *trismus nascentium*. It proves very clearly the intimacy of the association between whooping-cough and convulsive diseases.

The facts related, and the propositions deduced from them, have a valuable application to the pathology of convulsive diseases. It may be said, that the relations of these diseases to pregnancy bring the accuracy of various theories as to the essential conditions of these diseases to the test of clinical experiment. Many are the theories, and discordant, of the pathogeny of epilepsy, of chorea, of tetanus, and of hysteria. Now, be these essential conditions what they may, anæmia, congestion, change of structure of the nervous centres, embolism, pregnancy must produce them all, and all must vanish suddenly with labour. Are these conditions so created and so disposed of? Great as I believe the pathogenic potency of pregnancy to be, I cannot go so far as this. We cannot, at any rate, admit that a gross structural change in the nervous centres is of the essence of epilepsy or chorea, when we see complete recovery ensue as soon as the pregnancy is over.

We are, then, driven to conclude, with Voisin and others, that the visible alterations found in the brain and cord, in persons who have died of epilepsy or chorea, are consecutive on, not antecedent to, the disease.

These structural alterations, I submit, are more strictly connected with the ulterior superadded symptoms of the disease than with the initiatory or proper symptoms. For example, when the disease has long endured, when the fits have become frequent and severe, the brain commonly shows signs of impairment, and exhaustion, paralysis, dementia, or mania is the result. In a memoir which I wrote some years

ago on Chorea in Pregnancy (*Obstetrical Transactions*, 1868), I adduced reasons for concluding that the graver symptoms—the paralysis, the mania, death—were produced by the repeated shocks of convulsion.

No one who has watched a case of puerperal convulsions, or of obstinate vomiting, or tetanus, or who has himself experienced the torture of sea-sickness, can have failed to observe how each repetition of the fit weakens the power of resistance, rendering the nervous centres more and more susceptible to those impressions which started the affection. This increasing susceptibility is obviously the result of shock, aggravated no doubt by exhaustion from want of food.

In the case of tetanus, it can hardly be questioned that the fatal prostration is almost purely the result of the repeated shocks. The blood-poison, if any exist, and I believe it does, mainly acts by increasing central nervous irritability; it scarcely complicates the problem; and the mind often remains singularly clear. In uræmic convulsions, again, notwithstanding the complication with blood-poisoning, the effect of shock is clearly seen in the exhaustion following the fit, in the general muscular resolution, in the relaxation of the sphincters, and in the gradual return of nervous power during the intervals, under the influence of rest. I have seen almost sudden death in labour which could be ascribed to no other cause than the shock of pain, and the convulsive action of the uterus. In some cases of paraplegia arising in labour it seems reasonable to attribute the paralysis to exhaustion or shock upon the spinal cord. It is certain that some of these cases cannot be accounted for on the theory of pressure upon the nerves in the pelvis.

The increasing or progressive influence of successive shocks partly explains what is comprised under the idea of "habit." "Habit" is a vague term. In the case of convulsive disease it implies—first, increased susceptibility to external and to emotional impressions; second, altered periodicity in the renewal of nerve-force. This increased susceptibility seems to be produced by repetition of shock or fit. We have one very interesting practical application of this law in obstetrics. When we induce labour prematurely in a woman for the first time we often find the nervous irritability insufficient to complete the labour promptly, and it becomes desirable to supplement defective natural power by operative aid. But in each succeeding pregnancy the nervous centres respond more and more easily to the artificial provocation, so that when labour has been brought on three or four times at the same stated period of pregnancy, it seems as if that stated time had become the normal term of gestation. Such is the altered periodicity in the preparation of the requisite nerve-force produced.

It is greatly by the influence of shock that I would account for the cerebral disorder which often attends the progress of puerperal convulsions, of epilepsy, and of chorea. The fits act as repeated shocks which stun the nervous centres. These shocks are equivalent to concussions. The *ictus epilepticus* is as real a blow as the apoplectic stroke. They exhaust and divert the nervous force, and after a time impair the nutrition of the nervous substance.

In the case of chorea proceeding to mania, we have to note that the cerebral disease is almost always *secondary and progressive*. In cases in which the chorea is evoked by fright, some mental disturbance may be noticed at the onset, whilst in other cases there may at first be little or no such disturbance. But soon irritability of temper, a certain peevishness or waywardness, a loss of balance, impairment of memory, sometimes of articulation, follow. An aspect of stupidity betrays a real loss of intelligence. At first these defects are slight, but they gradually increase in severity, occasionally to the extent of ending in delirium or furious mania.

In cases of puerperal mania breaking out after labour, where there has been no convulsion, it may seem that some other factor than shock must be invoked. In some of these cases there is albuminuria: that is, there is blood-poisoning; and this may be taken to be the chief factor. But in other cases there is no albuminuria. But in all there is the shock of labour, with its attendant exhaustion, its severe physical and psychical revolution, acting upon a nervous system wrought up to a climax of irritability. It seems to me that convulsions, collapse, insanity, are not, indeed, interchangeable or convertible, but that the issue in any one of these conditions is determined by idiosyncrasy, or antecedent peculiarity existing in the nervous centres.

THE PRIZES OF THE PARIS FACULTY OF MEDICINE.—The Faculty of Medicine in Paris has divided the Chateauvillard prize of 2,000 francs equally between Dr. Luys, for his *Researches on the Structure of the Encephalon*, and Dr. Legrand du Saulle, for his work on the *Delirium of Persecutions*. The Lacaze prize has been awarded to Dr. Pidoux, for his *General and Practical Studies of Phthisis*; and M. Lépine receives honourable mention for his treatises on *Caseous Pneumonia* and on the *Unity of Phthisis*.

CLINICAL LECTURES ON MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,

Medical Director, West Riding Asylum; Lecturer on Mental Diseases to the Leeds School of Medicine; etc.

IV.—CANCER OF THE BRAIN.

GENTLEMEN,—On the table before me lies a brain presenting some unusual appearances. You see, on looking at it from above, that it is very unsymmetrical, and that there is a remarkable bulging or swelling in the middle of the left hemisphere. In this swelling are involved the whole of the convolutions of the left parietal lobe—the ascending frontal and the posterior extremities of the three tiers of frontal convolutions. These have all an expanded and flattened appearance, as if they had been pushed out and distended by some force acting from within, and together form a tumour, not well defined in front, but accurately bounded above by the median fissure, below by the horizontal limb of the fissure of Sylvius, and behind by the external parieto-occipital fissure. This tumour, which is of the size of an orange, feels firm and elastic to the touch in some places, and pulpy in others, especially in its lower third, where its surface has an eroded ulcerated appearance, and is of a reddish-grey colour. On its surface, the outlines of the convolutions involved in it are distinctly visible beneath the arachnoid and pia mater, which are much attenuated, and which cannot be traced over the eroded or ulcerated area. Apart from this tumour, there is nothing very remarkable in the brain externally. The arachnoid is not thickened nor cloudy; the pia mater strips freely; the convolutions are not wasted—on the contrary, they have everywhere a compressed or flattened appearance; there is no atheroma of vessels. On removing the upper half of the hemispheres by a section which has been made through the centre of the tumour, in a line a little below the centrum ovale of Vieussens, so that the lateral ventricles are exposed, you at once see that the tumour is somewhat rounded in shape, that it involves the whole thickness of the hemisphere, and encroaches to some extent upon the optic thalamus and corpus striatum, which are also displaced inwards, so that they obliterate the third ventricle, and are in immediate contiguity with the corresponding ganglia of the opposite side. In its centre the tumour is firm and resilient; towards its margins, however—and this is particularly the case as regards its inner and deeper margins—it is softened and broken down. Its substance is of a pinkish-white colour, and is variegated by patches of yellowish translucent glue-like matter, by dark red blotches and stains, and by a few small irregular lacunæ or cavities and open mouths of vessels. When the section is scraped, a creamy juice is collected on the scalpel—and this is especially abundant towards its outer boundaries. The left ventricle has been greatly diminished in size by the growth of the tumour, and the right has undergone a proportional dilatation, its anterior and middle horns being singularly capacious.

Beside the brain lie two lungs, and to these I must next direct your attention. Taking the right first, you notice that it is covered externally by a layer of dense fibrous tissue, the remains of some former pleurisy, by which it was firmly fastened to the thoracic wall. At its apex there is a nodule about the size of a walnut, of stony hardness, and of a greenish-black colour; and below this there is a mass of matter, of a dirty-white colour, about the size of a hen's egg; this is of rather irregular shape, and is not of uniform density. The outer portion is of cartilaginous consistence, and creaks beneath the knife, but its core is soft and disintegrated. It is not defined nor sharply demarcated from the pulmonary tissue, which is somewhat hard, consolidated, and dark coloured, wherever they come into contact. Turning to the left lung, you find that it has also an external fibrous envelope, and that at its apex there is a white calcareous nodule about the size of a bean, around which the lung-substance for the space of half an inch is black and hard. The bronchial glands connected with both lungs are enlarged, black, and of stony hardness—in these respects exactly resembling the mesenteric and the mesocolic glands, which are also submitted to your inspection.

Now, this brain, these lungs, and these glands, have been taken from the body of a male patient who died recently in this asylum. They present to you a series of pathological changes easily recognised and named. It is clear that we have here a case of malignant disease to deal with, and that the cerebral tumour, upon which I desire chiefly to fix your

attention, is really a medullary growth. That seems evident at a glance ; but in order to remove all doubt on the matter, as well as to familiarise you with the histology of such morbid products, I have asked my colleague, Dr. Herbert Major, to examine it microscopically, and to prepare some slides illustrating its structure and formative elements. Dr. Major has handed to me the following interesting report, which you will be able to verify for yourselves, from the sections which he has made and mounted.

"Cells", he says, "constitute almost the entire mass of the tumour, and present a great variety in form and size, and in the number of their nuclei. On viewing a section stained by carmine under a low power, it is found that the cells are not stained uniformly ; in some parts they are deeply tinted and well defined, and in others but little coloured and clouded in appearance. The most common forms, whether of the larger or smaller cells, approach the oval, and but few are distinctly angular or irregular. Those of largest size are seen in many places to be distinctly endogenous, containing so-called daughter and granddaughter cells, with their nuclei and nucleoli. Next to these come simple cells, for the most part oval in shape, having well marked walls, one or more nuclei, and distinct nucleoli. Thirdly, cells are seen, the predominant part of which is the large nucleus, that being surrounded by delicate but slightly stained molecular matter. Fourthly, large oval naked nuclei are visible, containing one or more nucleoli. Now, these elements constitute, collectively, almost the entire tumour, being for the most part closely packed, or separated only by a little amorphous matter, or by delicate fibrous tissue. The masses formed by the deeply stained cell-elements are in most cases irregular, and pass gradually into paler and less definite forms ; but in some places these groups are sharp and distinct, being encircled by a ring of fibrous tissue. In some instances, also, several of these smaller groups occur together, each surrounded by a ring of fibrous tissue, which in its turn is derived from a common band traversing the tumour, and hence an appearance not unlike bunches of grapes on a common stalk. The amount of fibrous tissue entering into the formation of the tumour is exceedingly small : it occurs here and there, supporting or surrounding the groups of cancer-cells, but does not form a prominent element in the deep substance of the tumour. Towards the surface, however, in most directions, it is more distinct, the tumour being to some extent surrounded by transformed brain-substance. It is pale, almost homogeneous, and but slightly susceptible to the action of carmine, and exhibits here and there a few nuclei. It sends down delicate septa, subdividing the tumour ; and these in turn form the supports or boundaries, as the case may be, of the small groups of cells. But this fibrous stroma is not itself free from the cancerous element, for here and there small groups of cancer-cells are seen, as it were, encysted in it ; and these cells are large, well defined, and deeply stained by carmine. Everything points to the conclusion that these are young and vigorous cells ; they are embedded in the fibrous stroma, because they are forming new centres of growth ; the groups are small, because they are young ; the cells themselves are large, and are deeply stained with carmine, because they are of recent development,

"On the other hand, the cloudy cells above alluded to are obviously the products of a retrograde metamorphosis. As seen by the naked eye, the tumour presents, in various parts, a transparent jelly-like appearance, which is clearly due to gelatinous degeneration of the proper cancer-elements, and it would therefore seem that the cloudy condition of the cells is the first step towards this degeneration. Where the tumour approaches the outer surface of the hemisphere, the cortical layers are thinner and atrophied, and are found on microscopical examination to contain degenerated nerve-cells, hypertrophied fibrous elements, with a few true cancer-cells. Nerve-tubules and their axis-cylinders are nowhere discernible in the tumour. The blood-vessels in the tumour are of large size, but not numerous, and are surrounded by a great number of minute corpuscles."

Here, then, gentlemen, we have an unmistakable instance of cancer of the brain, a rare but interesting disease, the morbid anatomy of which you are not likely to forget after an inspection of this striking specimen, and of Dr. Major's highly illustrative preparations. But let us turn back from its morbid anatomy to its symptoms, and inquire how this terrible hidden growth outwardly betrayed itself during the life of the man whose days it cut short. He was a patient in ward No. 2, was named Michael B., and was admitted into the asylum on the 17th of July last, being returned as sixty-six years of age, and a stone-dresser by trade. His son-in-law, who brought him to the asylum, assured us that he came of a perfectly healthy stock, insanity or nervous diseases of any kind having been unknown in his family, and that he had always been steady and sober in his habits, and had never suffered from illness of any kind until about twelve months before, when a short cough began to harass him. This, however, was almost disre-

garded, and his general health remained apparently unimpaired, until the beginning of May, when, without warning, he was one night suddenly prostrated by a stroke which temporarily deprived him of power in his right arm and of vision in his right eye, and which was followed during the night by five or six seizures, which seem to have been convulsive in character. Within a few days after the stroke, strength and usefulness returned to the arm and the eye, but from that time a distinct change was observable in the patient's mental condition. He was at first listless and indisposed for any exertion, or even to leave his bed ; after that he was dull and stupid, and then, in the middle of June, six weeks after the stroke, he became agitated, and was greatly and unceasingly disturbed as to the safety of his soul. Moved by his fears on this account, he would wander about the house during the night, wringing his hands, and would even talk to his relatives about the desire which he felt to put a period to his earthly misery. When brought here, he was found to be a man of average height, fairly nourished, with brown hair, blue-grey eyes, and a florid complexion, due to dilated malar capillaries. He was depressed in spirits, and felt, he said, as if he was being perpetually upbraided by his conscience for having neglected to seek salvation. He was also enfeebled in intellect, as evidenced, not by any loss of memory—which was vigorous, especially as regarded remote events—but in slowness in fully apprehending what was said to him ; and in difficulty in collecting his ideas, so as to shape an appropriate answer. Ultimately an appropriate answer was found, and given forth, but he had to grope about for it, and make a severe effort to reach it. The expression of his face was that of mingled pain and obtuseness, and his manner betokened the alternation of emotional poignancy with intellectual bluntness. Now he was restless, sighing, and weeping, and again he was still and stolid, taking little or no interest in what was going on around him. He complained of intense pain in the left side of his head and chest, and of giddiness. His pupils were equal, and the irides were active ; there was no ptosis, but the mouth was slightly drawn to the left side, and the tongue, when protruded, pointed to the right. All the muscles were tremulous, but this tremor was decidedly more marked on the left side, whereas muscular weakness was most marked on the right. The heart's impulse was feeble, and the first sound was somewhat soft and muffled at the base. The pulse was eighty-six, and irregular. In the end of July it was noted that Michael B. had become more melancholic and more demented. When spoken to, he would, in attempting to reply, dribble into an incontinent emotional overflow of tears. During the first week of August, it was clear that an insidious form of paralysis was advancing upon him. Muscular power and sensibility on the right side of his body were gradually diminished ; the edges of the right pupil became uneven, and the pointing of the tongue to the right, when protruded, grew more and more apparent. The pain in the head was still severe. On the 8th of August, the power on the right side was altogether lost, and that of the left was seriously compromised, while articulation had become drawing and laborious. On the 15th of August he was transferred to the infirmary ward, being in a helpless and fatuous state, dirty in his habits, and incapable of understanding what was said to him, or of speaking. On the 24th of August, he was in a semi-unconscious state, and could not feed himself. On the 2nd of September, he had difficulty in swallowing, and remained constantly in a half-sleeping condition, from which he could be roused into a state of stupid bewilderment by powerful stimulation. On the 6th of September, he was so weak that he required to be propped up in his chair, and his breathing was then stertorous. On the 8th, he passed into a state of profound coma, from which he never rallied, dying on the 10th, at 4 P.M.

I have dwelt at great length, but not, I hope, with useless prolixity, on this one case. I have been anxious to lay before you its whole history, because that history conforms closely to the best descriptions of that disease, of which the particular case passed under review is an example, and because I believe that a typical instance is more instructive to begin with than an abstract definition. Having now before us a pattern, as it were, of cerebral cancer, we are in a position to examine with profit more generally into the origin and nature of the malady. And, first, as to its origin. That, I must tell you, is wrapped in the same obscurity which surrounds the origin of all cancerous affections. A hereditary tendency to it is handed down from parents to offspring ; but how this tendency passes over into the actual morbid condition, or why the brain is selected as the site of the growth in one case, and the stomach in another, we are altogether ignorant. No degree of vigour, or infirmity of cerebral structure, determines this selection ; for congenital imbeciles, and men of great capacity, have alike died of carcinoma of the brain. When the brain-cancer is primary, as according to statistics it is in about one half of all the cases that occur, there is

no doubt that some condition of irritation or exhaustion secures for the brain the first malignant infiltration; but what that condition is, we cannot say. Grisolle believed that cerebral cancer preferentially attacks old people, with brains past their meridian, and on the decline; but that generalisation is not borne out by figures. In forty cases of primary cancer of the brain, recorded by Dr. Ogle, the average age was forty-three years; in thirty-six cases recorded by Berthier, it was forty. When the cancer is secondary, its presence in the brain is more readily understood. The enormous supply of blood which the brain receives, must conduce to the deposition of the materies morbi in it, and must favour its germination and growth, when it is once deposited. Occasionally, also, it reaches the brain by continuity of tissue, and cancer seems to have a special proclivity to run along nerves. In many instances, medullary cancer has been known to spread from the orbit, by the optic nerve, to the brain. Mr. Soelberg Wells gives such a case, in which he removed the contents of the orbit, for a medullary cancer, and in which the optic nerve appeared healthy on section, but was found to contain, between its inner and outer sheath, small diffused patches of cancer-elements. The man died one year and eight months after the operation, when a large cancerous tumour was found in the middle fossa of the skull. When cancer stretches in this way from one organ to another, its elements insinuate themselves amongst the textures of the organ secondarily affected without definite limits; but when, on the other hand, it seizes upon the brain, not by continuity or contiguity of tissue, but by virtue of a previous development elsewhere, or when it occurs in the brain alone in the organism, then it may either appear as a distinct tumour, spherical or lobulated, or as a diffused mass, nowhere sharply demarcated from the normal structures. In whatever shape, and with whatever boundaries it occurs, it destroys the cerebral tissue by preying upon it, and causing its absorption, or compressing it, while it, at the same time, forms attachments to, or perforates any membranes that may be in its vicinity. It presents itself as one, or as several tumours, connected, or distinct from each other. In an interesting case, published by Dr. Manning, there were two tumours, one of the size of a walnut, in the convexity of the hemisphere, and not extending into the white substance; and another, of the size of an orange, occupying the middle of the hemisphere; while in three cases reported by Dr. Chapman, there were several tumours, varying in size from a pea to a walnut, dotted over the cineritious substance of the cerebrum. Then the tumours may vary in dimensions, position, and kind, as much as in number. Occasionally, a whole lobe of the brain is implicated, and again, the adventitious growth is no larger than a pea. Any part of the encephalon may be the site of a cancerous tumour, but the hemispheres suffer most frequently, and in these the largest tumours are always seen; for, as Lebert has pointed out, with great justice, a tumour at the base of the brain, and especially near the pons Varolii, or medulla oblongata, is likely to cause death before it has attained any great size, whereas a tumour in the hemispheres may be compatible with life, even when it is of comparatively huge volume. All the different species of cancer are represented in tumours of the brain, except, perhaps, epithelioma, which, though met with on the serous layers of the arachnoid, has never been encountered in the brain itself. By far the most common species, however, is the medullary, the most exquisitely malignant of all malignant growths, which appears as a white, reddish-white, or grey, lobulated and cancellated mass, of soft consistence, and with traces of a fibrous structure, consisting of albumen and phosphorus, holding fat, and yielding a milky or creamy juice. That mass may appear to the eye to be distinctly sundered from surrounding textures, but its intimate union with the neighbouring parenchyma is discovered when any attempt is made to dissect it out. Next in frequency to the medullary is, probably, melanotic cancer of the brain; and, after that, comes schirrus. The melanoid variety is mostly secondary to deposits in other organs. Jane M., who died in this asylum on the 13th of August, 1869, had been operated upon in December, 1868, for the removal of a melanotic tumour, which had become developed on the site of a nævus on the outer aspect of the left arm, and which had become intensely painful, and liable to frequent bleeding. At the *post mortem* examination of the body, the axillary glands on the left side, and the inner third of the right clavicle, were found converted into melanotic tumours, of large size, soft consistence, and a deep black colour. Melanotic tumours were also found in the liver, kidneys, suprarenal capsules, and ovaries; and melanotic blotches on the mesentery and pleuræ. On the occiput there was a fluctuating swelling, which, on being cut into, was shown to be composed of clot and fluid blood. Beneath this, the occipital bone was blackened, eroded, and, in some places, eaten through. The bones of the skull generally were of a dark tinge, and presented several distinct melanotic patches, which were black and very soft. Beneath all these patches the dura mater was blackened. The occipital lobes of the brain were really melanotic

tumours, large, flattened, softened, and everywhere of a black or brown colour. The melanosis was decidedly most marked on the left side. On the upper surface of the right lobe of the cerebellum there was a single melanotic spot.

[To be concluded.]

ON THE CLAIMS OF SICK AND WOUNDED MERCHANT SEAMEN.

By WM. R. E. SMART, M.D., C.B.,
Inspector-General of Hospitals and Fleets.

JUST now, when the Government is likely to be persuaded to undertake an authoritative supervision of the material of the mercantile navy, with a view to prevention of the great sacrifice of lives of seamen through the wreck of unsound vessels, it will not be inopportune to notice what it is possible to effect in the way of their systematic care when sick or hurt.

Our own data on this subject are limited, because we have only one great institution—the *Dreadnought*—devoted to this purpose, and I am not aware that her statistical reports have ever been published. In the United States, the care of mercantile seamen is a duty fully accepted by the Government. The Marine Hospital Service, entirely distinct from the United States navy, was instituted in 1798 by an Act of Congress which exacted a tax of 20 cents, or tenpence a month, from every person employed in the foreign and coasting trades, for the relief and maintenance of sick and disabled seamen in hospitals or elsewhere, as the President of the United States should direct, and provided that the sums thus collected at the various custom-houses should be expended in the district where collected.

The recipients of relief include women employed in vessels as stewardesses, etc., and foreign seamen for whom a charge of 3s. a day is made. Of late, it has been found that the general expenses have increased; and to meet that an Act was passed in 1870 raising the tax to 40 cents, or 1s. 8d. per month, reorganising the service, and placing it directly under a supervising surgeon, Dr. Woodworth, by whom there has been issued the *First Annual Report*, up to the end of June, 1872. This is a very creditable official document, reflecting much honour on the department by its mastery of historical details and statistics, as well as by its fearlessness in suggesting reforms of a system that has grown up somewhat wildly from wanting a general medical supervision.

It is noticeable that the United States navy was dependent on the marine hospitals for the treatment of its men, who contributed like merchant seamen to the fund, and received its benefits previously to the year 1811, when navy hospitals were first established. A table gives the aggregate receipts and expenditure between 1798 and 1872, as follows:

Collection from ships	...	...	6,733,966	dollars
Appropriations by Congress	...	...	4,705,994	"
<hr/>				
Receipts, total available	...	...	11,439,960	"
Total expenditure	...	...	11,241,156	"

For this great expenditure, amounting to two and a-quarter million sterling, there is shown the hospital service of the mercantile marine through 172 years, and of the United States navy through 112 years, forming a striking result on the whole. During the period there have been at various times 32 hospitals, in different ports where most required, but disestablished when the necessity had ceased at the port. The first of these were all on the Atlantic shore; but, as the annexation of the Western States advanced, a call arose for such provision on the banks of the great central rivers that fall into the Gulf of Mexico, and in 1837 an Act was passed authorising a board of medical officers of the army to select and purchase sites for hospitals on the Mississippi and Ohio rivers, and on Lake Erie. Since 1850 many hospitals have been constituted in other localities.

The system followed is to maintain hospitals where most wanted, and elsewhere to provide for the sick in the corporate or private hospitals of the place which are ready to devote a part, or the whole, if needed, to the accommodation of seamen; the expenses being limited to 20 cents, or 10d. a day for medical charges, and 2½ dollars a week for boarding, lodging, nursing and washing, amounting in all to about 16s. 6d. a week, in no instance to extend beyond four months; the regulated charge for foreign seamen being about 21s. 6d. per week. In this way relief was administered, under State supervision, in 1871-2, at 81 different localities, proving the great extent of an organisation to which we have nothing analogous. There are large hospitals, built of stone or brick, and one of cast-iron, on plans to admit of indefinite

extension without loss of symmetry, at Boston (Massachusetts), Portland (Maine), Pittsburg (Pennsylvania), Key West (Florida), Cleveland (Ohio), St. Louis (Missouri), Detroit (Michigan). These have permanent staffs; while at Louisville (Kentucky), and Mobile (Alabama), the marine hospitals are "leased for seamen" to private hands. The hospital at San Francisco is unoccupied, having been damaged by earthquake in 1868; that in Chicago, destroyed in the great fire, is being rebuilt; and that at New Orleans is also unfinished.

Thus we see that this important department has much real property, of which Dr. Woodworth does not speak with unqualified satisfaction. That at Boston, he states, endangers all surgical cases by erysipelas, in its ill-constructed wards; that at Portland had better be rebuilt in pavilion form; that at Pittsburg, seated amidst iron rolling-mills and blast furnaces, is always filled with smoke and soot; that at Key West is often damaged by storms; and of the new hospitals, that at New Orleans, of cast-iron, had better be allowed to rust away than be used; and that at Chicago is situated too far from the port; those at St. Louis, Cleveland, and Detroit, are in faultless working order.

Dr. Woodworth approves of the pavilion system; and he recommends the construction of a pavilion hospital convenient to the port of New York, and states in general terms, "*I particularly favour constructing all the hospitals of wood, and destroying them after ten or fifteen years, both as a sanitary and an economical measure, and building new ones in their stead.*" In this, his views correspond with those of the late Sir James Simpson. Such, then, is the *status quo* of the grand marine hospital system which will probably undergo a gradual reorganisation and reconstruction, now that it is entrusted to responsible professional management.

With all its faults, it affords a very strong contrast to the manner in which the interests and welfare of sick merchant seamen have been dealt with in our country; where for 139 years a tax of 6d. per man per month was levied on merchant seamen's wages—not for their own direct benefit, but to subsidise the State in providing for its seamen disabled in war or by long service. While in the United States, as shown above, to meet the wants of merchant seamen, there have been appropriations of public money by votes of Congress exceeding two-thirds the amount raised by taxation of the seamen, in England things have been managed on an entirely different principle. In 1695 an Act was passed for *the encouragement of seamen and the improvement of navigation*, etc., which instituted registration and a tax of 6d. per month per head from all seamen, whether in the royal or in the mercantile navy; which, being paid into the fund of Greenwich Hospital, was expended on the Royal Navy for the maintenance of its pensioners, while the merchant service received no direct consideration whatever from that fund. Thus, between 1695 and 1829, when the tax was abolished, a period of 134 years, an annual average subsidy of £22,000, amounting in total to £3,068,000, had been paid by merchant seamen for the support of seamen disabled or worn out in the service of the State.

On the occasion of closing the hospital at Greenwich in 1869, the Government obtained the sanction of Parliament to appropriate its properties of extensive lands, as well as the funded property, amounting to £3,813,000. An outcry being raised for the restitution of part for the benefit of the merchant service that had contributed so much, the Government conceded to its use the meagre sum of £4,000 *per annum*, representing the interest of £115,000 of the great property thrown into the consolidated fund, together with the conditional occupation of a small portion of the buildings at Greenwich. Thus, the merchant service has obtained a feeble recognition of its claims on the Government for hospital accommodation, as well as for aid in the very questionable form of pensions which may soon become mal-appropriated, as such things too often are.

It may be asked whether the time has not arrived for the State to take more notice of the claims on it of sick and disabled merchant sailors, by superintending a system for their benefit, supported by a tax such as the merchant navy endured so long for the benefit of others, and which, we believe, it would readily submit to again for its own direct advantage.

Unless the spirit of our mercantile marine has become denationalised by the amalgamation of so great a proportion of foreign seamen as now exists, it can scarcely be apprehended that any unwillingness would be shown on its part to an authorised system that would secure the rights of seamen to efficient care and treatment when sick or hurt, on the principle of self-help, and of provision for sickness, while in health, for those misfortunes to which they are all liable.

At present, with the honourable exception of the Poplar Hospital established by Messrs. Green for the benefit of seamen in their employ, there would appear to be none but public charities to assist mercantile

seamen who return home in bad health. Such a want of system as this is more consistent with the practice of an age when almsgiving was held a "saving" virtue, than with that of our own, when every effort is being made to teach the working-classes the importance of self-reliance.

At a time when British seamen superabounded, and the State was concerned to see its mariners flying from their country and seeking employment under the Dutch flag, when the highest wages to our seamen were 22 dollars a month to those so fortunate as to obtain ships on East Indian voyages, the seamen of England were loud in their demands for help in unavoidable misfortunes at their own cost, but under State supervision and protection.

They had before them at that time the advantages derived by their brethren in the Royal Navy from the system of self-help inaugurated under the advice of Lord Howard and Sir John Hawkins and other naval heroes, who had saved the country from Spain and its inquisition, and they fully appreciated the spirit underlying the principle of self-help in every form: they were willing to undergo, and to pay for possibilities that might befall them.

In the year 1638, the owners, masters, officers and common seamen sailing out of the Port of London (East Indiamen excepted), petitioned through the Trinity Office, that the State would undertake "the relieve of their poor maimed, etc., seamen and their widows," and to provide a fund for that object they voluntarily consented "to pay out of their monthly wages twelvapence from each master; sixpence from each mate, gunner, trumpeter, boatswaine, carpenter, chyrurgeon, and purser; and fourpence from each common seaman."

The request was not acceded to by the King's council, although the spirit that actuated it was laudable; and it shows that the institutions of the Royal Navy were the guiding stars to a truly English mercantile navy. Since then, a great revolution has been wrought out; the State now acknowledges its duties to its sick and disabled royal seamen, but the merchant owners have not followed the example, and their disabled seamen have nothing before them but public charities or the union infirmary. Is there not in this state of things what may be benefited by inquiry, and is not the time ripe for action?

In the first place, it would be requisite to ascertain that the same willingness to pay for such advantages exists amongst seamen now as in 1638; and that being agreed on, there would be but small difficulties in instituting and working out a plan for its execution, as there already exists under Admiralty direction an organisation of medical men—the surgeons and agents at sick quarters at all the minor ports, who would gladly accept the charge; and at most of the larger ports there are hospitals that would set aside a part of their accommodation, or would increase it where needed to carry out the object in view; while in ports such as London, Liverpool, Bristol, Hull, and Glasgow, the extent of the demand would warrant the construction of special marine hospitals, as in the United States, dependent on the contributions out of the wages of the seamen of the several ports.

To meet the inquiry of what is effected by this wide organisation scattered over the face of the great republic, we find in Table A the following totals of results between the 1st of July, 1871, and 30th of June, 1872.

Treated.	Admitted to Hospitals.	Discharged.					Remaining.	Average No. of days' treatment.	Percentage of Deaths.	Average cost per diem.
		Cured.	Improved.	Not improved.	Deserted.	Died.				
11,948	11,028	8,760	1,656	135	69	497	831	33	4.5	97.6 cents or 4s.

There are no such numbers as these elsewhere to be dealt with in elucidating the diseases to which seamen are liable.

It would be exacting to expect that any *first report* brought out so quickly as this should contain collections of cases to illustrate special or endemic diseases; but, as Dr. Woodworth has under his supervision a large staff of officers who have given ample proof of their ability to report as well as to compile, we may confidently look forward to his future reports affording details of no mean value to all who have at heart the well-being of a very important class in every maritime state.

It is to be wished that it were within Dr. Woodworth's competence to commence early in these reports, which cannot fail to become a very valuable series, a more modern classification of diseases; but this can scarcely occur without a general adoption in the United States of a new nosology. If it can be done without being charged with national

prejudice, that lately instituted by our College of Physicians, which has been at once adopted by all our Government departments, might be commended to his notice.

Above all peoples, our American brethren are the consistent announcers of great social reforms, on the principle that, with advancing knowledge, the latest device, when it meets with ready acceptance by a large body of capable judges, must be the best, and on such ground we ought not to hesitate in recommending that which has been universally adopted by the profession in the old country. Admitting that, with so large a base, the reports of the United States marine hospital service may take pride in standing alone in this matter, yet, for the sake of comparison, which will be advantageous to a prominent class of men in the two greatest maritime countries of the world, it would still be well to facilitate, by every means, instruction by these reports side by side with what we have had for a long time placed annually before us in those of our own naval medical department.

This first report has aimed only at presenting concise notations of surgical cases, especially of operations, that extend further back than the statistics of the report itself, and therefore exceed the average of surgery for yearly periods by about one-third. These offer a very favourable record of the results of operative surgery which may be summarised as follows :

189 surgical operations, comprising, amputations of thigh, 2 ; of both legs, 1 ; of one leg, 10 ; of toes, etc., 15 ; at shoulder, 1 ; of arm, 2 ; of forearm, 3 ; at wrist-joint, 1 ; of fingers, etc., 25. Excisions of joints—of head of humerus, 1 ; lower end of, 1 ; elbow-joint, 1 ; wrist-joint, 1 ; of metacarpal bone, 1. Ligation of arteries—exterior iliac, 1 ; superior profunda, 1 ; brachial artery, 1. Trephining—frontal bone, 1 ; mastoid process, 1. Hernia—radical cure, 4 ; strangulated, 1. Lithotomy, 1. Tumours and diseased growths—of head and face, 4 ; of neck, 3 ; of leg, 1 ; of superior maxillary bone, 1 ; of half of inferior maxilla, 1 ; of sequestra, 2. Eyeball—extirpation, 4 ; cataract extraction, 4 ; iridectomy, 2. Genito-urinary organs—strictured urethra, 17 ; phimosis and paraphimosis, 42 ; castration, 4 ; hydrocele, 7 ; varicocele, 2. Rectum—fistula in ano, 7 ; stricture, 1 ; hæmorrhoids, 6. Extraction of bullets and shot, 3. Sutured intestine, 2. Paracentesis abdominis, 2. Tenotomy, 1.

In this summary of 192 surgical operations, it appears at first sight very remarkable that only 11 terminated in death ; but this is accounted for, as it includes the successful cases of an indefinite period of which the fatal cases are unrecorded. Of course in future reports this want of precision will not recur. The fatal cases noted are :

Amputation of the leg, 3 : of which 1 died on the 3rd day, cause not stated ; 1 in 5 weeks, from gangrene, having Bright's disease ; 1 in 40 days, from pyæmia. Amputations at shoulder-joint, 1, complicated with severe laceration of the chest and back, died on the 9th day ; 1 in lower third of humerus, after erysipelas, subsequent to a preceding amputation of finger from frost-bite ; 1 of a toe for frost-bite, death in two weeks from gangrene and pyæmia. Excision of the wrist-joint, case of caries, death by erysipelas and toxæmia in two weeks. Trephining of frontal bone, three months after an injury, death in 14 days from erysipelas. Strangulated hernia, 1, after three days, death in six hours. Punctured intestine, 2 : 1 died of erysipelas on the 22nd day ; 1 died two months after being wounded.

Thus the eleven deaths are accounted for, offering a very small percentage, which may be attributed in due regard to good surgery ; but allowance must be made for treatment in hospitals under 200 beds, not over-crowded, and, in the majority of instances perhaps, in private dwellings.

In addition to these cutting operations, there is a good proportion of fractures of all parts ; but no cases of dislocation beyond those of compound character, complicated with fractures, for which amputation was had recourse to. The frequency of severe frost-bite in the hospitals of the Northern States on the Atlantic shore, affords a very good criterion of the severity of the winter climate by comparison with that of our own shores, although ranging from 10 to 15 degs. higher in latitude.

Further analysis, if space permitted, would display more fully the character of the cases under each operation, and the mode of procedure, from which much that is useful might be derived ; but my last observation shall be on a subject which at present occupies professional attention, to show the practical use of anæsthetics in the nation to which their first employment is due. In a total of 101 cases in which anæsthesia was produced, in 66 it was by the use of chloroform, 25 by ether, 9 by mixture of both, 1 by nitrous oxide gas.

From the circumstance that these cases are gathered far and wide, over the surface of the United States, without any official direction or guidance which might lead to the employment of any particular mode of producing insensibility, we may accept it as a demonstration of a

strongly marked preference of chloroform to other anæsthetics in the hands of our professional brethren in America, notwithstanding the grand fact that the discovery of the powers of ether as a surgical adjuvant was due to them.

With these statistics before us for a mercantile navy of no greater extent than our own, the necessities of sick and wounded seamen can scarcely be doubted. We cannot but lament that, in our case, no special means are taken to relieve them among a class of men on whom the commerce of our country depends, and towards which in the prevailing policy of reducing the Royal Navy to the lowest peace scale, the nation must look to man its fleets in the event of war. Under such circumstances, I cannot hesitate to express a fervent hope that the great question of adequate attention to the necessities of sick and wounded merchant seamen, will meet with due consideration in the inquiry about to take place into the alleged causes of the preventable sacrifice of their valuable lives through the unsound nature of vessels in which they embark, because governmental supervision is evidently as much required to provide for their proper treatment when sick or hurt, thus tending to the prolongation of their lives, as in the prevention of their loss of life through the cupidity of their employers.

It would be gratifying to find this important question followed out by some member of the profession more intimately acquainted with the state of our merchant navy than I am.

SEPTICÆMIA AND THE CATHETER.

By DAVID FERRIER, M.D.,

Professor of Forensic Medicine in King's College ; Junior Physician to the West London Hospital.

THE valuable paper read before the Royal Medical and Chirurgical Society on February 25th by Dr. Dickinson, on the suppurative condition of the kidney frequently seen in connection with pelvic and vesical inflammation, induces me to bring into greater prominence than is usually assigned to it what I conceive to be, in the great majority of instances, the starting point of these and allied disorders of the urinary apparatus ; and to endeavour to show that the means taken to relieve the patient in many cases aggravate the disorder, or induce pathological processes which lead to a fatal termination.

It is a commonly received opinion, though accurate clinical observers are beginning to doubt its correctness, that the ammoniacal decomposition of the urine met with in paraplegia, or generally in cases where the urine stagnates in the bladder, is the result of the fermentative action of the vesical mucus, and is therefore especially to be found in connection with vesical catarrh, where the secretion is formed in large quantity. There is not, as far as I am aware, a single trustworthy fact or experiment in confirmation of this assertion ; and that the causation is different, it is not difficult to prove.

The tissues and fluids of the body, with the exception of the contents of the alimentary canal, do not in themselves contain the elements of putrefactive decomposition, and may, with due precautions, be kept for an indefinite period entirely free from such change. Assertions to the contrary have been made by several eminent chemists, but it is easy to advance fatal objections to their method of experimentation. The almost universal existence of putrefactive germs is by many regarded as a hypothetical assumption ; nevertheless, the evidence is sufficient to make it a demonstrated fact. And in special relation to the subject under consideration, the existence or non-existence of such germs ought not to be a mere matter of opinion, as the practical results are of sufficient importance to demand serious inquiry. Experiments which I made with Dr. Burdon Sanderson, and which I have since repeatedly verified, establish quite conclusively that fluids prone to decomposition may be kept unaltered for an indefinite period, and that decomposition may be at once initiated by the addition of a drop of water, or even contact with an apparently clean surface. Such contact, even with the finger, is sufficient to determine the growth and multiplication of microscopical organisms, which are the active and only agents concerned in the putrefactive process.

Urine in itself, apart from such contamination, is not liable to decomposition. In illustration, I adduce an experiment which I recently made. A small quantity of urine—phosphatic, containing mucus, but not ammoniacal—was passed directly into a flask previously purified by heat. A plug of cotton-wool was then inserted, and the flask set aside, without being boiled or otherwise interfered with. For a whole year the urine remained clear, with phosphatic sediment, but free from decomposition and organisms. After being opened for examination and again

set aside, it began to decompose and turn ammoniacal, and contained immense numbers of bacteria and torulæ. The simple bringing into contact with the urine a surface not freed from germs—an ordinary glass rod—was sufficient to initiate the putrefactive process. The introduction of a catheter would have been a still more effectual way of setting up this change; for catheters are rarely so clean, and are usually covered in abundance with the effective agents of putrefaction.

The application of these facts to urine still contained in the bladder requires little elaboration. Urine, as secreted by the kidneys and accumulated in the bladder, will remain free from decomposition so long as there is no direct source of impregnation with putrefactive germs from without. The ammoniacal condition of the urine in paraplegia might seem, at first, to contradict this assertion. It will be found, however, on careful examination, that the ammoniacal state of the urine frequently met with is the result of inoculation from without, and almost invariably from antecedent catheterisation. I have no desire to dogmatise on this point, or to deny the access of germs in any other way. It is possible, for instance, that a catarrhal condition of the urethra may afford germs a means of access to the bladder, in a manner similar to the supposed function of the mucus of the cervix uteri in impregnation. In ordinary conditions of the urinary passages, however, the bladder is closed against such contamination from without. The usual sequence of events in the clinical history of paraplegia is that the urine, at first clear and acid, gradually turns ammoniacal, during which period the catheter has been employed. It is not necessary to adduce evidence of this at any great length, as cases in point may be found in most hospital reports. As an instance, I quote a case reported by Mr. Gray in the first volume of the *London Hospital Reports*, on which I accidentally lighted while searching for something else. A lad was admitted into the hospital nine days after a fall, which had fractured his sixth cervical vertebra, and caused complete paraplegia with incontinence of urine. He had not been medically attended in the interval between the accident and admission into the hospital. On his admission, "the catheter was passed at once, and a considerable quantity of clear urine was drawn off; it gave an acid reaction. The urine, which was clear and acid at first, was thick and alkaline the next day, and the day after phosphates were found in it. In a week it became strongly ammoniacal, and contained pus." (P. 193.) And such is the usual history of these cases; the ammoniacal and purulent urine follows the introduction of the catheter into the bladder.

In a great number of instances in which the catheter is introduced, the admission of putrefactive germs into the bladder is a matter of no moment, for the bladder can be readily and entirely emptied; and even though decomposition should develop itself, little or no harm might result if the tissues were otherwise healthy or possessed of the ordinary amount of vital resistance.

It is far otherwise, however (and it is here where the facts brought forward have their importance), when the bladder is in an atonic condition or when it is paralysed, or where permanent causes of obstruction exist, such as the enlarged prostate in old men, and more especially when there exist other causes of vesical irritation, such as a calculus in the bladder, or where there is structural degeneration of the kidneys. In these cases, the irritant ammoniacal decomposition set up by the introduction of a catheter into the bladder is frequently the starting point of the inveterate cystitis and inflammatory condition of the ureters and kidneys described by Dr. Dickinson. In many cases, cystitis originates entirely in this manner, and the surgeon is at a loss to discover its cause, when all care has been taken to introduce the instrument and avoid mechanical irritation of any kind. The *post mortem* examination of the case already alluded to in the *London Hospital Reports*, discovered intense cystitis, phosphatic encrustation, and pyelitis in one kidney, for which *mechanical* irritation by the catheter was not responsible, but certainly *vital*. Where cystitis already exists from calculus irritation, the condition is intensely aggravated by the catheter or sound. An additional and permanent source of irritation is introduced by the instrument. The ammoniacal urine causes increased irritation, and by converting the mucus and pus of the already inflamed mucous membrane into a gelatinous mass tenaciously adhering to the walls of the bladder, affords a permanent nidus for the putrefactive agents, not removable by ordinary methods of emptying the bladder. Hence, continuous decomposition, phosphatic deposit, and irritation are the consequences.

These pathological changes, of themselves, are of grave moment; but, when the process extends to the kidneys, the danger becomes increased in a twofold manner. In addition to the interference with the excretory function of the kidneys caused by this pathological condition, which of itself might lead to a fatal result, the coincident condition of the bladder hastens this result in another way. As has been shown by

Treskin, the contents of the bladder stand in relations of diffusion with the blood and lymph in its walls, and urinary products are again reabsorbed into the system. The kidney being inadequate, and septic ammoniacal urinary products being absorbed into the blood, uræmic poisoning is the necessary result. That uræmic poisoning may originate from the use of the catheter without antecedent vesical or renal irritation is not only probable, but borne out by clinical observation. My friend Dr. Fothergill has furnished me with particulars of two cases of death from uræmia, for which this seemed the only discoverable cause. Both were cases of men of advanced age, and suffering from incontinence of urine caused by over-distension from enlarged prostate. Both were, in other respects, in good health, till the catheter was passed; and in both, after this operation, symptoms set in in a few days which terminated fatally, with all the characters of uræmic poisoning.

In view of these facts, the causes we have mentioned, though apparently trivial, are of sufficient importance to demand the serious attention of the surgeon. If the simple precaution were taken of using carbolic acid oil instead of ordinary oil for lubricating the instruments passed into the bladder, we should have less cystitis and fewer cases of "surgical kidney." The same remarks are applicable to obstetric operations and puerperal septicæmia.

CLINICAL REMARKS ON THE RELATION OF PSORIASIS WITH NERVE-DISORDERS.

By GEORGE GASKOIN, Esq., Surgeon to the British Hospital for Diseases of the Skin.

THAT herpes may ensue on neuralgia, is a fact scarcely open to challenge. What is less appreciated and less easy of demonstration is, that other eruptions may follow in the same sequence. As to this, I have lately seen an eczema which ensued on a severe neuralgia in the anterior crural nerve. A singular arrangement of the patches in a case of psoriasis guttata has also arrested my attention, and led my thoughts to the subject. These patches were of the size of a shilling-piece, oblong in figure, distributed unequally on each side of the spinal column; few and scanty on the left, abundant and crowded on the right side near the scapula and the median line. Their long axis in either case was directed downwards and outwards from the latter. The major group in the right dorsal region gave rise to two straight prolongations, consisting each of three or four equidistant patches, which, lying an inch or more apart, were produced downwards toward the loins and ilium, also slightly in the outward direction. Widening out in their descent, these lines were less proximate below than above, and thus gave one the idea, false or otherwise, of their arrangement being dependent on some nervous distribution. The patient was a lad sixteen years of age. The attack occurred two weeks since, and came on suddenly with much pain and heat, not differently from herpes.

It has happened only once to me lately to find marked anæsthesia in psoriasis or lepra Anglicana, but this was of a most unmistakable character. The fact was not inquired for, but was repeatedly complained of by the patient as a source of great discomfort. The leprous scaly patch where it was noticed was of considerable size, and situated over the ligamentum patellæ. A sensation of numbness and annoying insensibility was complained of at each visit, and it continued for several weeks. The patient was a young woman low in stature, not otherwise remarkable, with no obvious hysterical tendency.

I may be allowed, perhaps, to extend these remarks on psoriasis as seen in my *clinique*. There has been recently a well marked case of the gyrate form. The man's arms appeared as if he had been released from thongs, or from being bound with strong cords; the markings were chiefly in the oblique direction. Being treated with tarry preparations, the patient complained of a feeling of tightness quite insupportable. I see very many cases of psoriasis in which the palms and soles of the feet are affected, the rest of the body being often free from eruption. The hands, as I think, are oftener affected than the feet, but more frequently both together. The greater number of these cases I believe not to be syphilitic, though undoubtedly a certain proportion of them are so. In a recent instance, such a form of complaint had preceded syphilitic infection, and was afterwards complicated with its results. Altogether, it is with psoriasis as with acne: its existence in the syphilitised is not altogether decisive as to its syphilitic derivation. Of psoriasis of the tongue, I may say with some reserve that nearly all such cases are syphilitic. Of such I see a great many; and, judging by daily experience, I should call this affection of the tongue the most ordinary result of syphilis. It is certainly that

which most often presents itself to me in hospital. It would be curious to know how far it may be occasionally indicative of other primary taint. I have seen bad psoriasis of the tongue described to me as called in India the Patna tongue, 'produced by the bad drinking-water of that district or city; concerning which I would gladly be more precisely informed. Epithelioma of the tongue is occasionally engrafted, no doubt, on an abrasion previously syphilitic. The implication of the nails in psoriasis is repeatedly seen; the patients complain of a sort of pith which troubles them under the nail. Affection of the conjunctiva from the same I have not seen, though I have once heard of it in London practice, on excellent authority; the symptom being chiefly interesting from its connexion with tubercular leprosy. A good deal has been said lately about the well nourished and strong in frame being the proper subjects of psoriasis; somewhat too much of this, perhaps. As a trade, I think, butchers are rather liable to it. Certainly by far the worst case I have seen was in this class, with full and febrile pulse. But also we have no lack of cases in needy ill-fed children, who improve on steel tonics. It is evidently in them a constitutional peculiarity, intensified by scanty supply of nourishment. Psoriasis, indeed, is occasionally accompanied with muscular tenuity. The operation of debility is seen, besides, in nursing mothers, of which last year I had a striking example. The woman had invariably psoriasis during lactation after many repeated confinements. But the first two were exceptions from this; she was then young and more robust.

Among curious observations which I made on the influence of revaccination during the past year, I have, I think, once or twice distinctly traced psoriasis to this as its cause or starting-point; whether this be that vaccinia acts with a certain destructive potency, like other enthetic fevers, leaving ulterior effects which we habitually underestimate; or whether it acts as a shock or *secousse*, just as an indigestion, burst of temper, or stumble of the feet, in a malarial climate, may be the starting-point of ague. Writing as from the hospital, I should say that the connexion of psoriasis, and also of eczema, with gout, would appear exaggerated by medical writers and in medical apprehension. It is but in a few cases that I find the connexion. Those who see much of gout will undeniably meet with both very often accompanying that disease.

I once took some pains to ascertain the alliance and alternation of asthma with psoriasis—a task of some difficulty, from the asthma, and with it phthisis, running a good deal in collateral branches, as well as in the direct line. I never succeeded further than in verifying a near connexion between them. In asthmatic families, I have also seen eczema play a part, sometimes alternating with psoriasis from parent to child. This connexion of psoriasis with asthma appears to me of far greater interest, since microscopical science has established beyond a doubt the existence of an epithelium in the air-cells. There are also circumstances in the course and pathology of asthma which certainly give countenance to the theory that there may be something analogous to skin-eruption in its anatomical character. I would not be understood in this to place so varied a complaint as asthma on too narrow a foundation.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM A SPECIAL CORRESPONDENT.]

Lecturers.—M. Roger on Intestinal Worms.—Monstrous Birth.—The Vienna Exhibition.—Death of M. Rigollot.

BESIDES the supplementary list of professors given in my last, there are others who lecture *ex officio* on the different branches of medical science, of which the following is a list: Dr. Fort on Anatomy, Physiology, and Pathology; Dr. Dally on Orthopædics; Dr. Verrier and Dr. Chantreuil on Obstetrics; Dr. Voisin, Physician to the Salpêtrière, on Mental Diseases and Nervous Affections; Drs. de Wecker, Fano, and Desmarres on Diseases of the Eye; Dr. Mallez on Diseases of the Urinary Organs; Dr. Charles Fauvel on Laryngoscopy and Rhinoscopy.

On a visit to the Children's Hospital, M. Roger, one of the physicians, gave a lecture on intestinal worms. He said that one of the principal means by which these parasites, especially the *tænia solium*, or *ver solitaire*, enter the human body, is undoubtedly the use of raw meat, which has become much *à la mode*, and which, like pork,

contains the larvæ of the *cysticercus cellulosæ*. There is an impression among the people that milk is also one of the vehicles of worms. This may be true to a certain extent as regards adults, but the explanation is other than that generally entertained. In this case the subject, being underfed, and consequently in a condition opposed to robust health, offers a soil favourable for the development of parasites, whatever be their nature or origin. Sugar is also considered as a worm-generating agent and a destroyer of the teeth; this, too, is only a prejudice, which arose probably from this article of food having been for a long time very dear in France; but since the introduction of beet-root-sugar and the consequent fall in the price, people have begun to find out that it is useful as an aliment, and employ it to a considerable extent, constituting as it does the staple of the food of the French people, at least of the Parisians, if one may judge by the *bonbon*-shops that crowd the capital and all the larger towns of France.

After briefly describing the various entozoa that are to be met with in the human subject, M. Roger said that, of all intestinal worms, the *ascaris lumbricoides* is that most frequently found in children. He then went over the symptoms caused by the presence of these parasites, and the treatment to be adopted in each particular case. The remedies employed, he said, were as numerous as the worms themselves; but, as a rule, he considered that mercurial purgatives, oil of turpentine, and the bark of the root of the pomegranate, were the only substances that deserve the name of anthelmintics or vermifuges, and may be employed in all cases, even for the destruction of the oxyurides, for which latter they ought to be administered in the form of enema. But the expulsion or destruction of the worms constitutes only part of the treatment; and M. Roger dwelt upon the importance of relieving present symptoms and the employment of preventive measures against the return of the parasites. To fulfil the latter indication he knew nothing better than cod-liver oil, particularly in delicate children, good and well-cooked food, and the various remedies in and out of the *Pharmacopœia*.

In my last, I mentioned about the monster exhibited by M. Houel at the Academy of Medicine. I have now to bring to your notice the case of another monster birth that took place at the Hôpital des Cliniques under the following circumstances. A woman about twenty-five years of age, primiparous, having been for several hours in labour, was prematurely confined at her home of a female child of seven months and a half, after which, her abdomen continuing to be somewhat large, another child was suspected, and a search was consequently made; but, instead of a foetus, a globular object was found to be lodged in the womb. This greatly puzzled the *sage femme* and two or three doctors who were called in succession; and, after having made several fruitless attempts to remove it, they sent the patient to the above-named hospital, where, after great difficulty, the strange body was extracted by Professor Depaul. On the following day he delivered a most interesting lecture on the subject, and gave the following description of the monster. The trunk is of an ovoid form, without a head or neck, and consequently belongs to the class of acephalic monsters described by Geoffroy Saint-Hilaire; it has but one leg, which is greatly deformed; at the place of the arms is to be found a sort of appendix; and at the neck is found a sort of ear. The trunk is composed of an abdominal cavity containing portions of intestines in a rudimentary state, and a small cavity above which represents the thorax. The child that was born lived only a few hours, and the mother is doing quite well.

By a decree of the Minister of Public Instruction, MM. Wurtz and Tardieu are nominated members of the Prize Committee to be held at the Exhibition of Vienna; the former is to represent Chemistry, and the latter Medicine and Surgery.

The death of M. Rigollot, a *pharmacien*, who had become celebrated by his invention of the paper sinapism or mustard plaster, is announced.

LARGE MEDULLARY SARCOMA (?) OF THE OVARY.—Dr. Clemens describes in the *Deutsche Klinik* (No. 3 for 1873) the case of a woman aged 42, who had a large abdominal tumour, which, when she lay down, rested on her thighs nearly as far as the knees. It had been growing ten years. A puncture was made with a large trocar at a point where fluctuation was most distinct; but nothing escaped beyond a quantity of dark blood. The wound healed, and no further attempt at operation was made. She died rather suddenly, after having become greatly emaciated, about two months afterwards. The tumour was found to engage the left ovary; a quantity of blood and serum, estimated at ten pounds, escaped from it on removal; and, after losing this, it weighed eighty pounds. The tumour is described as a medullary sarcoma; but, unfortunately, there is no account of a microscopic examination.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 19TH, 1873.

MEDICAL REFORM.

OWING to the pressure of business on last Monday week, when the Chancellor of the Exchequer brought forward the Budget, Mr. Headlam was prevented by the rules of the House from introducing the Medical Acts Amendment Bill of which he had given notice.

The Reform Committee of the Association has for some time been in communication with Mr. Headlam on the subject of his Bill, which is chiefly based on the Bill of the Government which was withdrawn in the session of 1870. It approves of and authorises the formation of conjoint boards of examination for the respective divisions of the kingdom by the medical authorities,* subject to the approval of the Privy Council and of the General Medical Council; but, in case of failure on the part of such medical authorities, it delegates the power to the General Medical Council, in conjunction with the Privy Council, in order to obviate and render for the future impossible the injurious competition which has existed amongst the Universities and Corporations, nineteen in number; several granting two and even more separate qualifications, each of which entitles the possessor to be placed on the *Medical Register* as a legally qualified practitioner, and therefore virtually to practise all departments of the profession, although possibly licensed only in one. Compulsion will only come into force where the medical authorities prove themselves unequal to the task of securing, in the interests of the state, of the profession, and, above all, of the community, an uniform, efficient, and thoroughly practical examination of all candidates for the medical profession. The approval of all the arrangements respecting examinations and licences will fall specially within the province of the General Medical Council.

The proposed Bill of Mr. Headlam will in this way give greater power to the General Medical Council than it has hitherto possessed; and, as a necessary consequence, it seeks to modify its composition, and make it more truly representative of the profession than at present.

When the Medical Act of 1858 was passed, it was, as it still remains, one of the objects of the British Medical Association to have the profession directly represented in the General Medical Council; and it is in the personal knowledge of Mr. Southam of Manchester, now President of the Council of the Association, and of other members, that the intended representation was then deferred because there was no *Register* of the profession in existence such as has since been formed, and, therefore, no means of ascertaining at that time, as through the *Medical Register* can now without difficulty be done, who are entitled, as members of the profession, to vote in the election of its representatives.

Deputations from the British Medical Association and from the profession generally—the latter deputation embodying the wishes of upwards of ten thousand medical practitioners—have requested the sanction of the General Medical Council to this addition to its body. They have represented, *inter alia*, that the addition to the Council of members elected by the general body of registered practitioners would bring it into more intimate relation with, and cause a greater interest in its proceedings to be felt by, the profession; and that its power of doing

good would be increased. Hitherto, these representations have been without success. It has been suggested, on the part of the Medical Council, that it is not for that body to favour a modification of its constitution; that the proposed addition would render the Council unnecessarily large, and more expensive than at present; while the idea of anything like the disfranchisement of some of the corporations has met with no favour from the representatives of these bodies. Further, it has seemed to be the opinion that the representative principle, though very proper and desirable, very advantageous even for other bodies, was not to be sought for by the medical profession.

The Universities, endowed with the accumulated wealth of ages, the richest Corporations, do not pay their representatives on the General Medical Council: all the general expenses of the Council, as well as the payment of all its members, are entirely defrayed by fees exacted from the medical practitioners of the United Kingdom on registration.

Mr. Headlam's Bill will, by the introduction into the Council of direct representatives of the profession in the proportion of one-fourth of its members, correct, at least in part, this anomaly; it will bring the General Medical Council into more immediate connexion with the profession, and thus enlarge and strengthen the basis of its constitution. In the present circumstances, Mr. Headlam's Bill merits well the favourable consideration of the Association.

THE ARMY MEDICAL WARRANT.

It is not very long since a contemporary warmly congratulated Mr. Cardwell on the advantages secured to army medical officers by his new Warrant, and wound up by a brightly tinted sketch of their position under the present *régime*. We cannot help thinking that this savours a little of the recruiting sergeant, and that, although the ranks are at present full, and will probably remain so for some time, it is thought well to flourish the ribbons abroad in case of future contingencies. The real fact, however, is, that the dissatisfaction originally expressed with the last War Office effusion becomes deeper and stronger day by day, until we may shortly expect to find it reach an unanimity of condemnation quite unprecedented in the annals of the department. We have recently discussed this question largely with all ranks of the service mainly affected, and have found the only variation of opinion to be one of degree—even those whose duty it is to defend acknowledging the many grave faults of omission and commission. Nor can we look upon this as a mere unreasoning clamour—a pettish expression of disappointment at the destruction of long cherished hopes; for many willingly concede that the Warrant contains the germs, at least, of much that is good and reasonable, if properly carried out. All agree as to the necessity for the general hospital system in time of war; and to some, at least, the loosening of the strict bonds of regimental life may be considered a boon.

We presume that the staff medical officer attached to a regiment will henceforth occupy the position which is found to work well in the Brigade of Foot Guards—*i.e.*, of being an honorary member of the mess, and paying only when he actually dines. Mess and band subscriptions, although much curtailed by the excellent arrangement of the present Director-General, who only permits them to be paid when a doctor exchanges at his own request, will now cease to affect him under any circumstances; and the adoption of a general staff uniform will obviate the expensive change of dress with every fresh regiment. Poor men will be no longer morally compelled to join in subscriptions to balls and other extravagant luxuries; and altogether their position will be improved in many respects. We must remember that if good regiments represent the *beau idéal* of army medical life, an unpleasant colonel or uncongenial associates may render such a position irksome in the extreme; and the opportunity will now be afforded for the industrious student to devote himself to his profession far more effectually than formerly.

But it is lamentable to see how the recognition of all the good points

* The Universities and Corporations are included under the title "Medical Authorities."

is prevented by the appearance of certain very irritating alterations and curtailments, quite unnecessary in themselves, saving little money, and probably only introduced to appease the jealousy of other departments. It is difficult otherwise to account for the want of tact which adds with one hand largely to the duties and responsibilities of the medical officer, and with the other takes away rights and privileges long enjoyed; and somewhat mysterious must have been the influence which has made these interpolations on the original Warrant sketched some years ago. For instance, the restriction of the right of forage to the number of horses actually required for duty will be a heavy blow to those surgeons of cavalry, who have hitherto been enabled to keep an extra nag or two for hunting purposes; and the alteration in the regulations concerning choice of quarters will be of serious disadvantage in mixed garrisons. But a still more vexatious grievance has lately crept in, and, although not expressly laid down in the Warrant, has at all events become a regulation at Aldershot and other stations. The medical officer's annual leave of absence consists of sixty days; but, in addition to this, he was always allowed an occasional short break, to relieve the tedium of a dull station by attending to his professional improvement in town, or amusing himself in other ways. All this, however, must now cease, and every night spent out of quarters must be rigidly subtracted from the bare period just mentioned, or at all events met by a deduction of pay.

The *United Service Gazette* of April 12th, tells us that "all surgeons of regiments and corps have, with the exception of the Guards, been transferred to the staff." In estimating the great amount of individual expense, discomfort, and uncertainty which this order will entail, we may congratulate the present surgeons of the staff on reaping some slight benefit; for there can be no doubt that so large a numerical accession to their ranks, and consequently also to the roster for foreign service, must materially increase the duration of their tour of home duty.

The *Globe* of March 25th contained a very exhaustive and complete summary of the whole question, which, if conceived in a somewhat too uniformly gloomy key, is impartial in tone, and has given general satisfaction to the department. In addition to many points previously discussed in the JOURNAL, it makes some suggestions relative to promotion, and specially advises that the period of service, in the positions of surgeon and deputy surgeon-general, should be respectively limited to ten and five years. This seems reasonable enough; for, although the numbers in the executive ranks are too small to affect the upward flow much, even by very prolonged retention of office, it is only fair that the opportunity of attaining to these higher grades should be brought within the more possible reach of all. But would not this regulation rather tend to block than to increase promotion? for anything that facilitates the chances of rising in position and emolument will only induce the senior surgeons to remain on longer in hopes that the good things may come their way. Instead, therefore, of "tapping" at the top, then, it will be better to operate about the middle, by encouraging the retirement of the surgeon and surgeon-major—of the former, by the £1 *per diem* after twenty years; and of the latter, by a larger number of half-pay berths, among other inducements.

We are glad, also, to see another heavy blow struck at the useless and obstructive system of military commandants of general hospitals. Anything which hampers the responsibilities and zeal of the medical officer in charge exercises an evil influence on progress and efficiency. Civil life teaches the same lesson with respect to the autocratic power of treasurers; and the confusion frequently existing at Woolwich, coupled with the recent financial irregularities at Netley, triumphantly demonstrates that this arrangement is at all events useless. But we must go further, and assert that it is a mere waste of public money, and will, to use the words of the *Globe*, be swept away by the first real man of business who takes army reform in hand. But, unfortunately, the new broom, when it comes, too often does not content itself with sweeping away the mere cobweb, but removes things which might very well have been allowed to remain. A Secretary at War cannot always be ex-

pected to understand the feelings and wishes of the Army Medical Department; and a Director-General is much hampered in power. When a scheme like the present is introduced, which paves the way to large economic reforms, a reduction of establishment grievances is apt to be characterised as petty, and those whose toes are trodden on are probably recommended to get out of the way. But it must be recollected that no department can work well, in whose ranks a smouldering discontent and distrust of superiors begin to spread; and we would once more urge on the authorities the propriety of not disregarding the dissatisfaction of those whose peculiar position forbids them to combine for their own defence.

THE DEBATE AT THE PATHOLOGICAL SOCIETY.

ON the whole, the debate on Tubercle at the Pathological Society has passed off successfully. It would be unfair to expect that a Society which has not hitherto cultivated prolonged discussions, and has almost exclusively devoted its energies to hurried remarks on morbid specimens, should suddenly find amongst its members experts in debate: it is, therefore, not surprising that want of conciseness and much verbiage should have occasionally been strongly marked features. The debate, moreover, as truly remarked by Dr. C. J. B. Williams, tended to become a disputation on words rather than a discussion on the anatomical relation between pulmonary phthisis and tubercle of the lung.

The unprecedented attendance, not only of members, but of large numbers of the profession without the Society, was conclusive evidence of the popularity of the step taken by the Council, and of the great interest shown in the subject chosen for discussion. A medical and a surgical debate of the kind during each session would be specially within the aims of the Pathological Society, and would redeem its character from the charge of a neglect of pathology, and of excessive partiality for a plethora of morbid specimens and a fat volume of *Transactions*. It is to be hoped that the remaining meetings of the session will not be entirely given up to a hurried exhibition of mere results of disease.

THE annual dinner of St. Mary's Hospital will take place at Willis's Rooms on May 14th; the Marquis of Lorne in the chair.

AN increase of yellow fever at Monte Video is reported by the last River Plate mail. The health of Buenos Ayres is at present good.

DR. TYACKE, of Chichester, who has for many years acted as magistrate for that city, has been appointed also a Justice of the Peace for the county of Sussex.

THE anniversary festival of the Victoria Park Consumption Hospital is announced for April 29th, at the London Tavern; Philip Twells, Esq., in the chair.

DR. MOREL, chief physician of the Asylum of Saint-Yon, at Rouen, has recently died at the age of 72. He was the author of many works on mental diseases and the medical jurisprudence of insanity.

The second annual congress of German surgeons is being held in Berlin. It commenced on the 16th, and ends on the 19th. The meetings are held in the hall of the University, from 12 to 4 o'clock daily.

MR. FURNEAUX JORDAN and Mr. LAWSON TAIT have been appointed Honorary Consulting Surgeons to the West Bromwich District Hospital.

THE statistical abstract of the health of the navy for 1871, which is just issued, says that of the 401 deaths in the service afloat, 286 were the result of various forms of disease, and 115 were by violence—namely, 55 by drowning, 19 by falls from aloft, 28 by accidental wounds, 5 by wounds in action, 7 by suicide, and 1 by murder.

DR. HUGH L. HODGE of Philadelphia, the well known gynaecologist, inventor of the pessary which bears his name and of other obstetric instruments, died of angina pectoris on February 26th, at the age of 76.

AT a recent meeting of the Academy of Sciences in Paris, M. Rabuteau announced that he had found that iodide of tetramethylammonium and iodide of tetramylammonium act on animals like curare. They paralyse motion, but not sensation. Their action is as energetic as that of curare, a few centigrammes being sufficient to kill a dog in a few minutes.

THE ACTION OF DISINFECTANTS.

THE *Philadelphia Medical Times* reports that a student, undergoing his examination, was asked what was the mode of action of disinfectants. He replied: "They smell so badly that the people open the windows, and the fresh air gets in."

POPLAR AND STEPNEY SICK ASYLUM.

ON April 4th, the Right Honourable Mr. Stansfeld, accompanied by Mr. Longley, visited this institution. He was shewn round the building by Mr. E. H. Currie, the Chairman of the Board of Managers, and by the medical superintendent, who explained the general method of working the establishment, and more especially all that referred to the nursing staff. The President of the Local Government Department evidenced a great interest in all he saw, and at the conclusion of his visit, wrote the following report. "I have to-day, for the first time, visited this admirably, I might almost say perfectly, managed and model institution; and I desire to record the great satisfaction which I have derived from my visit."

RECIPROCITY OF PRACTICE ON THE BELGO-GERMAN FRONTIER.

BY a convention agreed on between the Emperor of Germany and the Belgian Government, physicians, surgeons, midwives, and veterinary surgeons, residing in the frontier districts of either of the two countries, are to be allowed to practise within the frontier districts of the other country. They must not, however, supply medicines within the limits of the State in which they are not resident, unless the patient be in a dangerous condition; nor can they remove their residence beyond the frontier, without complying with the laws affecting medical practice in the state into which they pass, and undergoing an examination. This arrangement is subject to termination six months after objection has been made to it by either of the governments.

THE ABUSE OF PRESCRIPTIONS.

A RECENT order of the *Staatshalterei* of Lower Austria calls attention to the frequency with which mere copies of physicians' prescriptions are employed, in supplying medicines containing articles specially marked in the Pharmacopœia as to be used only under professional direction; and especially to the custom of midwives to use old prescriptions of ergot and its preparations. To obviate these evils, medical men are desired, when they prescribe any of the articles referred to, to add the words "ne repetatur"; and the apothecaries are not to dispense a prescription so marked more than once. Ergot is only to be supplied if the prescription have been written on the day of application or the previous day. If a prescription containing ergot be presented a second time or after the date mentioned, the apothecary is to detain it, and inform the person presenting it that a new one is necessary.

NEW AMERICAN SANITARY JOURNAL.

WE have received the first number of a periodical which has just appeared in New York under the title of *The Sanitarian: a Monthly Journal*. It is edited by Dr. A. N. Bell. Its purpose is "to so present the results of the various inquiries which have been and which may hereafter be made for the preservation of health and the expectations of human life, as to make them most advantageous to the public and to the medical profession." The number contains articles on Sanitary Science, by Dr. C. R. Agnew, President of the Medical So-

ciety of the State of New York; on the Results of Sanitary Improvements of Towns, by Dr. Stephen Smith; a Report of the Committee of the Medical Society of the State of New York on Infant Mortality; an article on New York Quarantine Establishment (with a quarantine chart of New York Harbour and other plates), being a report drawn up by Dr. Bell and presented by the Committee on Hygiene to the State Medical Society; and articles on school-poisoning, on the necessity of revaccination, and on life-insurance, together with some brief notices of books. We hope that the journal will be successful in carrying out the laudable object with which it has been founded.

MODERN DRESS.

MR. W. B. TEGETMEIER, F.L.S., delivered a lecture on the 10th instant in the Library of the Social Science Rooms, Adam Street, London, on "Modern Dress in relation to Health and Taste". The lecturer pointed out the evil results to health which are already well known to our readers as accruing from the present fashions, especially of female attire. The lecture was rendered peculiarly intelligible by diagrams.

NEW SCHOLARSHIPS FOR ST. BARTHOLOMEW'S HOSPITAL.

THE Treasurer has just received the handsome legacy of £2,000, free of duty, under the will of the late Miss Brackenbury, the interest of which sum is to be awarded each year to the best students in medicine and in surgery respectively. Sir J. J. Trevor Lawrence and his sisters have just presented £1,000 for a like purpose, in memory of their late father, Sir Wm. Lawrence, long the principal surgeon to the hospital.

THE NETLEY HOSPITAL.

WE understand that Surgeon-General Innes, principal medical officer at Netley, will shortly retire from the service, and be succeeded by Deputy Surgeon-General Balfour, C.B., who is now senior on the list for promotion. While congratulating the Royal Victoria Hospital on so efficient a head, we believe some difficulty will be experienced in providing for the duties of the statistical department, over which Dr. Balfour has long presided with signal ability.

THE PARIS ACADEMY OF MEDICINE.

AT the meeting of the Academy of Medicine in Paris on April 8th, an election of two foreign corresponding members took place—one in the Section of Anatomy, Physiology, and Medical Pathology, in the room of Dr. Farre; the other in the Section of Surgery, in the room of Mr. Joseph Hodgson. In the former, Dr. Donders of Utrecht, Dr. Hughes Bennett of Edinburgh, and M. Van Beneden of Louvain, were nominated; Dr. Donders being successful. In the department of Surgery, there were nominated Mr. Prescott Hewett (who was elected), Dr. Barnes of Washington, and M. Porta of Pavia.

MR. HAVILAND.

WE are glad to learn that the sanitary authorities of Northamptonshire have appointed Mr. Haviland, of St. Thomas's Hospital, Medical Officer of Health for the County. Mr. Haviland's qualifications for the appointment are well known, and we can congratulate Northamptonshire in securing his services.

CONVALESCENT HOME AT BIRMINGHAM.

SIR JOHN PAKINGTON, on Wednesday, opened the Convalescent Home established in connection with the Birmingham hospitals, and pleasantly situated at Blackwell, near Bromsgrove. The building has cost £14,000, all of which is subscribed. Sir John urged the importance and usefulness of such institutions as an adjunct to our hospital system.

DEATH OF DR. HAMILTON ROE.

DR. HAMILTON ROE died on the 13th instant. He was born at Wexford, in Ireland, in 1796. He commenced his professional studies at the Royal College of Surgeons, Ireland, in 1815. He afterwards repaired to Edinburgh, where he took his M.D. degree in 1821. Dr.

Roe was for many years physician to the Westminster Hospital, and to the Consumption Hospital, Brompton. He was elected a Fellow of the Royal College of Physicians of London in 1823, and was for some time a member of the Council of the College. He was also a Doctor of Medicine of Trinity College, Dublin, and of Oxford, and the author of a treatise *On Whooping-Cough*.

THE SKOPZI.

THE *Pall Mall Gazette* says that fresh legal proceedings have been commenced in Russia against the extraordinary and unnatural sect of Skopzi, who, notwithstanding all that is done to suppress them, continue to increase in numbers. The present proceedings are directed against fifty-four persons in the Government of Kalonga. The complete removal of the penis and scrotum forms the baptismal rite of this abominable sect.

SCOTLAND.

A MOVEMENT is on foot to secure a site for the erection of a new unatic asylum for Dundee.

THE appointment of Dr. E. A. Letts as Assistant to the Professor of Chemistry in the University of Edinburgh for the remainder of the session, has been approved by the University Court.

SPECIAL WARD FOR THE EDINBURGH ROYAL INFIRMARY.

THE late Mr. Buchanan of Dura has left a fund for the endowment of a ward in the Royal Infirmary for the treatment of disease of the chest. The fund amounts to nearly £14,000. A portion of the present infirmary will be set apart for the purpose, and one of the wards in the new hospital will be endowed with the money, and called "Buchanan of Dura's" Ward.

UNIVERSITY OF ABERDEEN.

AT the meeting of the General Council of the University of Aberdeen, held on the 9th inst., a report of a special Committee on medical bursaries was presented. Exception was taken to some of the statements, and it was accordingly referred back to the Committee. A Committee was also appointed to report on the present medical curriculum, and on the additions and changes, if any, desirable in the internal arrangements of the University, and in the University Act and Commissioners' Ordinances, so far as they concern the medical faculty.

DR. MURIE.

WE are pleased to learn that Dr. Murie's high claims as a scientific man and an anatomist have been more fully recognised in Edinburgh than by the authorities of Charing Cross Hospital, London, and that he has been chosen to fill a responsible and important appointment. On Tuesday, he was unanimously elected, by the Town Council of Edinburgh, Professor of Anatomy and Zootomy to the Veterinary College of that city—a position which he is preeminently well qualified to fill. One of the trustees, in seconding the resolution electing him as professor, said he believed that "the appointment of Dr. Murie would be the means of shedding a lustre on the Veterinary College which it had never yet enjoyed".

MIDLAND AND WESTERN SCOTTISH MEDICAL ASSOCIATION.

A MEETING of Council of this Society was held at Glasgow on April 8th—Dr. Fairless of Bothwell presiding. In the course of business, it was resolved that the special grievance in connection with death-certificates should be brought under the notice of the general meeting to be held next July, with the view of taking adequate steps for its removal. The profession in Scotland, it was stated, were obliged, without remuneration, and under penalty, to deliver in writing to a registrar the materials of information for which the latter was remunerated. Medical men were in a great many cases called upon to give attendance, irrespectively of hours, where neither *post* nor *ante mortem* fees could be got. In many cases they were called at the last hour, and in not a few once only

a month or six weeks before death; still, the practitioner who had so visited, was expected to return the certificate within seven days. It was resolved that the matter should be signified to the universities and medical corporations throughout Scotland, in order to bring every lawful influence to bear upon, and so to get rid of, the grievance. It was agreed that delay in the matter was not desirable. Before the close of the meeting, Dr. Stewart, seconded by Mr. MacRaild (Greenock), proposed that the compliments of the Association be expressed to Drs. Alexander and Andrew Wood of Edinburgh for their energetic and valuable services at the General Council. A hearty vote of thanks to the Chairman terminated the proceedings.

TESTIMONIAL TO DR. M'KENDRICK.

A VERY gratifying memorial has been presented to Dr. M'Kendrick, Assistant Professor of the Institutes of Medicine in the University of Edinburgh, by past and present pupils of the class of practical physiology. The memorial, which is signed by four hundred names, testifies to the high estimate of Dr. M'Kendrick's abilities as a teacher of physiology, and the personal regard and respect entertained for him by his pupils. During Dr. Hughes Bennett's absence within the past two winters, Dr. M'Kendrick has fulfilled the professorial duties of the Chair with much acceptance and success.

IRELAND.

SANITARY LECTURES.

THE seventh of the course of scientific lectures on public health was given on the 5th inst., by Dr. Robert McDonnell, F.R.S., on the subject of "Antiseptics and Disinfectants". The lecturer commenced by observing that impurities in the atmosphere consist of two kinds, distinct from one another—the one invisible, the other visible under certain circumstances. The noxious gases with which the air we breathe is often contaminated are generally detected by the sense of smell, and the chemist can show their existence by chemical reagents; but we cannot see the carbonic acid gas exhaled in a crowded room, or the sulphuretted hydrogen which rises from the cesspool. We can, however, now render visible the minute, although solid, impurities which exist in the air; for, owing to the marvellously delicate means of analysis now brought within reach by the agency of light, we can not only see, but demonstrate, the physical constitution of the dust which dances in the sunbeam, and is borne across the ocean by the winds. Dr. McDonnell next referred to the experiments of M. Pasteur, which go to prove that it is the presence in this atmospheric dust of organic particles and minute floating germs which causes fermentation and decomposition, for if they be excluded decomposition does not take place. Agents which destroy these germs are called antiseptics, because they tend to prevent decomposition, whilst true disinfectants are those which more or less rapidly promote the complete oxidation of organic matter. He stated that the most important antiseptics are such agents as creasote, carbolic acid, sulphuric acid, and certain metallic salts, as chloride of zinc, sulphate of iron, etc., which render albuminous compounds insoluble, and cause them to resist decomposition. Among the disinfectants we may range the powerful oxidising agents, such as nitrate of potash and nitrous acid, permanganate of potash and soda, chlorine and quicklime; whilst for purposes of deodorisation, peat-charcoal, dry earth, quicklime, and chloride of lime, are efficacious. The lecturer exhibited the well-known experiments of Professor Tyndall. In the beam of an electric light, the moths and dust were submitted to analysis. They were destroyed by fire, and were shown to be absolutely absent in air filtered through cotton. Without entering into the controversy of Pouchet and Pasteur, he showed that the air of our large cities, of our factories, and hospitals, is largely impregnated with organic matter. Dr. McDonnell concluded by giving a condensed account of the antiseptic mode of treatment adopted by Mr. Lister of Edinburgh, as applied to open wounds, and paid a high tribute to the skill of that eminent surgeon.

ROYAL COLLEGE OF PHYSICIANS OF LONDON: PRESIDENT'S ADDRESS.

At the recent Annual Meeting of the Royal College of Physicians, Dr. BURROWS, the President, delivered the following address.

GENTLEMEN,—In taking a cursory retrospect of the transactions of the College during the past year, it may be convenient to bring under your notice, in the first place, all that relates to the intercourse of the College with the Government and different national and other public bodies; and secondly, to call to the remembrance of the fellows the various proceedings which concern the internal organisation of the College, and the resolutions agreed upon for the purpose of perpetuating a worthy succession to the fellowship, and for maintaining the literary and scientific reputation of the College.

Very considerable and significant changes have been agreed upon, and we may confidently hope that the fellows will henceforth enjoy a larger share of the confidence of the members; and as the profession at large will have access to an accurate and authorised summary of all the important business transacted at our meetings, so as a public body the College will be better understood and less frequently misrepresented.

The relations of the College with the Government during the past year have continued on the same satisfactory footing as has long subsisted. The College has had no favour to seek for, but has rendered a willing aid to the Government whenever applied to for counsel or other assistance.

Two reports on Leprosy have been made to H.M. Secretary for the Colonies in reply to his communications during the past year. That of Dr. Gavin Milroy is founded on eleven months' residence and observation of leprosy in Demerara, Barbadoes, Antigua, Trinidad, Dominica, and Jamaica, and its publication is looked for with much interest.

The Secretary of State for Foreign Affairs has transmitted specimens of condurango root to the College, requesting to be favoured with a report upon the reputed efficacy of the root in the treatment of cancer. These specimens were placed in the hands of several competent and trustworthy observers for the purpose of experiment, and the results unhappily compelled the College to return a report to Lord Granville announcing that the condurango root had been found quite inert in the treatment of that terrible malady.

The desire of the colonial medical institutions to connect themselves with our College has been manifested upon several occasions during the past year. Trinity College, Toronto; Dalhousie College, Halifax, Nova Scotia; and Bishop's College, Montreal, applied to have their courses of study recognised by the Royal College of Physicians as qualifications for admission to examination for the diploma. The Medical Board of Trinidad has made application through the Colonial Office requesting the College to undertake the examination, by sealed papers, of physicians wishing to obtain a licence to practise medicine in that colony. To this request the College gave a qualified assent, and prepared a plan to carry out the wishes of the colony; and this plan, mutually agreed upon, is about to come into operation. In answer to the other applications, the several colleges have been informed that no definite answer can be given while the scheme for the formation of a Conjoint Examining Board for England is under consideration.

The College have also maintained their amicable relations and interchange of courtesies with other public and national bodies. It is well known that we are in possession of many interesting and valuable works of art, both pictures and busts; and the College have had the pleasure of granting a loan of some of their treasures to the Royal Academy, to be exhibited, with other specimens of the ancient masters, in the rooms of the Academy at Burlington House during the past winter. The commissioners of the International Exhibition at South Kensington have also requested and received from us the loan of a set of most unique surgical instruments in the possession of the College, the exact date of which is uncertain, but certainly long prior to 1650. The commissioners of the International Exhibition have acknowledged the liberality of the College in the handsomest manner. The College also granted the use of their building for the Meeting of the International Ophthalmic Congress which was held here in August last, and this favour has been acknowledged in terms of respect and gratitude. It was announced to the College by letter that a public meeting had been held at Folkestone for the purpose of erecting a statue to Harvey in that town, the place of his birth, and permission was asked and accorded that the committee appointed to carry out this object might hold a meeting in the College reading-room. This reading-room, well supplied with periodicals and recent medical and

scientific publications, has been open for the use of all connected with the College throughout the year, and quite free of all expense to them.

I have had the honour of appearing as your representative at various meetings of the trustees of the British Museum, of the trustees of the Hunterian Museum, and of the trustees of the Tancered Charities. I have also been called upon, *ex officio*, to take part in the election of the Woodwardian Professor of Geology in the University of Cambridge, in succession to the late distinguished and venerable Professor Sedgwick; and as one of the trustees, to take an active part in the appointment of the Waynflete Professor of Chemistry in the University of Oxford, on the resignation of Sir Benjamin Brodie. On this latter occasion, it will give you pleasure to learn, one of our own fellows, Dr. Odling, was elected to that honourable office. The appointment of standing counsel to the College having become vacant in the course of the year by the elevation of Sir Roundell Palmer to the Lord Chancellorship, and of Mr. George Denman to the judicial bench, I have exercised the privilege of president, and nominated the late Attorney-General, Sir John Karslake, Q.C., and Mr. Arthur Townley Watson, of the Chancery bar, to fill the vacant offices.

Several circumstances relating to our domestic economy have occurred since I addressed you last year, and these ought to be brought under your notice. Our late Bedellus, abusing the confidence reposed in him by our Treasurer, had for a considerable period, by a well-contrived system of fraud and forgery, succeeded in misappropriating various sums belonging to the College to his own private purposes. Happily, a large portion of the losses which would have fallen upon the College funds have been defrayed by the Guarantee Society, who were security for the Bedellus on entering upon his office. The dishonesty of our officer necessarily demanded his immediate dismissal, and caused some temporary inconvenience in the transaction of the routine business of the College. I believe we have succeeded in obtaining the services of a most efficient and well-informed successor to the office in the person of Mr. Gurner. The defalcations of our Bedellus caused our Treasurer to institute a strict scrutiny into the state of the finances of the College, and into the method which has been usually adopted in keeping the College accounts. This investigation, and some other circumstances, induced our Treasurer to ask the fellows to appoint a Finance Committee; and accordingly the Registrar, Dr. Sibson, Dr. Barclay, Dr. Munk, Dr. Lockhart Robertson, together with the Treasurer, were elected a committee for this purpose. I fear the labours of the Finance Committee may show that the expenditure of the College has for some years past been exceeding the income, and that capital has been drawn out to meet annual expenses. Should such prove to be the case, it will be necessary for the College to adopt a more economical expenditure for the future.

The customary *soirée* was held last summer at the College, and was attended not only by the fellows and members, but also by a large number of members of other learned and scientific societies, and of men distinguished in the political and artistic world. In my former address, I intimated my opinion how much this annual *soirée* tended to keep the College in a proper and dignified position in relation to other public bodies, as well as to promote friendly intercourse among all who are enrolled on our lists. I trust the report of the Finance Committee may not be of such a nature as to dictate the necessity of foregoing the *soirée*.

Those who have taken an active share in the affairs of this College for many years past, have been painfully conscious of the large amount of additional labour imposed upon the Registrar beyond that required of him when he first accepted office; and they equally felt that this extra labour had been most admirably and cheerfully performed by that officer. The College, upon having this subject brought under their notice, became sensible of their obligations to the Registrar, and, by a complimentary resolution recorded in our annals, determined to offer him a present of 100 guineas, and a suitable addition to his annual honorarium.

The term of office of our representative in the General Medical Council having expired, it devolved upon the fellows to elect a successor; but the result has been that that high and well-deserved honour has been conferred for another quinquennium upon Dr. Risdon Bennett. It is needless for me to remind the fellows who attend our general meetings, or those who serve upon our Council, or those who have formed part of the committee, to carry out the scheme of a Conjoint Examining Board, how largely that gentleman sacrifices his time and personal convenience in attending these meetings, and how ably he co-operates in conducting the business and promoting the best interests of the College.

One of the most interesting events in each year is the manner in which we commemorate our illustrious predecessor, Harvey. The Harveian oration last year was delivered by Dr. Arthur Farre, who

most appropriately selected the subject of Generation, as exemplified in the celebrated *Exercises* of Harvey, for the theme of his discourse. The orator informed us that it did not appear that this subject had been selected before, and then entered upon an elaborate and learned disquisition upon the state of knowledge on this subject from the time of Aristotle to Harvey, and upon the contributions made to elucidate this subject made by Harvey himself and by subsequent inquirers. All must remember the striking and remarkable passages quoted from Harvey, forming the concluding paragraphs of an instructive and eloquent oration.

The Goulstonian, Croonian, and Lumleian lectures, have been delivered by Dr. Robert Liveing, Dr. Radcliffe, and Dr. Barnes, who have sustained their reputation by discourses displaying erudition, elaborate research, freedom of thought, and clinical experience.

Many changes have taken place in the roll of the College during the past year. Fifteen new fellows have been elected, and six have been removed by death—namely, Dr. Aldis; Dr. Cammack; Dr. J. A. Gordon, F.R.S.; Dr. H. B. Leeson, F.R.S.; Sir Andrew Smith, K.C.B.; and Dr. Ormerod, F.R.S. All of these fellows worthily maintained the credit of their order: some, having completed a long professional career, died ripe in years and full of honours; others were cut off in middle age, and their removal from their sphere of labour must be regarded as a public loss. Among these latter I cannot refrain from especially alluding to the last of the names of deceased fellows, Edward Latham Ormerod. All who had the happiness of knowing that gentleman must have recognised in him a rare combination of extensive and accurate knowledge, indefatigable industry, great practical skill, and a character of singular gentleness and modesty, adorned by many social virtues. Fifteen new members have been admitted, and six have died. Eighty licentiates have also been admitted, while eight of the general orders of licentiates have died. Upon the whole, ninety-five new names have been placed on the College lists, and twenty have been removed by death; so that our numbers on the balance are increased by an addition of seventy-five to the College roll.

There remain three most important questions, having reference to the future of this College, to which it will be my duty to advert. I allude (1) to the reference by the fellows to the Council of the question of the mode of nomination of members for election to the fellowship; (2) to the desire of the College to promote the scheme for the formation of a Conjoint Examining Board in England; (3) to the determination of the College no longer to regard our proceedings as secret, but to suspend in the College hall an authorised abstract of the "res gesta" at each general meeting.

Let me touch upon these topics in the order in which I have mentioned them.

1. A feeling has long existed among those fellows who have been called upon to act upon the Council that, when the duty of selecting a certain number of our members to be recommended for election to the fellowship devolved upon them, they were often placed in a most painful position. While the list of all the names of members was read over in the customary manner by the Registrar at the Council-table, and every councillor had liberty to propose the name of any member as fit to be recommended for the fellowship, the insufficient acquaintance of the councillors with members residing at a distance, with their attainments and their professional status in their respective localities, caused the greatest perplexity to those who were called upon, then and there, to vote for or against the individual proposed for nomination. Each councillor felt himself bound by the faith he had pledged to the College at the time of his admission, "that he would admit to the fellowship those only who are distinguished by character and learning," and by a similar and even more stringent injunction imposed upon the councillors in performing the duty of selection of members for nomination to the fellowship. With insufficient information, a councillor often could not conscientiously vote for a member who had been proposed for nomination; and, although he refrained from voting against the individual, his mere abstention from voting acted prejudicially against the person proposed, inasmuch as it required the votes of a majority of the Council to secure the nomination of any member for election. From such circumstances, justice (possibly) may not sometimes have been done to those deserving of the honour of the fellowship. It is well, therefore, that this difficult question was referred for the further consideration of the Council, and it is to be hoped that, through the assistance of the fellows at large, and by the method recommended for obtaining more satisfactory information upon the merits of members selected for nomination, the revised regulations adopted by the College will diminish, if not entirely remove, some of the difficulties in the performance of an anxious, responsible, and somewhat invidious duty.

2. The College have been called upon to take further steps to pro-

mote the scheme for the formation of one Conjoint Examining Board in England, and have appointed four fellows (Drs. Pitman, Risdon Bennett, West, and Barclay), to act as representatives of the College in the Committee of Reference. This Committee of Reference have definite duties assigned to them in carrying into operation the scheme for the formation of a Conjoint Examining Board, and have recently presented a very elaborate and carefully prepared report upon the method of carrying out the conjoint examinations. In some minor particulars, the Committee of Reference have found it necessary to deviate from the strict letter of the scheme agreed upon by the co-operating medical authorities, and have been compelled to ask for your sanction to these modifications in the original scheme. In a question of such novelty, intricacy, and difficulty, it is essential that you should grant to your representatives a certain discretion, and accord to them a large amount of your confidence. Unless this be accorded to them, it would be almost impossible to carry successfully into operation a scheme which will increase public confidence in the profession, confer an immense benefit upon future generations of medical students, and more firmly establish this College at the head of the medical division of our profession, and in the position which was so unhappily and unwisely renounced at the time of passing the Medical Act of 1815.

3. The last topic to which I shall allude is the resolution of the College to have an authorised written abstract of the proceedings of each general meeting of the fellows suspended in the entrance hall, as soon as practicable after the meeting. This resolution virtually establishes the principle that the College no longer desire their proceeding to be secret, or unknown to the profession at large. For many years past the profession have obtained, through the medical journals, an imperfect, and often inaccurate report, of the proceedings of the College, and such inaccurate reports have necessarily led to much misunderstanding and misrepresentation. Our constituency formerly was a very small one, and those who were personally interested in our proceedings could generally obtain the information they required through their friendly intercourse with the fellows. But this state of things is now altered. By the institution of the comparatively new order of licentiates, and by the increased number of members, our constituency is much enlarged, and there has naturally grown up a corresponding increased desire to become acquainted with the proceedings of the governing body. All this is in accordance with the spirit of the age, and with changes which are going forward in all our political institutions. The College have therefore, wisely in my opinion, assented to this principle of a publication of their proceedings in an authentic form, and to which all may refer who are interested in so doing. Although the College have now established this principle of publicity, I am not sure that it is judicious on the part of some of the fellows to act as reporters to the weekly medical journals, and to provide them with *verbatim* reports of our proceedings, and not only with the names of the fellows who take part in any discussion, but also with the words used by them to express their thoughts. Gentlemen who venture to give such circumstantial reports incur a considerable risk and responsibility, and it is to be hoped that their personal predilections and opinions on any subject discussed in this library may not unconsciously lead them to give biased or partial reports of what takes at our meetings. Hitherto, as far as I have read these reports, they have been truthful and impartial.

From this brief and imperfect retrospect of the various transactions in which the College have been engaged during the past year, I think it will be manifest that there exists in this ancient and venerable institution an active, progressive, living spirit, which is not content with merely proudly looking back upon an honourable past, but which is conscious of its responsibilities, and is willing and prepared to take an active share in everything which may tend to advance the science and practice of medicine, and the welfare of the medical commonwealth. If this College have maintained a high position among the institutions of the country for three centuries and a half, I believe that, supported by the learning and scientific attainments of the fellows, and by the wisdom and liberality of their acts, it may confidently look forward to an equally honourable and distinguished future.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH:
PATHOLOGICAL AND CLINICAL SECTION.

THE last meeting of this session will be held at the Midland Institute, Birmingham, on Friday, April 25th, at Three o'clock.

VINCENT JACKSON, Wolverhampton, } *Honorary*
ROBERT JOLLY, Birmingham, } *Secretaries.*

Birmingham, April 16th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE spring meeting of the above Branch will be held in the Board Room of the Whitehaven and West Cumberland Infirmary, Whitehaven, on Wednesday, April 23rd, 1873; T. S. CLOUSTON, M.D., President of the Branch, will take the Chair.

Gentlemen who intend to be present at the dinner, or to bring communications before the meeting, are requested to inform the Secretary of their intention at their earliest convenience.

HENRY BARNES, M.D., *Honorary Secretary*.

Carlisle, March 29th, 1873.

NORTHERN BRANCH.

THE spring meeting of the above Branch will be held in the Athæneum, Sunderland, on Thursday, April 24th, at 2 P.M.

Dinner at the Palatine Hotel, Borough Road, at 4 P.M. Tickets, exclusive of wine, 6s.

Gentlemen who desire to read papers, or who intend to be present at the dinner, are requested to communicate with the Secretary, at their earliest convenience.

G. H. PHILIPSON, M.D., *Honorary Secretary*.

Newcastle-uponTyne, April 8th, 1873.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, APRIL 15TH, 1873.

Sir WILLIAM JENNER, Bart., M.D., K.C.B., President, in the Chair.

THE ANATOMICAL RELATIONS OF PULMONARY PHTHISIS TO TUBERCLE IN THE LUNG.

THE adjourned debate on the Anatomical Relations of Pulmonary Phthisis to Tubercle in the Lung was resumed.

Dr. C. J. B. WILLIAMS: I cannot but think that this debate on tubercle has been about words more than things. A great many things have been shown, and we have had abundant proofs of much diligent labour and careful observation; but the objects of all this seem to be to determine more what these things shall be called, than what is their real nature. When Dr. Fox and others, after the example of Virchow, call tubercles *growths*, they give no more satisfactory account of their nature and origin than the girl "Topsy" did, when, asked about her nativity, she answered, "S'pose I grow'd." No doubt Topsy was a growth in a truer sense than tubercles are; but, as this did not account for her origin and nature, neither will it explain the origin or nature of tubercles. But I maintain that the term growth is applicable to tubercles only to a very limited extent. It is one of their most remarkable characters, that, except at their first development, tubercles do not grow as other growths or tumours do. They harden by the increasing consistence and number of their corpuscles; and this induration, by depriving them of pabulum from the blood, leads to their ulterior decay, either by caseation or by dwindling. As growths, they are insignificant and abortive, and their chief characteristic is early decay. This is the foundation of their consumptive character, tending to the destruction of the tissues, and the waste of the body. That miliary tubercles are essentially modifications of the lymphatic glandular tissue, I think fairly proved by the observations of Dr. Sanderson and Dr. Fox, in confirmation of the opinions of Portal, Broussais, Abercromby, and others. The similarity of scrofulous disease in lymphatic glands and tuberculous disease in the lungs, and their succession in the same individuals and families, have been generally accepted as strong evidence in favour of their identity; and rendered most probable the views of Portal and Broussais, founded on anatomical, as well as on clinical observations, that miliary tubercles have their origin in the lymphatic textures. And since in more recent times the microscope has been brought to bear on the subject, and Virchow first declared miliary tubercles to resemble lymphatic or adenoid tissue in structure, there has been a general concurrence of opinion in the matter, and few doubt their resemblance, if not their identity. The experiments of Dr. Sanderson and Dr. Wilson Fox on artificial tuberculation led to the same conclusion, which was emphatically summed up by Dr. Fox during his address, in the declaration that "*tubercle is a lymphatic overgrowth*." For my own part, I had, forty-five years ago, expressed my conviction that miliary granulations in the lungs owed their constant form and size to their connection with some elementary part of the lung-texture; and I was quite prepared to conclude on the

new evidence given, that the lymphatic tissue is that element; but that they are simple overgrowths of that tissue, I could not and do not admit; nor do I believe that the lymphatic tissue is at all necessary to the production of other tuberculous formations which are not granular. A mere overgrowth of a tissue ought to be an increase of all its parts—of the stroma, of the trabeculae, of the lymph-paths,—as well as of the corpuscles; and this is what we have in true lymphoma, and in the adenoid enlargements of leucæmia. So says Dr. Bastian. So said I long ago. But this is not tubercle. In tubercle you have increase only of the corpuscles, and they are not merely multiplied, but they are altered; they are harder, so that, as they crowd in their proliferation, they form, not soft expanding swellings as in lymphoma, but little hard nodules; and their subsequent history of irritation and obstruction of surrounding parts, and of decay and caseation in themselves, is dependent on this essential character of induration, which is not comprehended in the term *overgrowth*. I say then, that tubercles, if a growth at all, are a bad growth, a *cacoplasia* as well as a *hyperplasia*; and the elements altered are the lymph-corpuscles rather than the whole adenoid substance. Do you ask for my proofs? I refer you to all the best microscopical descriptions, from those of Gulliver, which were the first, to those of the present day, not excepting Virchow, but excluding his fanciful connective-tissue conjectures. But I appeal more strongly to the evidence afforded in the numerous microscopic specimens which have been brought forward in this debate—some beautifully clear and conclusive—others more confused, and bearing some likeness to the tinct of *growths* in which the minds of their authors may have become bewildered. But more or less distinctly I see in all these microscopies an assemblage of crowded corpuscles, of small dimensions, with more refractory granules (called nuclei) shining out within and among them. These corpuscles bear the closest resemblance to those of adenoid tissue and to the pale blood-corpuscles, *leucocytes*, as they have been improperly named, for they are not essentially cells at all; therefore, I call them *sarcophytes*—flesh-germs. Crowds of such corpuscles, but without their colloid and amœboid properties, form the bulk of recent miliary tubercle, with little or no reticulum or stroma. When they get older and do not caseate, fibres appear among them and around them; about these I shall have something to say presently. But it is the corpuscles, like those of the lymphatics, that mainly constitute miliary tubercles; and therefore Dr. Sanderson and Dr. Wilson Fox call them adenoid growths. Dr. Cayley objects to this, because this same so-called adenoid tissue may be produced in any part of the body by almost any kind of irritation; in the margin of a hard chancre; in the liver in the early stage of cirrhosis; in the lung-tissue by the presence of irritating dust, as in grinders' phthisis. I think that Dr. Moxon described the same adenoid appearance in a blood-clot. I quite agree with these gentlemen, and I thank them for the illustrations which they give of my views. The appearances are the same, and the corpuscles seem identical; but their origin is different. The corpuscles of miliary tubercle are lymphatic, being developed by infection in the adenoid texture. The corpuscles of inflammatory irritation are the sarcophytes from the blood-vessels—the pale blood-particles migrating and forming the corpuscular exudation-matter of scrofulous and other low types of inflammation. And as, according to Von Recklinghausen, "the lymph-corpuscles are universally admitted to be identical in all their characters with the colourless corpuscles of the blood," so we find the same resemblance in appearance, and the same unity in nature and history in the multiplied corpuscles of diseased lymph in miliary tubercle, and in those of inflammatory exudations in scrofulous subjects. And thus, in brief, you have my key to the twofold seat and origin of tubercle, or rather of consumptive disease:—1, lymphatic, miliary, infective, scattered; and 2, inflammatory, diffused, local. Thus we have explained the identity and yet the difference of all the chief elements of consumptive disease—phthinoplasms, as I call them, granular and diffused, differing in their form and seat, but alike in their corpuscular composition and in their proneness to decay. Dr. W. Fox says that he doubts that caseous tubercle originates from the exudation of white corpuscles. If he mean that they exude in the caseous state, I doubt as much as he. But neither I nor any reasonable man can doubt that white corpuscles do exude from inflamed blood-vessels; and we have abundant proofs that they form a corpuscular lymph, which may turn either to pus-cells in suppuration (which is a process of excretion), or to a fatty disintegration in caseation (which is the condition of yellow tubercle). Suppuration results from continued inflammation, which involves a chemical change, a further oxidation of some of the proteiu of the corpuscles into a liquid tritoxide; but caseation results from lowered vitality, and is a process of decay. And now, to conclude with a few words on fibroid phthisis, which, in opposition to Dr. Moxon, I hold to be a reality in both tenses, present and past; and yet, differing

from Dr. Bastian, to be still a variety of phthisis; in some of the microscopic views of tubercle which we have seen, in addition to the prevalent corpuscles, there have been an admixture and an intertwining of minute fibres. And these are found, not only in old tubercles (miliary), but sometimes in recent granulations; and still more frequently and largely in the red and grey consolidations of chronic phthisis and pleuropneumonia. It has become the fashion to talk of these fibres in high Dutch, and call them connective-tissue growths. I prefer the plain English notion of them, which would call them fibrous, and trace their origin to the primordial fibrils found in clots of blood or in liquor sanguinis, and forming part of the inflammatory exudations of serous membranes and other tissues. I suppose that my friend, Dr. Beale, will condemn me in using the word *fibrillation*; yet, nevertheless, I must apply some such term to the reality which I bring before you in these microscopic sketches of my friend, Mr. Gulliver. They show the primordial fibrils which are formed in the spontaneous coagulation of liquor sanguinis, independently of any cells, nuclei, or other tissue-element. There are distinct, fine, even fibrils, of uniform size and great length, crossing and interlacing with each other; in fact, just like those of connective tissue; and I do not see how we can avoid the conclusion that they may be the primary material of such tissue. In ordinary nutrition, and even in hypertrophy, the growth of tissues may be effected by the activity and proliferation of their proper cell-germs or germinal matter; but in inflammation and similar states of vascular excitement, there is an overflow of a plasma through the coats of the blood-vessels, with nascent materials, ready to form, without the intervention of any cells or germinal matter of the old tissue. The result is the coagulable lymph of John Hunter in all its varieties; the fibrinous and the croupous lymph of Rokitsansky; the fibrinous and the corpuscular lymph of Paget; the plastic and the cacoplastic exudations of your humble servant. These views account for the relations of tubercle or phthisis to inflammation, much more satisfactorily than the thicket of growths in which the North Germans would mystify us. The more fibrinous and less cacoplastic exudation becomes organised into a tough contracting tissue called fibroid, and like chronic consolidations. The more corpuscular and aplastic degenerates into cheesy matter to soften and decay—this is diffused yellow tubercle, and the results of scrofulous pneumonia. These are the products of inflammation, and may be confined to the inflamed part; but by infecting the lymphatics they may contaminate other parts, appearing then as scattered miliary tubercles. But all these phthinoplasms, whether they wither and dwindle like fibroid, or caseate and decay as tubercles and corpuscular indurations, represent different degrees of the same consuming disease, bringing the life-giving and flesh-forming materials of our body to premature decay.

Dr. GREEN said that, in listening to Dr. Wilson Fox's most able introduction of the discussion on the relations of pulmonary phthisis to tubercle of the lungs, he thought that there were two main points upon which he especially insisted; firstly, that the anatomical changes in the lungs in acute miliary tuberculosis were precisely similar to those met with in pulmonary phthisis; and secondly, that the development of tubercle played the most important part in the production of the latter disease. With regard to the first proposition—that the changes in the lungs in acute miliary tuberculosis were precisely similar anatomically to those met with in phthisis—Dr. Green had little to say. These changes, which had been fully described by Dr. Fox, might be briefly stated to be of two kinds: the one an accumulation of large epithelial-like cells within the pulmonary alveoli; the other, the development of a small-celled adenoid growth in the alveolar walls, or in the interlobular tissue. The former of these growths Dr. Fox regarded as an inflammatory product, whilst the latter he described as tubercle. Dr. Green was desirous of bringing before the notice of the Society the pathological relations which appeared to him to subsist between these two kinds of growths. In order to state his views as briefly as possible, he would express his belief—1st, that the accumulation of epithelial-like cells within the pulmonary alveoli, and the development of the small-celled adenoid growth in the alveolar walls and in the interlobular tissue, were both the anatomical results of the same pathological process—a process which came within the category of what was understood by inflammation; and 2nd, that the predominance of the one or of the other of these anatomical changes depended mainly upon the intensity of this inflammation. That the growth in the alveolar walls, and that within the alveolar cavities, were both the results of one common cause, appeared to him to be evident from several considerations. In the first place, in a large proportion of cases of acute tuberculosis, these two kinds of growth were so intimately associated—the nodules of induration consisting partly of the one and partly of the other—that it seemed to him unjustifiable to

assume that they stood to one another in the relation of cause to effect. Then, again, the fact that in other cases the nodules consisted entirely of the small-celled adenoid growths, and that this growth was sometimes so markedly fibroid that its development must evidently have extended over a somewhat lengthened period, clearly showed that this growth by no means necessarily caused any proliferation of the alveolar epithelium (endothelium). For these reasons, therefore, he submitted that in these cases it was not a question whether the tubercle caused the pneumonia or the pneumonia the tubercle, but that both these products were the result of the same irritating agent. The point, however, to which he would especially venture to direct attention, was what he believed to be the cause of the preponderance of the one or of the other of these anatomical changes in acute tuberculosis, and in phthisis. Upon studying the alterations in the lungs in these diseases, and comparing them with those which resulted from inflammatory processes in other organs, he was led to believe that, the greater the intensity of the inflammatory process, the more did it tend to produce proliferation of the large cells contained within the alveoli; the less the intensity, the more did its influence tend to be limited to the elements in the alveolar walls and interlobular tissue; further that whilst the large epithelial-like cells invariably underwent retrogressive changes, the small-celled adenoid growth in the alveolar walls or in the interlobular tissue very frequently underwent progressive development and became densely fibroid. In the most acute cases of tuberculosis and of phthisis, the principal anatomical change was an intra-alveolar one. In those cases of acute phthisis which had been termed pneumonic phthisis, the pulmonary consolidation consisted almost entirely of the alveolar accumulation; and he must confess that in many of these cases he had failed to detect any marked change in the alveolar walls. The intensity of the inflammatory process not only determined to a great extent the anatomical characters of the pulmonary consolidation, but also the subsequent changes which took place in the small-celled growth in the alveolar walls. The large intra-alveolar elements, as already stated, always degenerated. If the intensity of the process were very considerable, the small-celled growth also died, but if less intense and more chronic, it underwent progressive development and became fibroid. Dr. Fox regarded the death and caseation of the new tissue as in great measure due to the obliteration of the capillaries by the tubercular growth. The death of the large epithelial-like cells which had accumulated within the alveolar cavities appeared to be in great measure owing to their apparent inability to undergo further development; and it could be explained, Dr. Green thought, quite independently of any such interference with their nutritive supply. The non-absorption of the retrograde products, on the other hand, and the resulting caseous metamorphosis, was, he thought, mainly due, as stated by the late Professor Niemeyer, to the interference with the circulation in the alveolar walls, caused by the pressure exercised upon the capillaries by the intra-alveolar accumulations. It was in the most acute cases of phthisis, those which had been termed "pneumonic phthisis," that this death and disintegration of the consolidated lung occurred so rapidly; and it was just in these cases, he ventured to think, that any adenoid growth in the alveolar walls, which might be supposed to interfere with the circulation, was almost entirely wanting. He wished to be understood to express the belief that the various anatomical changes met with in the lungs in phthisis were the result of inflammation, and that the difference in their anatomical characters and in the subsequent history of the newly formed elements was mainly due to differences in the intensity and duration of the inflammatory process. With regard to the question as to what part tubercle played in the production of phthisis, it appeared to him that the grounds for attempting to make any pathological or etiological distinction between the small-celled adenoid growth which was developed in the alveolar walls, and which was called by Dr. Fox tubercular, and the intra-alveolar growth, termed by him pneumonic, were somewhat insufficient. Anatomically, as Dr. Fox had stated, it was often impossible to distinguish the typical miliary tubercle from certain other chronic inflammatory growths. Dr. Green was unable to distinguish the small-celled reticulated structure of the grey miliary tubercles from that often met with in some portions of the indurated tissue of a cirrhotic liver. He could not help thinking that the prominent part which the production of this adenoid tissue played in these chronic inflammatory processes in the lungs was to be explained by the anatomical peculiarities of the pulmonary texture. This adenoid tissue was not only largely met with, as shown by Dr. Sanderson, in the neighbourhood of the minute bronchioles, but the recent investigations of Buhl and others seemed to show that the alveolar walls were intimately connected with the lymphatic capillaries, and that the large cells lining them corresponded with the lymphatic endothelium. In conclusion, he would say one word upon the question—What consti-

tutes tubercle? In the first place, he thought it impossible to frame a definition of "tubercle" upon a purely anatomical basis. The small-celled reticulated structure which made up the greater part of the miliary nodules in the lungs and in other organs, was met with in parts of the indurated tissue produced by many chronic inflammatory processes. If there were any anatomical peculiarity which might serve to separate tubercle from other chronic inflammatory growths in tissues closely related to the lymphatic system, he could not help thinking that it must be looked for in the giant-cells which had recently been prominently brought under notice by Dr. Schüppel. Respecting the significance of these cells, he would hardly venture now to express an opinion. He would only state that he had found them in the indurated tissue of a phthisical lung in which there was no naked-eye appearance of tubercle; and he was rather inclined to regard them simply as the results of chronic inflammatory processes in tissues intimately associated with the lymphatic system. On these grounds he thought that the use of the term "tubercle" tended to cause confusion amongst pathologists; and he would again venture to express the opinion which he did in another place more than a year ago, that it would, on the whole, be advantageous to discontinue it.

Dr. CRISP believed that the discrepancies that existed among the various speakers arose from the imperfect manner of investigation. If one might be permitted to look forward fifty years, the question would then be, not whether the lungs were abundantly supplied with lymphatics, or whether tubercle commenced in the so-called adenoid tissue, but in what form of organisation it was first seen. Dr. Crisp believed that, until this ascending scale was adopted, no satisfactory conclusions would be arrived at. He showed numerous drawings and preparations, some of which he had made twenty years ago, to show the various forms of tubercle in the lower animals, and the many important particulars in which it differed from the same lesion in the human subject. In the vegetable kingdom there was nothing that he knew strictly analogous to tubercle; there were abnormal cell-growth and abnormal cell-contents and subsequent death, but nothing exactly resembling tubercle. The nearest lesions to miliary tubercle were the nodes and excrescences produced in leaves and stalks by the *cynipidæ* (saw-flies) and insects. The specimens on the willow-leaf and on the cabbage were good examples; here there was as a consequence of irritation abnormal cell-growth, but no subsequent death of the tissue. In the animal kingdom, the effect of some irritants, such as mercury, stone-dust, and other extraneous bodies, was somewhat similar. But the grey semitransparent tubercle in the lungs of sheep from a gordian worm bore a greater resemblance, as seen in the drawings, to specimens of tubercle in the vegetable kingdom; and here there was no transmutation into amorphous and caseous matter. Among invertebrate animals, Dr. Crisp knew no lesion that resembled tubercle. Among fishes, especially pond-fishes, when overcrowded, and not living under good sanitary conditions, he had sometimes met with hard fibrous tumors in the abdomen, with yellow caseous softening in the centre, as in the specimens before the Society. Reptiles in confinement, especially the ophidians and saurians, were very subject to tubercle in the liver, intestines, and lungs, as were birds and mammals. Notwithstanding the assertion of Villemin, Dr. Crisp had met with a hundred different species of foreign animals in confinement with tubercle; and he believed that there was not a vertebrate animal in existence, with the exception of fishes, that might not under certain conditions, such as limited space, unnatural food, and a vitiated atmosphere become tuberculous. Various anatomical and pathological differences between tubercle in man and in the lower animals were pointed out; and Dr. Crisp had long come to the conclusion that the so-called tuberculous affections after inoculation partook more of the character of pyæmia than of tubercle.

Dr. J. E. POLLOCK said that, at that stage of the debate, it might be well to review what had been advanced, the doctrine which had been overturned and abandoned, and that which it was attempted to raise in its stead, with reference to the applicability of the theories to actual clinical facts. Laennec, whose pathological teaching reigned supreme for forty years, had at least the great merit in his theory that he propounded a specific entity, described a uniformity of progressive morbid actions; and it was found in practice that, while his theory was easily remembered and understood, it really, as far as it went, did conform itself to the observed features of phthisis in the living subject. This fatal disease, he said, had for its element an infiltrated morbid product, which once deposited in the lung-tissue was never absorbed, but underwent degenerative changes, involving the surrounding tissues in ulcerative destruction. Successive crops of these small bodies appeared, till the lung became infected, local inflammatory congestions took place, and the patient was wasted by the febrile disturbance caused by the softening of the infiltrated masses. A later pathology, under the guid-

ance of Virchow, had taught that the infiltrated product was not always found where there was phthisis or ulcerative wasting, and that the mass of what we did find in the lungs of persons who had died in advanced consumption was composed of cheesy and fatty degenerations, common to products of inflammatory origin, or more special diseases, as syphilis. Both the French and the German masters had recognised a miliary grey deposit, which might never soften but impact the lung, as well as other organs, and was accompanied by acute febrile symptoms. When Laennec called his supposed infiltrated product "tubercle", he did so from its well recognised physical properties; and before the days of microscopes, these were aptly enough represented by the name. Histological investigations recognised epithelial products, fibroid overgrowth, and lymphoid overgrowth, in every case of advanced phthisis. Virchow especially guarded against studying tubercle by its properties after it became cheesy, for it then possessed characters common to pus, to cancer, and to sarcoma. In other words, varied inflammatory products were by Laennec mistaken for softened and aggregated tubercles. By a not unnatural transition, the German school concluded that, in the vast majority of cases of advanced phthisis, the only appearances found were the products of inflammatory and degenerative changes. The terms tubercle became limited to the miliary grey translucent deposit, and it was asserted that it then only appeared as an incident in the course of advanced phthisis. In this transition of opinion, the identity of the disease was gradually lost, its specific character vanished, and neither in the dissecting-room nor under the microscope could the so-called deposit be verified; all unity went with it, and the vague conclusion was left that not one but a multitude of affections might lead to ulcerative destruction of the lung. With the loss of identity and specific character, all speculations as to the influence of heredity and other causative agents of course became vain—for why seek for special causes for a multiform affection? Dr. Wilson Fox, in his opening remarks, described his mental distress at finding himself thus perplexed; and by his propositions, it appeared to Dr. Pollock that he had restored the unity which had been lost. The disease which all agreed to call phthisis, presented a remarkable conformity to one type, although it had many varieties. He was therefore inclined to accept it as offering a plausible and present solution for phenomena which could not be accounted for by the theories of Niemeyer. The question of the nature of tubercle was no doubt still in a transition state; but it appeared to him that Dr. Fox gave a description which included every variety of phthisis as seen in practice. Excluding ulcerative bronchiectases, catarrhal pneumonia, and indurative pneumonia, all the elements found in the lungs of phthisical patients were included in the list of morbid appearances observed in the acute tuberculosis of children. Tubercle might have no individual features by which it might be infallibly recognised, but its vital and pathological tendencies were unmistakable. The constant presence of lymphoid or adenoid tissue in the so-called tubercle might hereafter be disproved, but at present it was the nearest approach to truth; and Virchow in 1860, and Latham years again before that, pointed out the almost complete correspondence between the corpuscles of tubercle and the lymphatic glands. It was proposed to renounce the word "tubercle"; but if the disease in which it played so prominent a part remained an unity, it was better to retain the term, which in itself contained nothing contradictory of the latest composition assigned to it. There was no doubt we might have ulcerations of the lung without grey granulations, but it was very rare to find advanced cases without them. The new word "granulia" had not so much to recommend it as tubercle. Regarding the question from a clinical point of view, Dr. Pollock entirely believed in a miliary acute tuberculosis, which need not of necessity proceed to ulcerative changes in the lung. But, from a like clinical standing, he must deny the accuracy of Niemeyer's pathology. It might not be that Laennec was entirely right; but the experience of large numbers of cases of phthisis contradicted the statement that the disease arose from a catarrh, although an epithelial impaction filled the alveoli after death. Neither had he ever seen a case in which an hæmoptysis originated a phthisis. The truth was, this branch of the German school constructed a picture of phthisis out of theoretical materials: the disease was to conform to the theory; and because blood-clots were subject to cheesy degeneration, and cheesy degeneration was asserted to be the causative agent in producing grey granulations, therefore the hæmoptysis was asserted to be the cause of the phthisis. But who had ever answered the question, what caused the hæmoptysis? Again, out of the *débris* of Laennec's pathology, arose the theory of "fibroid phthisis." Every case of phthisis which went beyond a very early stage contained this fibroid element; and, as had been well remarked by Dr. Moxon, fibroid phthisis was only old phthisis, in which this contractile element was developed. Regarding the inoculation of tubercle, and its propagation by infection of the system, the experi-

ments of Dr. Sanderson and others were of the highest interest; but he doubted if a similar state to that which had been produced in the rodentia could occur in man. Finally, all the facts drawn from observation of phthisis as a disease—the powerful influence of heredity, the marked obedience to one type of all the cases, with diverging features in the individual instances—pointed to a unity in the morbid appearances as a causative agency; while the variety in the features of the disease could be accounted for by the preponderance of one or other of the morbid anatomical elements observed in advanced cases. For instance, an acute typical miliary tuberculosis, with high febrile symptoms, destroyed the patient often before the degenerative changes had time to occur, and therefore the latter were not observed *post mortem*. The chronic ulcerative destruction of lung where the vessels were blocked and strangled by the aggregation of the granulations, afforded after death an abundance of cheesy degeneration and epithelial impactions. The attacks of pneumonic congestion to which the phthisical were liable, might be coincident not only with increased inflammatory products, but with first crops of grey tubercles, possibly derived from secondary infection. The strumous variety of phthisis would be found to exhibit more of the true lymphoid growth; while fibrous overgrowths abounded in very chronic cases, with retracted chest-walls and great shrinking of the pulmonary tissues. Out of the number of morbid products which Dr. Fox observed in chronic phthisis, there might thus be a basis for the several varieties of the disease as seen during life. Dr. Pollock desired to admit that, while there was a typical pathological entity which might be called tubercle more properly than anything else, the disease called phthisis was the manifestation of various morbid agencies—lymphoid, inflammatory, and degenerative—which in their various evolutions constituted the several varieties of the clinical affection.

Dr. BURNES YEO observed, that the introducer of this debate, as well as the speakers who had followed him, had based his opinions on anatomical facts, the correctness of which had not been disputed. The most opposed in opinion agreed as to the facts observed, so that it was not, at that period of the debate, so much a question of anatomical observations as one of interpretation. He believed that the solution of the problem which was before the Society did not depend entirely on anatomical and histological observations; but that the differences of opinion that existed amongst observers were greatly due to the circumstance that they had been looking too exclusively on one side of a many-sided subject. They would surely be more likely to comprehend the true import of the anatomical evidences, the last words, as it were, of a disease, when they regarded them in the light of the various circumstances that had attended its whole life-history. It had been argued, for example, that what was called *tubercle* was not *specific*, because it had no specific structure; that other products were histologically similar; that it was adenoid; that it resembled lymphatic-gland tissue. In answer to this he would press an argument advanced by Dr. Beale—that histological identity or similarity was no ground for specific identity; that no one thought of arguing that the embryonic cells of a whale were really identical with the embryonic cells of an oyster, although histologically they were not distinguishable; and he would urge that it was from an observation of the entire life-history of a morbid as of a normal product that its specific character must be judged. It had also been maintained that all those morbid deposits in the lungs which had been regarded as tuberculous were mere “products of chronic inflammation.” Now, this doctrine, which resolved every morbid product into one of the results of chronic inflammation, might have the merit of simplicity; but to his mind it was most indefinite and unsatisfactory. “Products of chronic inflammation” was the term applied by some to masses of deposit or infiltration, which it was quite as much in accordance with facts to regard as altered tubercular deposits. To complain of the arbitrary use of the term “tubercle,” and to use arbitrarily the term “product of chronic inflammation,” were somewhat inconsistent. While it seemed to him impossible, in looking upon anatomical details in the light of clinical experience, to admit the applicability of the theory of chronic inflammation to all cases of phthisis, it was equally impossible to regard them as having exclusively a tubercular origin. He thought that there was ample evidence, anatomical and clinical, for the separation of pulmonary phthisis into two main primary forms, tubercular and inflammatory; that they both ran a variable course and overlapped, so to speak, at their extremities; and that they both became complicated by secondary changes which tended to confuse their anatomical characters. In the case of tuberculous phthisis, which, he would assume, originated in an inherited taint, there were three chief circumstances which determined its clinical course and anatomical results: 1st. the intensity of the original taint; 2nd. the influence of secondary complications and coun-

teracting inherited tendencies; and 3rd. the effect of time, favouring development and transformations of the original deposit. In the most intense form of the original taint, which on that account most commonly developed early in childhood, there were cases of *acute tuberculosis*, with the general development of the characteristic grey granulations; in a less intense form, there were cases of *acute phthisis*, varying in their course according to the intensity and uncomplicated nature of the inherited dispositions. In these cases, in proportion to their duration, the anatomical results became complicated with the products of inflammation of lymphatic irritations, and of development or degeneration of the original deposit. It was in this manner, he maintained, in opposition to some previous speakers, that acute phthisis was directly related to acute tuberculosis. It seemed to him to be impossible to observe the mode of origin of cases of acute phthisis without having this belief forced upon one. The majority of such cases commenced not with signs of local inflammation or irritation, but with indications of a general constitutional affection, too frequently overlooked, and it was often some weeks before signs of local mischief were observed. Was this, he would ask, in the least like the course of an extending catarrhal inflammation? But, on taking into account more and more the modifying influence of time, and the varying intensity of original inherited taint, or even the inheritance of counter-acting tendencies, it would not be found difficult to trace the same life-history, with certain modifications, first through cases of acute tuberculosis, then through cases of acute and subacute phthisis, even to those of a chronic character. In chronic phthisis, however, cases of the second class were met with, for he believed that the majority of cases of chronic phthisis were of inflammatory origin. The life-history of such cases was quite distinct from that of the preceding. They begin with definite signs of local inflammation, and often with no symptoms whatever of general constitutional affections. He could, at present, produce several specimens which without a physical examination would be pronounced to be in robust health. He entirely agreed with Dr. Cayley that it was premature to give a definition of “tubercle,” and that embarrassment would only be produced by attempting it. To his mind, looking steadily at all the facts that had been adduced, anatomical, histological, and clinical, it was more consistent to regard “tubercle” as the cause rather than the consequence of lymphatic irritation; and from this point of view he was anxious to hear what Dr. Wilson Fox had to say in answer to Dr. Cayley’s remarks about those multinucleated giant-cells which some observers considered the most essential element of tubercle. These large “tubercles” also could be found imbedded in the cells of adenoid tissue, which might therefore be regarded as an irritative growth around them, and by this growth the giant-cells might in course of time be obliterated.

Dr. WILSON FOX: In replying to the many able arguments which have been addressed to the elucidation of this discussion, I must apologise for the fact that to answer extempore those which we have heard this evening is by no means a simple or an easy task. To some which have been before us a fortnight I have been able to devote some consideration, but those heard for the first time demand, from the authority of the speakers, a careful reflection, in order to appreciate fully their bearings on this intricate subject. If, therefore, I fail to pay the attention which they deserve to some of these points, I trust that those gentlemen will not regard it as evidence of any want of respect on my part to the views which they have expressed. I cannot but feel grateful to one and all for the generous indulgence which the Society showed me on the introduction of this subject, and also for the great courtesy and kindness with which my remarks have been treated by successive speakers. I am glad also to observe that, with regard to the main anatomical facts at least, there is a considerable unanimity of opinion in this Society. That there should be considerable differences respecting their interpretation, is no cause for surprise. When I introduced the subject, I felt that some points which I was obliged to deal with somewhat summarily would be regarded as requiring further elucidation, and in this I have not been disappointed. I was, however, obliged to state conclusions, rather than to support them by argument; and for this reason I trust that the Society will permit me to explain in some measure the grounds on which some of these conclusions are based, and to enlarge on a few points on which some members of the Society have asked me for further explanation. As I stated when I introduced this subject to the Society, my object was to investigate whether there were such essential anatomical differences in phthisis as to justify the classification of its different forms as distinct diseases. In the investigation of the lungs of phthisical patients, in addition to pneumonic and fibroid changes, I found one common feature in the whole class—viz., a growth of small cells or nuclei, in some

cases imbedded in a fine reticulum, while in others this reticulum was less apparent; but in all the cells or nuclei were densely massed, and were of the same character. In some parts this growth formed round masses, corresponding to the grey granulation in serous membranes; in others it was diffused through large tracts of the tissue of the alveolar wall and bronchioles. In the latter case it was very usually mingled with pneumonic products, and in a very large proportion of what appeared to the naked eye as granulations, it was also mixed with pneumonic products—that is, with epithelial proliferation in the interior of the alveoli. I regarded this growth as the distinctive feature of phthisis, whether acute or chronic; and it appeared to me that the diffused growth was of the same nature as the circumscribed masses, the grey granulations. I was, however, long under the conviction that the grey granulation was the typical form of tubercle, and therefore I felt doubt as to what the character of this diffused growth really was. I therefore determined to investigate the pulmonary manifestations of a recognised tubercular disease—acute generalised tuberculosis in children, and I found here, as I have stated, the same sets of changes—viz., circumscribed and diffused growths of the same nature. I argued, therefore, that in the generalised disease a growth similar in structure, similar in vital characteristics, and similar in sets of changes, occurring in the same disease in the same patient, but differing only in being in parts circumscribed and in parts diffused, must be in all probability of the same nature; and that if the circumscribed growth—the grey granulation—were tubercular, the diffused growth must also be so; and that if this were tubercular in acute tuberculosis, it must also be so in other forms of phthisis. In bringing the subject before the Society, I thought the most definite course would be to invert my own procedure, and to inquire first what was tubercle in the lung; and this was the reason why I devoted so large a part of my description to the changes occurring in acute tuberculosis. To Dr. Payne's and Dr. Cayley's inquiry what part of the various morbid changes in acute tuberculosis I consider characteristic of tubercle, I would reply that in the abstract which I furnished, and also in my description, I categorised all the essential changes of whatever kind, but that I withdrew all simple inflammatory changes from this category, as well as the accidental ones of emphysema, collapse, dilatation of the bronchi, congestion, œdema, and ecchymoses. I endeavoured, however, to show that all the granulations, except some of the earliest spots of lobular pneumonia, had one character in common—viz., this growth in greater or less abundance. Some of the granulations are pneumonic, with, however, this growth superadded in their wall. The epithelial proliferation is not, in my opinion, characteristic; it does not differ from that found in ordinary catarrhal or lobular pneumonia; but the growth, whether diffused or circumscribed, is characteristic, and, from its similarity to or even identity with the grey granulation, I still call it tubercular. The products of ordinary inflammation are, in the lungs as well as in the serous and mucous membranes, almost always found coexisting with tubercle; but, as in the serous membranes the distinction can be maintained, and as the growths can exist without them, I think that they must be regarded as non-essential in an anatomical sense, though I believe with Dr. Green that in some cases they originate under the same cause, or they may precede and even excite the tubercular growth, or follow it. The tubercular growth is something superadded to this, and gives to the pneumonia characteristic features. It causes the prominence even of the softer granulations, and it leads to caseation—necrosis—by destruction of vessels, which does not occur in ordinary pneumonia. I think it desirable that the inflammatory process and the new growth should, from an anatomical point of view, be considered separately, though their relations to one another are so intimate. Anatomically, pneumonia is not tubercular unless this growth co-exist in the alveolar wall. When this is present, I think the pneumonia may be conveniently called a “tubercular pneumonia”—that is, a pneumonia associated with tubercle; and this association is often more common in the lung, in acute tuberculosis, than the typical grey granulation—that is to say, a large proportion of the granulations in this disease show some pneumonic changes combined with the growth. I hope, therefore, that it is clear to the Society that I do not consider all the changes in the lungs in acute tuberculosis as tubercular. I limit the term tubercle to this growth. The criticisms that have been directed to the conclusions which I have thus formed may, I think, be summed up under the following heads. —Firstly, as the growths described, whether existing as granulations or in a more diffused form, are wanting in absolutely

specific histological characters, it is impossible to separate them from other diseases. This point has been distinctly affirmed by some speakers, and appears to me to underlie the argument of others. Some, however, think that the form is distinctive, and would therefore still limit the term to the grey granulation. Secondly, the disease known as acute tuberculosis, though presenting the same granulations and growths as ordinary phthisis, is yet so widely separated from it as to form no criterion for an anatomical analogy between the lesions of the two diseases. Thirdly, the one lesion known as the grey granulation is not the mark of one disease, but of several which are distinct from one another. Fourthly, the grey granulation presents certain cell forms which are sufficient to characterise it and to distinguish it from diffused growth and other granulations presenting, in other respects, similar characters. I shall endeavour, as far as lies in my power, to deal with these objections *seriatim*; and if I am obliged to enter, in relation to some, into a more abstruse argument than I had originally intended to bring forward, I think that it will be acknowledged that these points must be fairly met in the discussion of this question. I can only endeavour, in spite of the difficulties of some of these subjects, to do so as briefly as possible. I will allude first to the last which I have named—viz., a criticism introduced by Dr. Cayley. If I understand him rightly, I gathered that he regarded the “giant-cells,” the “Riesenzellen” of Virchow, as characteristic of the grey granulation of true tubercle; at least, he stated that I had not found them so frequently as others, because much that I considered tubercle was not really so. My remark was, however, confined to the grey granulations proper in the lung, or at least to such as appear so microscopically. If, however, we examine a number of grey granulations in respect of these cells, we shall find them, at any rate in such sections as we make, in a very small proportion; but the grey granulation, under the microscope, is easily recognised without them, and has been so recognised, before their frequency was observed, by the dense rounded mass of small cells and nuclei, with and without a reticulum. If we exclude all otherwise typical granulations in which we cannot find these cells (I do not say in which they do not exist) from the category of tubercle, we shall, I think, find a very considerable further reduction of the bodies that bear this name. Failing this characteristic, I would assert that, with the further exception of its rounded form, the grey granulation has no feature to distinguish it from the more diffused growth, which, as I have just stated, presents in all other respects essentially the same histological structure and vital characters. I must demur to the opinion that the rounded form is sufficient to separate the grey granulation from the diffused growth around. In the first place, it merges insensibly into it; and though Rindfleisch, to whom Dr. Cayley has alluded, makes the distinction in the intestine when he speaks of a diffused growth around ulcers as being inflammatory, while grey granulations also exist there, he admits that in the lungs processes, or irregular growths—such as have been very well figured by MM. Hérard and Cornil—extend between the granulations. I admit that many grey granulations are tolerably sharply circumscribed, but in many, equally typical in other respects, the same growth extends indefinitely into the alveolar wall; and I believe we cannot then say that the latter is different in essential nature from the former when thus extending from it. Again, when tubercle—which is universally admitted to be tubercle—grows in the sheath of an artery or in a bronchus, the extension is longitudinal; and though it tends here also to form nodular masses, there is as much a diffusion of infiltration within the sheath as there is in the alveolar tissue of the lung, and the round form is often only an accident due to the section being made transversely. Mere roundness of form, and mere circumscription cannot, therefore, be affirmed as being essentially distinctive of even typical tubercle. I believe that, whatever be the real nature of the granulation, whatever characters it possesses are possessed equally by the diffused growth—the same histological structure occurring with it, and the same vital tendencies. In the specimens which I brought forward, of tubercular growth in an arterial sheath extending into the adjacent alveolar texture, you cannot, I think, logically say that the tubercular growth is limited to the former. The growth is the same; and, whatever it is in the arterial sheath, it is, I believe, the same in the alveolar wall. You cannot, when they thus occur together, call one inflammatory and the other non-inflammatory; you cannot, except by a mere arbitrary definition, call one part tubercular, and the other part scrofulous, pneumonia in the lung, or arbitrarily draw a line of demarcation between the different aspects

of a similar growth in the margin of an intestinal ulcer. I do not think that we ought scientifically to separate the granulations which contain some epithelial inflammatory products, but in which this growth occurs, from those which contain none—to call the latter pseudo-tubercle or chronic lobular pneumonia, and limit the idea of tubercle to the former when they both occur together. I lay in this case especial stress on their concurrence, for reasons into which I shall enter presently. The recognition of tubercle without the grey granulation may be, and is, sometimes a matter of doubt and difficulty; but in the case of acute tuberculosis I believe that we must regard these diffused growths as being of the same nature as the circumscribed form, and on this point I would quote an aphorism of Virchow:—"The form ought only to be admitted as a decisive criterion of new formations when it is conjoined with a real difference in the tissue, and does not result from accidental peculiarities of situation or position." Is there any real difference in the nature of the grey granulations and of the diffused growths? In my opinion this is not discoverable by histological characters, nor by the transformations to which they lead, nor by the circumstances under which they originate. This is admitted by nearly every member of the Society who has discussed this point, including Dr. Bastian, to whose singularly able address, with its further details published *in extenso*, I shall have to make more than one allusion. I would, however, remark that I somewhat differ from him in the interpretation which he puts upon the writings of some pathologists when he says that these diffused growths "amidst the shipwreck of the old term (tubercle) were deliberately cast aside" out of this category. He considers that I have lost sight of the fact that the definition of tubercle, as consisting only of the grey granulation, was "confessedly arbitrary," for a certain purpose. Now, "arbitrary" was the very word that I used in introducing the subject; but even in the imperfect revision which I was able to give to the report of my *extempore* remarks, I did not choose advisedly to retain such an expression as applied to any definition of Professor Virchow, as being capable of being understood to imply less of the personal respect and gratitude which I entertain towards him; and, without dwelling on the subject as I would gladly do, I cannot quit it without expressing how great is my sense of the obligation due to him for the stimulus which he has given to pathological inquiry, not only in this, but in nearly every important branch of medicine, and how vastly he has increased our actual knowledge. On this subject of tubercle in particular, I feel that I should have wanted a guiding clue to most, and these some of the obscurest points in this difficult subject, without his luminous exposition of its morbid anatomy and without the references collected by his profound learning in his history of the "morbid growths". But when Dr. Bastian asserts that these diffused growths have been categorised by other authors under the term chronic and interstitial pneumonia, I would, from my own reading, which has been directed somewhat carefully to this point, state my impression that, though the presence of chronic pneumonia and induration has been affirmed, especially by M. Lebert, both for these and also for a large proportion of the granulations present (*pneumonie disséminée chronique*)—though I confess that I am unable fully to understand the distinction which he makes between these and the grey granulations,—neither in this sense nor in that of an "interstitial pneumonia" (a term which, as applied to them, I consider as essentially incorrect and misleading) has their identity of structure with that of the grey granulation, from which they may be seen extending, been distinctly affirmed until recently by Professor Buhl, and previously by Dr. Sanderson, whose views on this point, as far as I can judge (though in his absence I scarce venture to quote him), correspond in many important points with those I have now laid before the Society. I do not recollect to have found it stated, except by these authors, that these growths are of the same structure and pass through the same changes as the grey granulation; nor do I find anywhere the proposition, as stated by Dr. Bastian, that they must, in spite of this recognition, be avowedly rejected from the category when they occur with it, because we want an artificial definition of tubercle; (and form—not only form, but a certain form—and appearance combined, are the only very positive criteria at our disposal), and that we must, therefore, for convenience sake, in our phraseology, draw the line here, and arbitrarily choose to describe these changes which are apparently similar in nature, in different terms, implying a real dissimilarity—to call the grey granulation tubercle and all the other growths chronic inflammation. Such a mode of definition thus stated would have been intelligible; but I do not

think that it would have stood, or that it will stand, the test of criticism or of practical experience. What, I think, was first attempted was to distinguish the grey granulation from caseous change; then grew up the idea that the grey granulation was the only tubercle, and the similarity of these growths was overlooked, and the process by which the caseous change is most commonly produced in phthisis was, I believe, mistaken. Every form of tubercle has been called chronic pneumonia by some authority or another, but to this point I shall presently allude. Nor do I think that Dr. Sanderson or myself can be said to regard some of the "old infiltrations" as being tubercular. These were largely pneumonic, consisting of products occupying the interior of the alveoli. In this sense of the word I agree with Professor Virchow that tubercle is not an infiltrated product; and owing to the misunderstanding that may arise from this term—which is not very etymologically accurate, though it is, with respect to these growths, as applicable to tubercle (if they be tubercular) as it is to cancer,—I think that they had better (though I have used the former term) be described as "diffused," in contradistinction to the "circumscribed" form. I would now refer to some criticisms which have been directed to the anatomical peculiarities and nature of this growth, and especially to the term "adenoid" or "lymphoid" as applied to them. I used generally the latter phrase, or styled them lymphates; the word "adenoid" I employed as a quotation from my friend Dr. Sanderson. I greatly regret his absence, because he would have been able to give a much more complete exposition of this point than I am able to do. I had thought that the word "lymphoid," as introduced by Virchow, had become so familiar a phrase, as expressing one of the peculiarities of tubercle, that it required no further explanation. Virchow long ago drew a parallel between the structure of the grey granulation and that of an isolated lymph-follicle, and stated, and I believe accurately, that in some places, as in the spleen, it was almost impossible to distinguish the one from the other. The term is one of resemblance, and does not affirm identity of structure. Since the publication of Virchow's *Cellular Pathology*, our knowledge of the structure of lymphatic glands has been greatly extended by the researches of His and Frey. We know from their researches that all these bodies possess a very complex structure, involving the distribution and reunion of afferent and efferent ducts, and that the glands consist of two parts, a medullary and a follicular portion. The composite structure is only found in the larger glands, and not in the isolated follicles of the intestines, which His believes to be only aggregations of the diffused adenoid growth in the parts. The main tissue is, however, composed of a reticulum in which cells lie embedded, though these are more densely packed and the reticulum is less distinct in the follicular portions. It is to the follicular parts of the gland, or to solitary follicles, that typical grey granulations bear the greatest resemblance; but the resemblance is one of tissue, and not of anatomical structure, and it is, after all, only a resemblance, and not an identity. The tissue thus formed has been called by Kölliker and His "cytogenic," and has many anatomical variations and distributions, into which I cannot enter. It is, however, as far as our present anatomical knowledge goes, a derivation of the connective tissue. In this sense I think the likeness of tubercle to these structures may be maintained, as far as concerns the reticular structures in which such cells are imbedded, though in tubercle, as in the lymphatic glands, larger multinucleated cells are not wanting. This tissue is not, however, as a question of normal anatomy, necessarily circumscribed, but it occurs in diffused areas, particularly in the submucous coat of the intestine, and the circumscribed lymphatic masses are only to be regarded as modifications of this structure, with which, except in details of anatomical arrangement, they closely correspond. I am quoting entirely from the researches of His, Frey, and Von Recklinghausen, though as far as my observations have gone I can largely confirm their statement in the latter point; but the facts that these two forms exist naturally, and that in embryological development the one proceeds from the other, afford, I think, an important analogy and clue to the nature of some new formations. To return to the description of tubercle as a lymphoid structure, it may be remarked that, as Dr. Sanderson and others have shown, it frequently arises from smaller conglomerates of the natural adenoid or lymphoid tissue. It also arises from the sheath of the arteries and bronchi, which are believed with great probability to be of the nature of lymph-spaces. Many typical tubercles have, therefore, not only a lymphoid or adenoid structure, but have also a lymphoid origin; and I think, therefore, that this term may be appropriately applied to them. As regards the

diffused growths, I have stated my belief, which has been confirmed by other speakers in this discussion, that they have the same structure as the grey granulation. That they have the same anatomical origin in the cases where that of the latter can be shown, is not so easy of proof. I hypothetically stated the possibility of their origin and extension from the lymphatic plexus of the lungs. Dr. Beale doubts the abundance of this; and I should place the greatest weight on the criticism of so accomplished an anatomical observer. I have no personal observations to record on this point; my confirmatory evidence was based on the observations of Likorski, who announces the discovery of a plexus in the air-vesicles, which, from his description, presents the closest analogy to the origin of lymphatics in other parts, and which he has traced also through the bronchioles. Whether this be accepted or not, we may, I think, fall back on the fact that there is a delicate nucleated membrane in the walls of the air-vesicles, which may serve as the origin of this growth, and which is allied to the connective tissue series, this being again allied—and indeed more than allied—to lymphatic structures; it being shown with tolerable clearness by Gertch and Schmidt that the latter in their embryological development proceed from the former. I have gone into these details of explanation about the name, because, as Dr. Moxon has well remarked, names should not be loosely used. The name lymphoid, as it is commonly employed, and I observe that it is still employed by many, denotes a resemblance, but not an identity. The degree of resemblance may be a question, and in this respect it varies in different specimens. Even when the grey granulation proceeds from a true lymphatic structure, the identity of structure between the new growth and the tissue in which it originates is destroyed; and notably in this peculiarity, that a lymphatic gland is vascular, while a tubercular growth is absolutely or nearly absolutely non-vascular; but the resemblance in tissue to a greater or less degree remains, and sufficiently so, I think, though this may appear in a different light to others, to justify the retention of the name. Dr. Williams thinks that the resemblance is so far destroyed that nothing but an overcrowded mass of corpuscle is present. I should hardly venture to reassert my own opinion that there is a reticulum also, were it not that he has stated that fibres are also found in older specimens, and that Professor E. Wagner has also affirmed that much of what is generally recognised in Germany as tubercle is a reticulated lymphadenoma. This brings me to one of the points involving the greatest difficulty raised in this discussion. I do not mean a personal difficulty, for I do not wish to enter into any special pleading; but a difficulty which meets everyone who attempts to define the series of new formations, in which a somewhat similar structure appears, from one another, if we look merely to their histological characters. It was a difficulty which I intended to express by stating that the characters of the new growths in acute tuberculosis were distinctive but not specific. This phraseology may meet with criticism, but by it I mean to express that their general characteristics distinguish these formations from simple inflammatory processes in the lung and other organs; but they are not specific—that is to say, they are more or less closely shared by formations occurring in other diseases—glanders, typhoid, leucæmia, and it is stated in other chronic inflammations, in some syphilitic growths, and in the class of lymphosarcomata, and lymphadenoma. With some of these my acquaintance is but small, as with glanders; but it must be admitted, from Cornil and Ranvier's description, that there must be, histologically, very little difference between the appearances which this disease produces in the lung as regards the implication of the perivascular and peribronchial sheaths and tubercle occurring in these regions. Of syphilis also I can say but little; but I would say that during the past fortnight I have looked through the drawings and descriptions of most of the authors who have described secondary syphilitic growths, and I can find little or nothing corresponding with any close approximation to these formations in the lung in acute tuberculosis, except in one by Von Bärensprung, of probable syphilitic disease of the lungs. There are scattered masses of cells and nuclei imbedded in fibrous tissue; but these are less dense than in tubercle proper, they are more widely separated by fibrous tissue, and they occur in little groups. I do not wish to dwell on finer distinctions, though I would make the same remark of the appearance of the base of chancre. Here, also, at least in some specimens which, thanks to the kindness of Mr. Arnott and Dr. Gowers, I have been able during the past week to compare with the lungs of acute tuberculosis, I find such differences that, if I had met with these appearances in the lungs, I should have called

them suppuration and not tubercle. The cells diffused through the tissue are, individually and collectively, larger than in tubercle; they are not so fused with the basis substance. They appear more isolated, and again they occur in scattered groups, between which is proliferating connective tissue. Here, again, it is a question of degree, the variations in which it is almost impossible to express verbally. Billroth and Wagner have, however, described a true cytogenic tissue at the base of chancres, and I accept their statement. In leucæmic growths, especially in the liver and kidney, there is the greatest difficulty, I would say impossibility, of histologically distinguishing between them and the grey granulations in the same situation. Of the appearances presented by the lungs when affected by this disease I have no experience. In typhoid again, at least in the general infiltration of the intestine, the resemblance to the cytogenic tissue found in tubercle is so close that, histologically, it would, I think, in many cases, be almost impossible to distinguish the tissue at the base of the ulcers, in these diseases, from one another; and the resemblance is still greater from the fact that in typhoid you may have multiple disseminated small growths, as Wagner and Hoffmann have shown, in the liver, peritoneum, lymphatic glands, and air-passages. Indeed, as Virchow long ago remarked, anatomically as well as clinically, the diagnosis between acute tuberculosis and typhoid may be a matter of the extremest difficulty. Here, even in well-marked diseases, we have a whole group of very similar changes of structure. And I would go further. I would say that in nearly all new formations arising in the so-called connective tissue you may have almost identical appearances, but at different stages; or, as Dr. Beale has well put it, in the earliest periods of growth it is impossible to differentiate one bioplasm from another; and in some instances this may extend to later periods of formation. At any rate, in the connective tissue series, the products of inflammation may at certain periods very closely resemble the processes of morbid growths of very different kinds, and the difficulty of expressing these differences is at times extreme. Hence I said that I would give no dialectical definition of tubercle. I believe it would be almost impossible to frame any definition even in the histological changes in common suppuration, in which the attributes predicated of it might not be equally applicable to cancer; and again I have preparations of cancer of the lung which in some respects present a close resemblance to tubercle; while Dr. Bastian has affirmed the same ascending series, with no line of demarcation, for the peritoneum. No one can affirm more strongly than I do the absence of histological specificity for tubercle. Such absolute specificity is denied etiologically in every phase of its history, except the hereditary tendency; and how far back this reaches it is impossible to say, for when we know family histories it is traceable further than in statistical hospital inquiry; but that the disease may originate *de novo* under various unhealthy influences, none of which can be called specific, is a fact which I think no one can deny; while as to the diathesis, M. Pidoux at least asserts that it may be the expression of any diathetic constitution when the plenary manifestations of this are exhausted in successive generations. I do not adopt this mode of expression, but it conveys in some cases an approximative truth. I said in my introduction that I should abstain from etiological considerations, and must still pass them by; but I wish to express my opinion that we have no more right to attribute to tubercle a specific form than to attribute to it a specific structure. At least, if we do, we exclude from the disease a vast number of forms, which in some cases predominate in its manifestations. Take the illustration of acute tuberculosis, and I would ask where in the lungs would you draw the line between the varieties of granulations found there. They differ from one another in structure as a whole, but they contain one structure common to all, and common to all the manifestations of the disease throughout the body; though here again the same differences are observable in different tissues, for in some, as in the intestines and in the vascular sheaths, the mode of growth differs as much from what is observed in the peritoneum as it does between the peritoneum and the lungs. You must, I believe, take the disease as a whole, and then I would state my conviction that the diffused growths which occur in it are of the same nature as the circumscribed masses; and if this be true, the definition of the grey granulation as the sole form of tubercle is too arbitrary to express the phenomena of the disease. I have no wish to add to the confusion of this intricate subject; but I think that we may as well look the logically impossibility of a framing a dialectical definition based solely on the histological characters of any single general disease fairly in the

face and admit it. Histological identity is one feature necessary to prove the identity of similar growths at the same period; but it alone does not prove identity, it is only by the collective characters that they can be discriminated, and even here we are often in difficulty. Take multiplicity of anatomical changes, even when combined with structure, and we have it in a vast group of new formations, in some of which, besides tubercle, it is apparently of an infective kind, as in leucæmia and lymphadenoma. The tendency, to a greater or less degree, characterises at least nearly all the diseases of the connective tissues, including even the process of suppuration; but yet, as a practical fact, we may distinguish most of these diseases from one another. Where I think we shall err, is in pushing any single feature to its extreme. Take, for instance, suppuration and tubercle. The resemblance of tubercle, in its constituent elements, to pus, was, fifteen years ago, affirmed by Virchow; and even his classical figure of a typical grey granulation differs but little, except in the size of the cells, from a small nodule of commencing suppuration. Years before that, Dr. Williams stated that no boundary line of definition could be drawn between tubercle and inflammatory processes, a proposition which he has recently reasserted, and with which I fully concur. Is there, however, no difference between them? Is every suppuration tubercle, and every tubercle suppuration? The question may be absurd, but anyone trying absolutely to state their differences in all stages would find this, I believe, an impracticable task. He must recognise diseases by their broader features; and this is what I have attempted to do in discussing this question of the relation of tubercle to phthisis. I have dealt with tubercle as a disease, and I have affirmed my belief that the sole form of its anatomical manifestation is not the grey granulation, but that it occurs in other forms. Now the question meets us, firstly, is it distinguishable from other and recognised diseases? In the majority of those diseases which I have enumerated, though in some cases the pulmonary manifestations may be similar, we have other criteria. But perhaps the greatest difficulty that can meet us will be in syphilis, typhoid, and leucæmia; for isolated specimens of the two last named may, I believe, be found which, when placed under the microscope, would be indistinguishable from tubercle. I admit that the question of the relation to phthisis of these may be at times very difficult; and I at once admit that I have no positive definition to give, partly because I have had few opportunities of examining destructive changes of the lungs occurring in these diseases. In one case, after typhoid, the granulations resembled the softer forms of acute tuberculosis. In all the cases of phthisical patients with a past history of syphilis coming under my observation, the appearances in the lung differed in no respects from those of ordinary phthisis. In one case which I recently met with, presenting syphilitic gummata in other parts of the body, there were a few similar bodies scattered through the lung, and these were very distinct from any appearances seen in phthisis; but there was no destruction of tissue—no phthisical disease. I have not, however, been able yet to subject these to microscopic examination. The argument of the non-specificity of tubercular new formations is, I think, pressed somewhat unduly if we say that the disease is, except in the form of the grey granulation, undistinguishable from other diseases. In the first place, the majority of those quoted are either more or less specific in their origin—as syphilis, glanders, and typhoid—or have, as in leucæmia, other distinctive features. When we eliminate these, we have little remaining with which phthisis can be confounded, except some of the processes of inflammation. I have admitted before, and I shall have to repeat, how great is the affinity here; but it is an affinity only to be taken practically in a special sense. Inflammation, as a process undergoing evolution, does three things—it either resolves, or it suppurates, or it passes into a chronic stage, sometimes ulcerative, sometimes indurative. The first two may be excluded. The question lies in the chronic stage, and may be answered from two aspects. The first is the anatomical: as regards ulceration in ordinary chronic inflammation, it also is in the main suppurative, and the tissue is infiltrated with cells, large, more loosely packed, and differing in actual appearance from the growths of tubercle. Moreover, it is not preceded by caseation, as in tubercle, and the vessels grow in it and are not so directly destroyed by the growth. As regards indurations, though a nuclear and cell growth appears in these, it is less dense, and passes far more rapidly into fibrous tissue. These, again, do not undergo caseation. When caseation occurs as a consequence of inflammation, it is due, in the vast majority of cases, simply to the retention of preformed pus—it is not the first immediate change in the cells

of new formation. It is said that caseation is common in the lung, because its structure facilitates retention of inflammatory products; but when we look at other glands where retention is even more easy, as, for instance, the mamma, the parotid, and the liver or kidney, do we find simple chronic inflammation attended with this nuclear growth and caseous change combined? Even pus is probably long before it undergoes the latter change. In most indurations or other nuclear growths of the kind, which we know as simple chronic inflammation, it hardly ever occurs, if at all. I wish to be distinctly understood that I am not speaking of all caseous matters found in the lung—I am only speaking of the changes in the growths which are said to be not specifically definable from processes of ordinary inflammation. Of the origin of the diffused caseous matters in the lung I have already spoken, and shall have again to refer to them; but I do not know, either from my own observation or from that of others, of simple chronic inflammations producing growths of precisely the same nature as those in phthisical lungs with the same dense growths of reticular structure, not suppurative, and with the same vital tendencies. To call these in the lungs, therefore, *mere* chronic inflammation, is to state an opinion of their nature little supported by analogy. The boundary line, I admit, may be indistinct, but the broader features on either side differ to a marked degree. That nuclear growth does occur in inflammation, and does occur in some chronic indurations (whose inflammatory nature is less distinct, and is denied by some), may perhaps be considered as proved, as in such cases as early stages of cirrhosis and of the granular contracted kidney referred to by Dr. Bastian. Such appearances, however, are not common, and certainly are not the predominant features of the fibroid thickenings in that disease, but are on the whole very exceptional to any marked degree in them. They do not undergo caseation; they do not indurate in the same manner, and, as far as I have seen, do not present any true resemblance to those which are found in the walls of the alveoli in acute tuberculosis and phthisis, and the resemblance is only on the side of induration, and not in the tendency to caseation. And, I would ask, are we to take these exceptional appearances as an adequate ground for stating that phthisis and tubercle are not a definable disease? Again, there is an etiological side to this question. The mere existence of "chronic inflammations", with the exception of these two diseases last quoted, is comparatively rare without constitutional or local weakness or mechanical or chemical causes. In cases, however, where these are not provable, as in chronic catarrh of certain mucous membranes—and of these, in relation to the lungs, I will especially quote chronic bronchitis, which in an otherwise healthy person may last for years without producing any growth significant of phthisis,—it is the old argument, as raised by Laennec and Louis, that the most persistent inflammation of this kind was insufficient to produce phthisis. In the stomach, the chronic catarrh of hepatic congestion is rarely attended by enlargement of the lymphatic follicles. In phthisical people, it is so very commonly. Chronic dysentery presents the nearest analogy, and forms one of those diseases where the boundary line between irritation of the lymphatic apparatus, as seen in tubercular and in non-tubercular conditions, is the least defined; but the vital character of the growth differs, for caseation is the exception in dysentery. There are intermediate stages on each side not accurately defined, for tubercle may soften so acutely as to resemble suppuration, though caseous change is rare in inflammatory products except in its presence. I only point out that the broader features differ, and clinically a great proportion of the chronic inflammations appear in persons to whom that ill-defined condition, a tubercular or scrofulous condition, is attributable; and when this is not present there is usually some other form of constitutional cachexia; but the inflammations in the former class have characteristics, not absolutely definable, but different from the latter. In the inflammations of the serous membranes, we have perhaps one of the best contrasts: we have a chronic pleurisy without tubercle, and a chronic pleurisy with tubercle. A chronic pleurisy in itself always affords the gravest ground of suspicion for a constitutional state in the background—Bright's disease, or cancer, or tubercle; but the first-named presents no special growth; the latter presents growths similar to the grey granulation, and which, until Dr. Bastian's new position was introduced, have been almost invariably regarded, with the exception of Andral, as being of this character. To sum up, I would say that the so-called chronic inflammations of the pulmonary tissues are most commonly attended with other evidences of tubercle, and are very rare except in its presence, and

that they then present many marked distinctions from the processes of inflammation not so associated. Another question remains behind. Do the formations, which we recognise as tubercle because characterised by the bodies which we know as the grey granulation, represent pathologically more than one essentially distinct constitutional disease? This is the question which has been raised by my friend Dr. Bastian, and argued by him with great ability. Now, though I have argued that such bodies are not the sole form in which tubercle may appear, I admit they form its most distinctive character; and therefore I started from its structure in investigating the other changes found in the lungs. I think, also, that we may generally admit that the grey granulation is not usually produced or imitated very closely in the other diseases of the lymphatic class which have yet been classified, so that, except these, we have only what we have hitherto regarded as one. Now this formation appears in the disease which we know as acute tuberculosis, most forms of phthisis, and certain inflammations of the serous membranes, in which it is very seldom found alone. Does its presence signify under these varying circumstances one disease or many diseases?—diseases, I mean, as different from each other as leucæmia, or glanders, or lymphosarcoma, or lymphadenoma are in turn from one another or from what we call collaterally tubercle. If I understand Dr. Bastian's arguments aright, it may. I understand that he means that there are granulations in ordinary phthisis having identical naked-eye appearances and histological structure to those occurring in acute tuberculosis, but which have yet an absolutely different pathological signification. He adduces also illustrations of the same character from a granulation disease localised in the peritoneum, hitherto known as tubercular peritonitis, but which he regards as again different—that is, having no necessary pathological affinities to the two former. Dr. Bastian, therefore questions the consequences of my reasoning from the grey granulation as occurring in acute tuberculosis being applied to define tubercle generally. According to him, the grey granulation is only to be called tubercle (if the name is to be retained) when it occurs in acute tuberculosis. The same identical anatomical form and structure occurring under any other conditions may be another disease not yet named, or to be called granulation. Now I would for a moment call attention to the fact that this is not Virchow's definition. Virchow's definition was of the grey granulation in the abstract, wherever found; and the definition in question is, if Dr. Bastian will allow me to say so, a second arbitrary one engrafted on a previous arbitrary one (using the term arbitrary in the non-invidious sense in which he applies it). The argument is not, however, unfamiliar to me. I have long thought that the largest outcome of Niemeyer's views would be that there is no tubercle except in acute tuberculosis; but as an anatomist I have felt the combination of anatomical form with anatomical structure of these granulations, coupled with their pathological affinities and their vital tendencies, to be an insuperable objection in my own mind to accepting this doctrine. The distinctions of acute tuberculosis on which Dr. Bastian relies are mainly these: simultaneity of affection of a great number of organs, and therefore involving multiplicity; and acuteness of course. Now, on all these points I would venture to assert that the disease, as we have hitherto known it, presents very great variations. In M. Empis' book, and also in Colin's and Wunderlich's cases, I would observe that these excellent clinical observers show a series of successive invasions of different organs, often attended with intervals of remission, and extending over comparatively considerable periods of time, and that the characteristics of the disease vary with these variations of site. There are a cerebral form, a pulmonary or acute asphyxial form, and an abdominal form. Secondly, multiplicity is also very variable. I hardly know what Dr. Bastian will accept as acute tuberculosis, seeing that he excludes Bayle's cases of granular phthisis from this category. Still, however, I would point out that a disease in the adult running the course of acute tuberculosis may, as in a case recorded by MM. Hérard and Cornil, be limited to a single lung; and even in the multiple disease I am acquainted with three other recorded cases where, in addition to other lesions, one lung alone was affected, the other remaining free. What, however, is the degree of multiplicity necessary for the recognition? On this point I would, even at the risk of undue prolixity, quote the results of an examination which I made nearly two years ago, and without any special object, except to illustrate the general pathology of the disease, of 61 cases, illustrating chiefly the pulmonary manifestations of what has usually been regarded as acute tuberculosis in the adult, all being

above ten years of age, and only 2 below fifteen, except two ages not stated. In all but one the lungs were affected, the solitary exception being the combination of tubercular pleurisy with tubercular peritonitis. In 7 cases the data are uncertain; in these cases the lung was the sole organ. In 7 two organs alone were affected, in 16 cases three organs, in 12 four organs, in 9 five organs, in 6 six organs, and in 1 seven organs. Dr. Bastian lays stress on the meningeal affection; but in any shape where brain-complications are recorded (though in all tubercular meningitis is not described in the current terminology of the present day), the cases amounted only to 28 of the whole number, though in 4 more it was probable but not certain. This is much below the proportion of cerebral affections in the whole class, my data being collected for another object; but they show, I think, that meningeal affection is not necessary to the recognition of acute tuberculous as a disease—a fact which Dr. Bastian will, I am sure, admit. In respect to multiplicity, again, I would for a moment call the attention of the Society to the data existing for ordinary phthisis, when we know that multiple lesions are common. For a moment I would advert to the cases attended by myself: In acute tuberculosis (8 cases), in 2 cases the lungs alone; in 3 cases, two organs; in 2 cases, five organs; in 1 case, seven organs. In acute pneumonic phthisis (45 cases) there were 10 where the lungs, with or without the pleura and bronchial glands, were affected alone. In the others, reckoning the former collectively as one, there were in 11 cases, two organs; in 11 cases, three organs; in 5 cases, four organs; in 5 cases, five organs; in 2 cases, six organs; and in 1 case, seven organs affected. In 42 cases of chronic phthisis the lungs and pleura were affected alone in 4 cases; in 17 cases, two organs; in 9 cases, three organs; in 10 cases, four organs; in 1 case, five organs; and in 1 case, eight organs. Now, these represent the minimum, for the notes of the examination of all the viscera were not always perfectly recorded; and in one or two, where the lungs are tabulated as alone affected, I find omissions of the larynx, and even once or twice of the intestines. Very similar data may be collected from other authors: thus Cless, in phthisis in the adult, found the disease limited to the lungs alone, in 35 out of 146 cases, or nearly 24 per cent. Dr. King Chambers, however, found this in 41 per cent. Age, however, exercises a great influence on this; Cless found the same limitation in only 3 out of 20 children, and Barthez and Rilliet in 23 out of 265, or less than 9 per cent. Tubercle in the child is multiple more commonly and to a greater degree than in the adult—a fact which may be explained in various ways, the most plausible hypothesis being, in my opinion, the greater irritability of their lymphatic tissues. I must, however, on these data demur to Dr. Bastian's opinion, that the existence of tubercle can only be affirmed by its multiplicity, or that tubercle cannot affect a single organ. In any organ I believe that the local manifestation may be acute enough to kill the patient, without the secondary implication of other organs; and this is sometimes the case, particularly in acute pneumonic phthisis, where the inflammatory lesions largely predominate. How far the meninges can suffer absolutely alone is a point on which I can give no positive assertion without fuller research. Barthez and Rilliet record one such case, and Dr. Gee mentions one, where the minimum amount of caseous matter found in each lung was the sole other lesion present. Again, as regards duration, I find in 55 cases of acute tuberculosis, from different authors analysed without any reference to this discussion, that 20 extended over more than two months. Empis gives a mean duration of thirty-nine days, the extremes varying from seven to sixty-five days, though Wunderlich records a case fatal in thirty hours. The possibility of a long duration of a disease characterised by the grey granulations when limited to the lungs was affirmed by Bayle; and numerous instances are given by other authors, one of them lasting nine months, to which I have myself seen a parallel, though here the peritoneum was also affected. I cannot, for my own part, doubt that a certain chronicity may attend this affection; while, indeed, in one case by Empis it was shown to lapse into the course of chronic phthisis. Nor is it only acute and fatal. There are a few but tolerably distinct cases of recovery, and some where, after partial recovery, both chief sets of changes which the granulations undergo have been found—in some induration, in others caseation. I admit to the fullest degree the peculiar course often assumed by this disease; it has been enough to cause every one to classify it as a variety, but I gravely doubt whether it can be precisely defined in children from ordinary tuberculation. Nor in the adult is it so widely separated from the course of acute pneumonic phthisis. I say this advisedly,

since even in my own classification I found great difficulty in determining which cases in some instances to classify in either of these categories. Nor are the granulations in this disease always of the typical grey granulation form in all organs. I will not weary the Society with the wider data than my own which I have collected on this point, but in nearly as large proportions as those already stated from my own observation, the yellow and caseous are recorded in the lungs by other observers; and I would therefore only state that these confirm my remark that the grey granulation is not the only, and in many cases not the most common of the granulations found in the lung of what, as a clinical disease must, I still venture to think, be regarded as acute tuberculosis. Dr. Bastian and the Society will, I hope, pardon me for not entering minutely into the discussion of the artificially produced disease in the Rodentia. I could only repeat what I have already laid before the profession as to the similarity of this disease to acute tuberculosis in man. I would only remark on three points—firstly, that however minute descriptions may differ as to some organs, the granulations in the peritoneum have such an identity of dissemination and structure that, coupled with the multiplicity of the disease, they are in themselves almost conclusive. I would also remark that this disease is not always one slowly evolved, creeping on in recognisable stages from organ to organ. In one of my cases death occurred in six days, with a minimum implication of four organs, and in two others in twenty-eight and twenty-nine days, with a minimum implication of four and five organs, in all exclusive of local effects, or of the implication of the neighbouring lymphatic glands. Dr. Bastian and Dr. Crisp, however, state their objections to considering this disease tubercular on opposite grounds—Dr. Bastian that it is not acute enough, Dr. Crisp that it is too rapid for ordinary tuberculation. Dr. Bastian appears to think that too much stress has been laid on the histological character of these growths. When I stated my belief in their tubercular nature, I put this, the last, as a question of proof. I stated “that it rested on a broader basis of analogy”—that is, rested on the general or constitutional affection. I stated, “it is not a question of the lung alone, or of the liver alone, or of the lymphatic glands, or the spleen, or the omentum, or the intestines considered simply. It is a question of general disease, producing in all these organs growths which, if they occurred in man, would be considered tubercular”; and as no other disease was known producing similar results, I concluded, strange as it might seem, that they must be classed under this category. Into the many etiological questions connected with this subject I cannot enter, except presently to allude to one which has been raised in this discussion, how far indifferent caseation may be an origin of tubercle. To return for a moment to the question of the pathological identity of the grey granulation found in acute tuberculosis and in ordinary phthisis, I can only assert my belief in it; and that, though acute tuberculosis differs in many of its manifestations, these differences are in many cases determined by the age of the patient, or by a rapid multiplicity of lesion. In other respects, I think that the disease, etiological and clinically, shows too great an approximation to ordinary phthisis to enable us to classify it separately. There is one other point to which I would allude. To confine the term tubercle to acute tuberculosis, is almost to exclude tubercle from the diseases of adult life. It is so rare that, even in a clinical hospital admitting a very large proportion of acute cases, one may wait months, I may almost say years, at times, without meeting with a typical example: and it is to affirm that the grey granulation when multiple in the child is a different disease when less freely disseminated in the adult. In discussing the presence of the grey granulation in ordinary phthisis, I wish to state distinctly that, though I do not regard it as the sole manifestation of the disease, yet it is its most characteristic feature, if we put aside for the moment the theory of its secondary origin from infection; and nearly every observer admits its almost constant occurrence. Thus Rindfleisch, who separates every other anatomical change from it, only found it absent in two cases of acute phthisis, and in a few of phthisis after measles; and, in relation to this subject, I would quote an old writer—Broussais—who, biassed as he was by theories of inflammation, and who, as Dr. Williams has pointed out in his invaluable analysis of his experience in his work on *Consumption*, had the strongest personal grounds for opposing Laennec, yet sums up his experience in the following words. “During three years of observation in this immense theatre (a military hospital), I have opened all the men sacrificed by phthisis, and I have only found one with an ulcer of the lungs without tubercle, and this was due to a foreign body.

Tubercles, always tubercles! ‘This is the most general and the most constant feature of resemblance.’ We may demur to Broussais’ idea of what tubercle was; but he found something in the lungs of phthisical patients always present, and that something was different from what he found in ordinary inflammation. Allow me for a moment to ask your attention to the tables drawn up by myself of the different kinds of granulations found in the lung. I have omitted nothing that could be called phthisis, except two cases of old fibroid induration of uncertain origin, and one of acutely ulcerative broncho-pneumonia. Now, of the forty-five acute cases, pneumonic infiltrations existed in forty-four, grey granulations in twenty-nine, and other forms of granulation (representing the softer forms found in acute tuberculosis) in fourteen, and visible pneumonia alone in two (“the acute general infiltration”). Now all these last sixteen but one had secondary affections of one or more organs of a nature ordinarily considered to be tubercular—a larger proportion than was found in those where the granulation was present, when a secondary affection was absent in five; but in two of the latter, and one of the former, the state of the larynx is not recorded. Of the forty-two chronic cases, induration was present in twenty-nine, and was excessive in twenty; pneumonia was present in twenty-three, recent grey granulations in thirty-one. In eleven cases, they were absent, the lesions being indurated and caseous or soft granulations, mingled in some with pneumonia; but, in the cases where they were absent, a secondary affection existed in all but two, where the appearances were doubtful. They were absent also in two of the cases where grey granulations were present; so that here again, as far as these numbers go, the multiple lesions were scarcely less common in the absence of recent grey granulations than in their presence. Here, therefore, in the absence of the distinct grey granulations, we have strong evidence of a multiple or constitutional affection. Then arises the question, Can we not recognise tubercle except as the grey granulation? To say that we cannot, is to deny its metamorphosis on one side into fibrous tissue, and on the other into caseous change. I believe that no one will deny either of these; and in some cases of phthisis the production of recent grey granulations shortly before death is a matter of accident. What we have to look to in this class is the probable pathogenesis, the origin of indurated and caseous granulations; and, knowing the tendencies of tubercular growth in both these directions, we may, I think, conclude that they are tubercular. In fact, we know the former as obsolescent tubercle. Are we, when we meet with indurations, to ignore the fibroid change and call them chronic lobular pneumonia? More diffused indications may, as I stated before, arise sometimes from tubercular growths, sometimes from mere chronic pneumonia; but the latter is different from the former, and I still believe that it is rare except in the presence of granulations of a tubercular character. I would also state that, in those where the grey granulation was absent, I made in nearly all an examination of the other forms of granulation present, and in all that I did so examine (though I cannot quote the exact proportion of these) I found the same growth that occurs in the grey granulation and in the softer forms of granulation in acute tuberculosis. This is my ground for the statement that in all the cases of phthisis which I have examined I have found, both in granulations and in the diffused form, growths identical in character with those found in acute tuberculosis, and that in the vast majority of cases there was a multiple disease affecting other organs. Is this multiple disease different from the multiple disease in acute tuberculosis? It is scarcely so in its multiplicity numerically considered. It is not so as far as the lesions go in the different organs affected. Here however, we are met with the question of infection, but on this I must dwell briefly. It has been known since the days of Laennec that tubercle tends to multiply; but the question at the present time is, can it be produced in the human subject by indifferent caseous products, or by any inflammatory change not associated with a peculiar liability of constitution? I strongly doubt both. I have already alluded to the rarity with which ordinary inflammatory products undergo this change except under special circumstances. The evidence of caseous glands serving as the sources of this infection is, to my mind, after reading Schüppel’s observations on the nature of these glands, only evidence of a secondary infection from a primary tuberculous change. You may get a tuberculous gland secondary to any common irritation, in a predisposed subject; that is, a carious tooth or a cutaneous disease of the head may give rise to a change of a tuberculous nature in the nearest gland. And I believe that what we thus

see externally takes place in the lung: any irritation of the tissue may, in the presence of local or constitutional predisposition, give rise to secondary growths, diffused or circumscribed, which constitute tubercle, and which may be the source of further infection, and that with or without antecedent caseation, though this stage and that of softening are most favourable to the change. I have no wish to ignore the evidence of other non-tuberculous caseous changes acting in a similar way; but then the granulations radiate from this as a focus, and the question is, will they arise without this predisposition? Such cases are, however, few, and in the majority of those where secondary infection is reported, the primary change is tuberculous in its nature; and of this I have seen a marked instance where the bronchial glands became caseous secondarily to an empyema, and acute miliary tuberculosis occurred in the opposite lung. As regards the caseous changes in the lung, which are supposed by many to be the source of the infection, I have attempted to show that these are not a simple inspissation of pus or retained secretion, but a death of tissue due to a particular growth. I do not call the caseous matter tubercle in these diffused areas; much of it is pneumonic, but it is pneumonia running a particular course in the presence of tubercle; and I think it open to the gravest doubt whether it is the caseous matter, as such, or the growth which is the source of further infection. I expressed this opinion in relation to the Rodentia, and it has been more fully expanded by Dr. Sanderson, with whose views in this respect I entirely concur. I would say one word about the often repeated statement that these caseous nodules are often mere accumulations in the smaller bronchi. I have fruitlessly, in earlier days, when I believed this, spent much time in the dissection of bronchi to come upon them; I have taxed the ingenuity of instrument-makers for knives and scissors to penetrate to the finest ramifications, but I have not been able to find such conditions in the sense in which they are spoken of as a gradual inspissation of tenacious mucus forming the first stage of this process. A caseous nodule of tubercle surrounded by induration, presents the greatest resemblance to a bronchus; and when it is softened in the centre, a bristle can be passed into the branches, because they necessarily communicate. But this appearance, which I also used to describe in the terms often employed, is not in the majority of cases a mere inspissation in a bronchus. It is an area occupied to a greater or less extent by a tuberculous growth, and often including smaller bronchi, but it is not, in my opinion, a mere inspissation in the interior of these. I had intended to dwell on these points and give some further illustrations when I introduced the subject, but I had to pass it briefly by, and can only give this further explanation now. Inspissations do occasionally occur in larger tubercular bronchi—bronchi with a tuberculous growth in their walls; but the majority of caseous nodules found in the lung are not, I believe, due to this cause, but to changes in the lung-tissue. I must demur also to the opinion that this caseation is due to mere pressure. The most intense exudation of acute pneumonia does not produce it, nor does any other pressure with which I am acquainted. I must now turn to another difficult point, perhaps the most difficult in this question—the relation of tubercle to inflammation. But I have little to add to what I have stated as my belief. The question of the origin of the disease in a lymphatic gland represents, briefly stated, to my apprehension the origin of the majority of cases of tubercle found in the lung. That tubercle may arise from blood-changes I have no doubt; but at any rate my belief is, that it is a lymphatic growth, excited by abnormal local or constitutional conditions; or probably, in the great majority of cases, by both combined, I cannot admit, on such evidence as we possess, that, although these modes of origin are apparently different, the disease itself is essentially so. I would ask whether the disease excited in the lymphatic gland by a carious tooth, in the child of a phthisical parent, is essentially different from the tubercular meningitis in another child of the same parent, arising without apparent exciting cause? For my own part I cannot think so; and, if in later life another member of the same family become phthisical after a pneumonia or a catarrh, I confess that I see in all these the manifestations of the same disease. Unless chronic pneumonia in the lung, of which I know almost nothing apart from tubercle, be different from chronic inflammations elsewhere, I would assert that these changes, though with great affinities to a chronic inflammation, have a peculiar but not specific stamp of their own. So great is this affinity, that everything which has been known as tubercle has been called simply inflammatory. Broussais did so with a qualification; Cruveilhier,

Gendrin, and others have done so with various modifications. Reinhart affirmed it of all forms, and said that even the grey granulation was only an induration of grey pneumonia, and that the so-called tubercles of other organs were only multiple disseminated inflammations. Andral affirmed it also for the grey granulation in the lungs and peritoneum. Empis makes the same assertion, both these authors separating it from what they call tubercle or caseous masses. The modern German school, agreeing with the late Dr. Addison, precisely reverse these opinions, so that what one set of observers call tubercle another set assert to be inflammatory, and what the latter call inflammatory the former call tubercle. Is there no way out of this confusion? I believe that there is but one, except that proposed by Dr. Bastian, to which I shall presently allude. I believe that it is to recognise tubercle as the result of irritation of a particular set of tissues under certain constitutional conditions. We cannot accurately define all the peculiarities of these conditions. This is wanting to our definition of the disease; but on the anatomical side the growths have, I think, characteristic features. The tendency to assume the round circumscribed form is a general feature of these tissues; it is the type of one of their normal physiological developments, and it recurs under pathological conditions; but the diffused form is nearly equally constant, though not equally characteristic, and this both physiologically and pathologically. And as we admit their identity in the former case, we must also, I believe, in the latter. We have analogies enough in other constitutional diseases, as Professor Buhl has pointed out. We have a diffused and a circumscribed series of growths in leucæmia. We have the same in syphilis; we have the same even in common suppuration; we have the same in lymphosarcoma, and even in cancer. It may be said that this is only to recur to the definition of Broussais, that tubercle is only an expression of inflammation of the lymphatic tissues; but what Broussais affirmed without the knowledge of these tissues which we now possess, and while he used the term tubercle in a different sense to that in which we apply it, the proposition is proved for a large series. The only question is, does analogy justify its extension to the remainder? I admit that we have not precise proof of its origin in the diffused growths; this yet awaits anatomical elucidation; but I think that we have strong grounds for this belief. This question has been already fully dwelt upon by Dr. Sanderson as well as by myself; and my views, I believe, correspond on this point with his. It is not any inflammation of a lymphatic. No one would call a suppurating bubo tubercle. It is the results of irritation in certain constitutional states which give to the growth its peculiar characters. To my apprehension, this idea is not productive of confusion, but the reverse; but to take the alternative, if I may again quote Dr. Bastian—who dreads the chaos which this prospect seems to open to his apprehension—I would ask, is any chaos greater than the present? We are in doubt, at least after his statement, if we have one disease or many included under those at present classified as presenting the one common anatomical and tolerably distinct feature, the grey granulation. Nay, even I think that on his premises it might fairly be disputed that the one disease we know as acute tuberculosis ought at least to be divided. On his showing, no one can say certainly, or feel sure, what the different granulations in the lung in ordinary phthisis signify—whether, even when grey granulations are met with, they are in all cases the same disease, or whether what we have all been calling tubercular inflammations of serous membranes have any pathological affinities to each other, or to any of those to which I have alluded. Dr. Bastian proposes to start afresh in the inquiry by doing away with the word tubercle altogether. The idea is not a new one to me. I persistently adopted it in my own notes for some three or four years, and I still commonly do so in my descriptions of lungs. But I think this procedure hardly necessary, nor even then can we start easily with any common terms. I think we could hardly, even as far as I have ventured to comment on Dr. Bastian's views, define the acute disease, "granulia," as one. There are a variety of different appearances in the granulations present which are characteristic. In some cases, in even tissues, one is more common than the other. What degree of multiple affection, or what length of duration, or what combination of symptoms is necessary to constitute it? I have often pitied the "intelligent student," to whom we have appealed as our test of the definitions of our views, who, fresh from the reading of Niemeyer's text-book, turns to find out in the dead-house what is tubercle. I should, I think, pity him still more if I have to tell him, when he asks what Laennec and Louis, Roki-

tansky and Virchow, Stokes and Williams, and Walshe, meant by tubercle, that there is *no tubercle*. *Nous avons changé tout cela*. And yet still more, when he is told that identically the same appearances to the naked eye, and to the microscope, may mean different diseases; that there is no pathological affinity between an acute granular pneumonia with granulations of varying appearances in the same and different organs, and a granular pneumonia with similar granulations, and with caseous and fibroid products, and a caseous pneumonia with the same granulations and fibroid changes, both associated with caseous, or ulcerative, or granular changes, in the serous membranes, larynx, intestines, liver, and genito-urinary organs, and a granular peritonitis resembling some forms of the complications of the former, yet not the same disease, but passing by insensible gradations into cancer. I believe that, if this plan were adopted, the first effect would be in the attempt (perhaps *mutato nomine*) to re-establish the unity of most of these affections. For my own part, though I did for the purpose of inquiry cast aside the name, I do not think that we can do so in our literature and description without such a cataclysm of our pathological ideas that I for one cannot advocate it. I do believe that between these diseases there is such a close etiological, pathological, and clinical connexion as to demand at least a terminology implying in some degree their association in a common category. I think it better to express this association, as to my mind it is really expressed, by the use during three centuries of the word "tubercle", notwithstanding the doubts and obscurity which have hung over it, rather than to seek a new term or set of terms about which for a generation to come there will be even, I think, more disagreement. We may express the phenomena of tuberculation in the terminology of any current pathology. We may call it a neoplasm, an exudation, an inflammation, a deposit, what we will; but it is a *disease*, and in the vent of our pathological ideas it will want a name. To my own ideas its formations are most nearly allied to, though not identical with, the phenomena of inflammation; but you want some term to distinguish it, as I believe it is distinguished, from most common inflammations, and that not in the lung alone, but in other organs. The disease is, I believe, most easily recognised by the presence of recent grey granulations, but I do not believe that it can be defined as limited in its pathological effects solely to this special form. It is distinguished by vital characteristics, by a growth destructive of vessels, and by a consequent tendency to early necrosis, though capable in some cases of more or less permanent development. I have ventured on some remarks adverse to a demand for definitions of anatomical change specific for each disease, which I believe would render all pathological classification, if carried to its full extent, impossible. Imperfectly defined words are the *idola fori* of science; but too limited definitions, excluding phenomena of identical characters, are not less so; and I believe that we exclude a large part of the phenomena of a tubercular series of formations if we limit the use of the term to the grey granulation. We are in this case in no worse position than in almost every other disease—our definitions of disease are only abridged descriptions. There is scarcely one extant with which I am acquainted that precisely excludes the phenomena of other diseases, but they are sufficient for recognition. I have only attempted to give such an account of the growths in phthisis as may answer the former purpose. My own position, setting aside the use of a name, was a simple one. I started with the inquiry whether I could find in the diseases classified under the name of phthisis (with the exceptions before alluded to) such differences of anatomical structure as would, in my opinion, justify me in establishing these as the basis of clinical investigation. The result of this research has appeared to me to be negative. I find in all one common series of growths, conducing on one side to destruction, on the other to induration of lung, and I find these corresponding to similar formations in acute tuberculosis; both also forming common phenomena of a disease tending to multiplicity, the manifestations of which, in different organs present similar characters. If, therefore, many different diseases are included under the name of phthisis, their anatomical classification has (if my observations are correct) yet to be sought for. This position involves, after all, but a slight modification of that previously existing. It is that similar growths occurring simultaneously in the same organ are probably of identical nature, and is in accordance with the aphorism of Virchow, before quoted. No one can recognise more fully than I do the variations in the clinical features and anatomical characteristics of these diseases, but they are all mutually interchangeable, and pass by indistinguishable gradations into one another. Some of these may perhaps be well expressed

in different terms. The expressions caseous pneumonia and fibroid phthisis are unobjectionable as expressing certain appearances; but I object to the term scrofulous pneumonia, if this signifies mere caseation without the intervention of a morbid growth, for without this it scarcely exists in the lung—or that it signifies a disease having a different anatomical basis to fibroid phthisis, or that either may not at one time or another pass into the other without changing their essential nature. Both diseases are attended by the same morbid growths, but evolving differently under accidental conditions—in the one into caseation and softening, in the other into fibroid induration. The only objection to either of the former terms consists in the fact that they leave undescribed the granulations which are almost invariably present; but their close relationship is, I believe, a point never to be forgotten. Among the drawings which I exhibited were one of typically fibroid and another of typically pneumonic form of phthisis, occurring in two sisters, daughters of a phthisical father, who both died in hospital. The one (the younger) had been under my care for years, the other died after a few months' illness. I have seen a very similar contrast and association in two brothers. Neither the whole of the fibroid change, nor the whole of the caseous matter, is of distinctly tuberculous nature—that is to say, neither in all circumstances directly arises from a tubercular growth, but in the vast majority of cases both are associated with it. Both simple ulceration and simple fibroid may occur in the pneumonic portions without the apparent ulceration of these growths, but they are, if present, and the former, of the extremest rarity, except in their presence in other portions of the lung. It is, however, to these growths that a great part of the destructive changes, and a part, but a varying part, of the indurations in the lung, are due. The purely inflammatory changes may vary in extent, and the fibroid may also; but these growths are almost invariably present, and until some further distinctions are established I have felt that I could only regard these growths as of the same nature. Being only to any true extent simulated, as I believe, by the growths in typical tubercle of the child, I venture still to call them tubercular. In this I have no wish to be dogmatic; and, if I have maintained my own reasons, it has been after a full consideration of those of others. There are no subjects in medicine which would, I think, so dispel a spirit of dogmatism and exclusive adherence to one's own opinions as the study of the history of phthisis, on which such differences have existed and do exist, among the greatest men of the past and of the present, as may well make any one doubt the justness of his own observations, and the accuracy of his conclusions; and much as I felt the honour done me by the request that I should open this discussion, I shrank from it personally, lest what I believe to be the truth should suffer from the imperfect exposition which I should be able to give. I do not regret, and I hope the Society will not regret, that this discussion has taken place. It has, at any rate, elucidated new views of the greatest importance; and, though I have ventured to dissent from some of them, their expression will, I believe, stimulate to further inquiry, which, in this Society, cannot fail to lead to the discovery of fresh truth. As regards those which I have stated, I wish to be distinctly understood as disclaiming all priority. I have endeavoured to work out this question as a whole, without any desire for early publication; and much of what I have stated as my opinions have been, in some form or another, expressed by others; but the varying shades of opinion have prevented me from going into the details of these views, or referring to their work in the terms which that work deserves.

A vote of thanks was proposed from the Chair to Dr. Fox, and carried by acclamation. The meeting then adjourned.

OBITUARY.

BENJAMIN FIELDING MATTHEWS, M.R.C.S.

MR. MATTHEWS was born at Colneworth, in Bedfordshire, and was the eldest son of the late Rev. T. R. Matthews of Bedford. He was educated at Westminster Hospital, and was for seven years Resident Medical Officer of the Bedford County Asylum. He died on March 27th, at Norton, near Bury St. Edmunds, where he had practised for some years.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION: THE PUBLIC HEALTH ACT.

ON Monday, April 7th, a meeting of the Poor-law Medical Officers' Association was held at the Medical Club, to consider the operation of the Public Health Act of 1872 in relation to the advantage of the public and the interest of the medical profession. Dr. Lush, M.P., presided; and amongst those present were Dr. Brady, M.P., Mr. Corrance, M.P., Mr. E. Wells, M.P., Mr. Gordon, M.P., Mr. Napper (Cranleigh), Dr. Clegg (Epping), Mr. Ernest Hart, Mr. Benson Baker, Dr. Joseph Rogers, Dr. Brett (Watford), Mr. Massey Harding, Mr. Cornish, Dr. White, Mr. Wickham Barnes, etc.

The CHAIRMAN opened the proceedings by referring to his nomination and election as President of the Association, and thanked the members for the honour they had thus done him. He took the deepest interest in their work, having been a Poor-law Medical Officer himself, and he should do all within his power to creditably discharge the duties of the position in which they had placed him. He held that too low a status was unworthily given to the position of the Poor-law Medical Officer, whose pay was insufficient and whose work was greatly above what it should be. He could see no reason why the medical man who attended upon the sick poor should not be entitled to rank in the same social position as others, or should be regarded as discharging his important duties less than those who laboured among other classes of society. The meeting were well aware that when the Public Health Bill was before the House of Commons, it was hoped that there would be an elevation of the social status of the Poor-law Medical Service by the officers being called upon to act under it; and it was now for them to consider how far it had borne fruit—in other words, how far the Act, as carried out, was in unison with the spirit in which Mr. Stansfeld had introduced the Bill, and in what way the Association should exert itself to procure the amendment of the measure. This matter was entirely outside all political feeling, and all that the Association and its friends in the House of Commons would endeavour to do would be in the view of carrying out what was best for the profession and for the public interest. He believed that, if the Association adopted a settled course of action, there would be obtained a fair amendment of the Act, which in truth was a mutilation, in several important particulars, of the Bill as first introduced. The Association should come to a resolution as to what was really desired; members should drop their individual feelings—for he knew there were differences of opinion amongst them—and be united in the recommendation of amendments. The fact was, that differences of opinion varied according to the locality in which the members resided; and, in fact, the inspectors of the Local Government Board had varied in their recommendations—in some places urging amalgamation of districts, in other places advising separate action. This want of uniformity must certainly weaken the course of the central authority, and disorganise the expected beneficial action. He urged the members of the Association to resolve on such a course as should tend to elevate the profession, and raise the Association in the opinion of the profession.

Dr. JOSEPH ROGERS explained that the meeting had been called in accordance with the wish of Mr. Corrance, M.P., who, in consequence of the contradictory advice given by the Local Government Board inspectors, wished to obtain information on which to take action in Parliament. After reading a letter from Dr. Rumsey of Cheltenham (given in the next page of this JOURNAL), the speaker proceeded to say that, having taken the line that district Poor-law medical officers should not act with chief health officers in rural districts, it might appear strange to some that he should oppose an Act which, to a superficial observer, appeared to meet his requirements by appointing medical officers as health officers debarred from private practice, over a large area; but, as a matter of fact, the Act did not carry out what was desired in using the Poor-law medical man as deputy health officer. The district medical officer, by the very character of his position and pursuits, was most fitted to collect information with respect to preventable diseases and sanitary matters; and it was therefore much to be regretted that the Government Department, in urging that the districts be combined, had lost sight of the advantages to be derived from utilising local knowledge. They wanted that every district Poor-law medical officer should be the deputy health-officer in the first instance; that his duty

should consist in furnishing returns of sickness, and notably of preventable sickness, in his district, weekly or monthly, with the probable causes of such preventable disease, to an independent health-officer appointed for a whole county or parliamentary division of a county, and that he should be elected by and be responsible to a county board. The labour, he thought, should be fairly paid for on some general principle imperially determined; and there should be a complete development of the dispensary system, not limited, as in the Public Health Bill, to urban districts and very populous places, but distributed, as in Ireland, all over the country, so that the poor should not have to travel many weary miles for a bottle of medicine. He believed that in a large number of instances the boon of having all drugs and appliances found for them would have been so thoroughly appreciated by district medical officers that, with a very small addition to their stipends, they would cheerfully give all that information which would enable the independent health-officer to do his duty, which, under existing circumstances, it was impossible to carry out. He ventured to assert that such a scheme which had been pressed upon the Government by Dr. Rumsey of Cheltenham, Dr. A. P. Stewart, and other thoughtful members of the profession, would in the main be infinitely less expensive than the present arrangements. He moved—"That this meeting, holding that the Poor-law medical officers are specially in a position to give that exact, practical, and positive information respecting the condition of the humbler classes, among whom diseases of a preventable character mainly originate, and from whom they spread to the classes above them, expresses its regret that the administrative arrangements made by the Local Government Board to carry out the provisions of the Public Health Act (1872) do not appear to utilise and include the local knowledge and services of local officers."

Mr. CORRANCE, M.P., who seconded the motion, said he had felt it his duty to watch the action of the measure in the rural districts; and he could say that the manner in which it was carried out showed that the objections made to the Bill were well founded in the evils resulting from the appointment of guardians as the local authorities to carry out the Act. The manner in which the Act was being carried out might tend to cheapness, but would not tend to efficiency. It was allowed in the House of Commons that the guardians were too ignorant to do this work, but that the Central Board would be occupied in overcoming the incapability of the guardians. He and others contended that no central body could carry on such work without the assistance of willing local bodies; and events had proved the fact. The Central Board had now tried to force its own nominees, without reference to local authorities; and it was not to be supposed that the local authorities would put up with a course like this. He dwelt upon the varied advice offered by the several inspectors in the different localities; and he contended that the Local Government Board had gone from the promises made in the House of Commons that the district officers should be considered in the appointments made; for, he said, when the local authorities recommended Poor-law officers for appointments, they were informed that "such recommendations were not favourably looked upon" by the central authorities. The speaker asked the members of the Association to furnish him with information in regard to the appointments made, so that he might have some facts to lay before the House when he called attention to the matter.

Mr. WICKHAM BARNES defended the action of the Local Government Board, and read a letter from Mr. Stansfeld to show that he had no desire to prevent the Poor-law medical officers from becoming health-officers under the Act; and, in regard to the varied advice of the inspectors, that fact was owing to the desire to accommodate themselves to the circumstances of the localities.

Mr. ERNEST HART said that, if Mr. Corrance went to the House of Commons with the case he had presented to the meeting—one implying that Mr. Stansfeld had acted inconsistently with his statements on the introduction of the measure—Mr. Stansfeld could clearly show that he had acted consistently with his plan: a very bad one, it was true, but still he had acted up to the course he had laid out. When he introduced the Bill, Mr. Stansfeld said—very much to the dissatisfaction of those who were pressing the necessity of a defined course upon him—that the plan he should pursue would be to divide the country into districts, and favour amalgamation, but should not press it; that he would favour the appointment of district medical officers as officers of health, but such appointments would rest upon his own idea of their position. In fact, he said that no one system could be adopted. And was it not a fact that Mr. Stansfeld was systematically acting upon that principle of no system? As a fact, Mr. Stansfeld had made appointments of Poor-law medical officers as health-officers; and nearly all in North Wales were so appointed. The only thing which could be pressed upon Mr. Stansfeld was, that he should alter the principle of his measure, and that the Poor-law medical officers should be generally used as deputy health-

officers. With regard to the reports of the Local Government Board inspectors, if Mr. Stansfeld would fall back upon the advice of Mr. Farnall and Mr. Heilely, there would be considerable success.

Mr. GORDON, M.P., expressed his concurrence with the views of Mr. Ernest Hart, and regretted exceedingly that the measure had not been attended with more beneficial results than it had. He hoped Mr. Stansfeld would alter his views soon; and, if he did not, they must take stronger measures to convert him to a proper system.

Mr. CLEGG (Epping) presented a plan of operations of his own, and said the system he laid down was to appoint every district medical officer a deputy health-officer, whose duty it should be to report to a chief medical officer of health in connexion with the Local Government Board. In every county, too, there should be a government medical officer to inquire into cases of default.

Mr. BENSON BAKER said that no system could be worked, either in town or country, without the hearty co-operation of Poor-law medical officers; but they would be in a most unpleasant position if they were called on to fulfil wholly and solely the position of health-officers. They wanted a complete sanitary organisation, with a sanitary board and a chief officer of health in each district. Until they got that, they would fail entirely in their efforts. The chief medical officers might be selected from the district medical officers when they gave evidence of fitness which entitled them to promotion; and he believed that no system would work without promotion. With reference to remuneration, it would have to be settled by a central authority, and paid out of imperial rates. He had nothing to complain of with respect to his own board of guardians (Marylebone); for they had raised his salary as high as they could, and would, he believed, raise it higher, but for the Local Government Board.

The motion was carried, and the usual thanks to the Chairman closed the meeting.

With reference to the subject under discussion, the following letter was addressed to Dr. Rogers by Dr. Rumsey, of Cheltenham.

Cheltenham, April 3rd, 1873.

Dear Dr. Rogers—I regret that, as usual, my engagements preclude the possibility of my being present at your meeting of the 7th inst.

The arrangements now being made, under the direction of the Local Government Board are as faulty, contradictory, and fallacious, as any one might expect.

Mr. Stansfeld's perverseness in his attempt to administer the Public Health Act by means of the Poor-law Inspectors (legal and military), and his recent proposal to set aside the Poor-law Medical Officers, in contravention of that Act, are as inexcusable as was his previous obstinacy in forcing through Parliament a measure of which every well-informed and independent person saw the defects and errors, and predicted the failure.

I have always held and taught, that no sanitary system could be complete which does not avail itself of the local knowledge, as well as of the facts at command, of every Poor-law Medical Officer, and which does not offer to pay fairly for the information to be thus obtained.

I have always urged the establishment of the dispensary system, and the provision of drugs at the cost of the authorities, contemporaneously with the appointment of Health Officers, because I saw that the Poor-law Medical Officers, if relieved of the cost of supplying medicines, might be reasonably required to supply information instead. And I still believe, that such an arrangement, with a general and equitable adjustment of salaries, would have been far better than trumpery additions to the present small stipends of the District Officers, for their returns of sickness, or even for sanitary duties and responsibilities, which Mr. Stansfeld now assumes that they are not the most competent to undertake.

The whole blunder originates in the Act itself, and in the division of authorities into urban and rural. Is not the information to be afforded by the District Medical Officer as valuable in the towns as in the country districts? Why, then, should they be shut out of office in "urban" districts? Again, what does Mr. Wickham Barnes mean (see your last report, p. 16), by apologising for Mr. Stansfeld's refusal to sanction the appointment of the District Medical Officer, "in many cases, owing to the smallness of the district.....as the salary would not be large enough"? If the Union Medical Officer ought always to perform certain sanitary duties (as we think), the smallness of his district, or its urban character, ought to be no objection to his employment. What is necessary in a large district is also proportionately necessary in a small one. The Health Office was not created for the purpose of providing large salaries for a few of the Poor-law Medical Officers. And the officers of small districts have as good a claim to benefit, *pro rata*, by a new employment, as the officers of large districts.

The ridiculous muddle made in this and other counties by the division of Health Officers into two classes, urban and rural, and by the arbitrary grouping of districts for wide appointments, is just what we foretold.

Some of the small urban authorities in this county have consented to combine with a number of rural districts, and to form an area of an utterly impracticable extent. The ablest Officer of Health in the kingdom will be unable to accomplish all that ought to be done in such a district without the aid of the Poor-law medical staff. On the other hand, most of the urban, and some of the rural parishes, insist on their legalised right to appoint their own officers independently, so that there will be a number of *insulae*, of separate administration, in the midst of a monster county district, and of course the duties of the great officer will be the more perplexing and difficult. There must inevitably be an entire want of unity and completeness of organisation.

Again, owing to the want of co-operation between urban and rural authorities, the arrangements for hospital accommodation in fevers and small-pox are complex, conflicting, and ineffective. Such co-operation, as I showed some time ago, was not to be expected, unless made compulsory by the Act. *E.g.*, it has been found impossible to bring the Board of Guardians and the Local Board of this town (Cheltenham), to any voluntary co-operation on this question, and their puerile altercations show the absurdity of any attempt of the kind. But a hospital has just been erected by the urban authority within the district of the rural authority, and therefore no sick pauper, or other poor patient, can be legally compelled to go into it. And, while abundant opportunities are afforded, under present arrangements, for misunderstandings and complications between the Medical Officers of the Board of Guardians and the Health Officers of the Town Board, a renewal of pretty quarrels between the two Boards is tolerably certain.

Contemptible as are the results of the enactment of clause 10 of the Public Health Bill, I cannot say that I am sorry to find that the time-servers and place-hunters who backed Mr. Stansfeld in his ill-judged measure, have received their recompense by his inspectors excluding them from office in so many parts of the country.

It must now be obvious, even to those who have opposed us in this controversy, that all the conditions of the office ought to have been carefully considered before legislation, and laid down fully and clearly in the Act, so that nothing should have been left to the opinion or the will, or, perhaps, the caprice of the minister, who evidently desired to secure for himself a most unconstitutional share of authority. The principle of subversions at the pleasure of the central authority is indefensible, and the centralising tendency of the Act ought to have condemned it.

Mr. Stansfeld's recent objections to the registration of still-births is another proof of his entire unfitness for the office of health minister. He is reported to have said, that his object was "not to get together a number of statistics for the information and guidance of the profession." Is he not aware that vital statistics are for the benefit, not of the profession, but of the nation? and that the profession has no interest whatever in their collection, except on public grounds. This remark of his shews that he is quite incapable of crediting medical men with any but selfish and sordid motives, in their promotion of great sanitary reforms. Looking at the course pursued by Government in these matters, and at their general behaviour to medical men, I think that, as a body, we ought to have declined to take office at all, until a reasonable system of medico-sanitary administration had been adopted.

If our profession enjoyed the coherence, and consequent power, which are manifested by other bodies, the Ministry would have been compelled to retract their blundering measure of last session, and their Health Officer appointment might have been settled on a satisfactory basis.

Let me, before concluding, express my admiration of your excellent address, on February 6th. Nothing could have been more to the purpose. Joyce's speech was also forcible, logical, and quite unanswerable; and I was particularly gratified by that of Dr. Barnes, of Ewell, who, I am sure, hit a blot in your association, in showing that hitherto it has not fairly represented the opinions of the provincial Poor-law surgeon.—Believe me, dear Dr. Rogers, yours faithfully,

H. W. RUMSEY.

THE PUBLIC HEALTH ACT.

DR. JOHN W. WATKIN, of Newton-le-Willows, has been elected by the Newton Improvement Commissioners, Medical Officer of Health for the urban district of Newton-in-Makerfield, Lancashire, at a salary of £50 *per annum*.

MR. T. CARTER has been appointed Medical Officer of Health to the Richmond Rural Sanitary Authority. Salary, £130. Area of district, 72,000 acres. Population, 9000.

MEDICAL NEWS.

MEDICAL VACANCIES.

The following vacancies are announced:—

- BOWNESS**, Grasmere, Kendal, Kirkby Lonsdale, and Windermere Urban Sanitary Districts, and Kendal, East Ward, Sedbergh, Ulverstone, and West Ward Rural Sanitary Districts, combined—Medical Officer of Health: £600 per annum. Applications to C. Gardner Thomson, Esq., Kendal.
- BRIDGNORTH URBAN SANITARY DISTRICT**—Medical Officer of Health: £50 per annum.
- BRIDGWATER UNION**, Somersetshire—Medical Officer and Public Vaccinator for District No. 6: £34 per annum and fees.
- BRISTOL HOSPITAL FOR SICK CHILDREN**—Resident House-Surgeon: £100 per annum, furnished rooms, coal, gas, and attendance.
- BROADMOOR CRIMINAL LUNATIC ASYLUM**—Assistant Medical Officer: £175 per annum, increasing to £200, furnished apartments, coal, gas, and attendance. Applications to the Medical Superintendent.
- BUCKINGHAMSHIRE GENERAL INFIRMARY**, Aylesbury—Resident Surgeon and Apothecary: £80 per annum, with £10 increase to £100, board, lodging, coals, and candles, in furnished apartments.
- BURNTISLAND**, Fifeshire—Parochial Medical Officer.
- CARMARTHEN INFIRMARY**—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.
- CHARING CROSS HOSPITAL**—Surgical Registrar.—Demonstrator of Anatomy.
- DRIFFIELD UNION**, Yorkshire—Medical Officer for the Wetwang District.
- DUDLEY DISPENSARY**—Resident Medical Officer: £105 per annum, residence and allowances.
- DUNDEE ROYAL INFIRMARY**—Resident Medical Assistant. Applications to D. Gordon Stewart, Esq.
- ELY RURAL SANITARY DISTRICT**—Medical Officer of Health: £150 per annum.
- FARRINGDON DISPENSARY**, Bartlett's Buildings—Resident Surgeon: £100 per annum, coal, gas, and unfurnished apartments. Applications to Samuel Green, Esq., 10, Swithin's Lane.
- HALIFAX RURAL SANITARY DISTRICT**, and Barkisland, Brighouse, Elland, Hipperholme, Luddenden Foot, Midgley, Northowram, Queensbury, Rastrick, Rishworth, Shelf, Southowram, Sowerby Bridge, Sowerby, Loyland, and Warley Urban Sanitary Districts, combined—Medical Officer of Health: £600 per annum. Applications to Charles Barstow, Esq., Halifax.
- HEMSWORTH RURAL SANITARY DISTRICT**—Medical Officer of Health: £100 per annum.
- KIDDERMINSTER URBAN SANITARY DISTRICT**—Medical Officer of Health: £50 per annum.
- LIMERICK DISTRICT LUNATIC ASYLUM**—Resident Medical Superintendent. Applications to the Under Secretary, Dublin Castle.
- LISNASKEA UNION**, co. Fermanagh—Medical Officer for the Maguiresbridge Dispensary District: £80 per annum, and fees.
- LIVERPOOL ROYAL INFIRMARY**—Medical Superintendent: £200 per annum; or, if wife should be appointed Matron, £260 per annum jointly, board, washing, etc. Applications to Edward Gibbon, Esq.
- MALTON UNION**, Yorkshire—Medical Officer for the Norton District: £70 per annum.—Public Vaccinator for the Norton and North Grimston Districts.
- METROPOLITAN ASYLUM DISTRICT FEVER INFIRMARY**, Homerton—Assistant Medical Officer. Applications to W. F. Jebb, Esq., 37, Norfolk Street.
- MORPETH URBAN SANITARY DISTRICT**—Medical Officer of Health: £30 per annum.
- NORTH DUBLIN UNION**—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the No. 2 North City Dispensary District: £125 per annum, and fees.
- NORTH LONDON CONSUMPTION HOSPITAL**—Physician.
- NOTTINGHAM DISPENSARY**—Assistant Resident Surgeon: £140 per annum, furnished apartments, coal, and gas.
- OUGHTERARD UNION**, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Oughterard Dispensary District: £100 per annum, and fees. Applications to J. E. Jackson, Esq., Killaguile.
- OWENS COLLEGE**, Manchester—Brackenbury Professorship of Practical Physiology and Histology. Applications to J. G. Greenwood, Esq.
- ST. LEONARD**, Shoreditch—Dispenser: £120 per annum.
- ST. PETER'S HOSPITAL FOR STONE**, etc.—House-Surgeon.
- SEAMEN'S HOSPITAL**, Greenwich—Visiting Physician. Applications to Kemball Cook, Esq., House-Governor and Secretary.
- SUSSEX COUNTY HOSPITAL**, Brighton—Physician.—Assistant-Physician.
- THOMASTOWN UNION**, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Knocktopher Dispensary District.
- WARE UNION**, Herts—Medical Officer for District No. 2: £50 per annum.
- WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL and GENERAL BATHING INSTITUTION**—Physician.
- WARRINGTON DISPENSARY and HATTON'S CHARITY**—Resident Surgeon.—Apothecary: £150 per annum, £12 for servant's wages, furnished residence, fuel, and lighting.
- WESTMINSTER HOSPITAL**—Assistant-Surgeon.
- WEST RIDING ASYLUM**, Wakefield—Clinical Assistant.
- WORCESTER AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION**—Medical Officer: £170 per annum, and residence. Applications to C. J. Richards, Esq., 5, Lansdowne Villas, Lansdowne Road, Worcester.
- YEovil UNION**—Medical Officer and Public Vaccinator for District No. 2: £53 per annum, and fees.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

SELLS—SCHOFIELD.—On April 16th, at St. Wolfran's, Grantham, by the Rev. Prebendary Maddison, Vicar, assisted by the Rev. R. Napier Sharpe, M.A., Vicar of St. Mary, Rochdale, and the Rev. H. Hutchinson, M.A., Charles J. Sells, Esq., second son of Thomas Jenner Sells, Esq., of Guildford, Surrey, to Emily, youngest daughter of Jno. Schofield, Esq., of Beaconfied, Grantham, Lincolnshire.

OPERATION DAYS AT THE HOSPITALS.

- MONDAY** Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
- TUESDAY** Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
- WEDNESDAY** St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
- THURSDAY** St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
- FRIDAY** Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
- SATURDAY** St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

- MONDAY**.—Medical Society of London, 8 P.M. Dr. Boyd, "Observations on Still-born Children"; Dr. Symes Thompson, "Cases of Perityphlitis"; Mr. C. F. Maunder, "Two Cases of Dislocation and Fracture of the Humerus."
- TUESDAY**.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Elam, "On some results of Treatment in Affections of the Nervous System"; Dr. H. Sutherland, "On the Histology of the Blood of the Insane"; Dr. Boyd, "On Præternatural Cavities in the Brain of the Sane and the Insane."
- FRIDAY**.—Clinical Society of London, 8.30 P.M. Mr. Kesteven, "Case of Cancer of the Breast treated by Caustics and Incisions"; Dr. Greenhow, "Case of Acute Muscular Atrophy"; Dr. Tilbury Fox (for Dr. Tritsche), "Two unusual Cases of Elephantiasis Arabum?"; Dr. Thorowgood, "Two Cases of Chronic Dysentery successfully treated by Ipecacuanha."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, April 12th; The Manchester Guardian, April 16th; The Aberdeen Daily Free Press, April 12th; The Bath Express, March 12th; The Birmingham Daily Post, April 14th; The Western Mercury and Somersetshire Herald; The Shepton Mallet Journal; The Hull Packet; The Daily Bristol Times and Mirror; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Robert Barnes, London; Dr. D. Ferrier, London; Dr. Morell Mackenzie, London; Mr. W. R. Smith, Huddersfield; Dr. Skinner, Liverpool; Dr. George Johnson, London; Dr. H. B. Dow, London; Mr. Lawson Tait, Birmingham; Our Paris Correspondent; Dr. Graily Hewitt, London; Mr. Stocks, Salford; The Secretary of the Pathological Society; Mr. Cuffe, Horncastle; Dr. W. A. Hollis, London; Health Officer; Dr. Motherell, Castleberg; Mr. J. Caskey, Stourbridge; Mr. R. D. Byers, Milford Haven; Dr. Handfield Jones, London; Our Dublin Correspondent; J. H. W.; Mr. T. J. Dyke, Merthyr Tydfil; Dr. W. Hinds, Birmingham; Mr. W. M. Campbell, Liverpool; Dr. W. H. Short, Walsham-le-Willows; Mr. Pranker, Langport; Dr. J. W. Moore, Dublin; Mr. G. S. Elliston, Ipswich; Mr. A. Godrich, London; Dr. J. H. Martin, Portsmouth; The Secretary of the Clinical Society; Dr. De la Cour, London; Dr. Tyacke, Chichester; An Associate; Dr. W. Hinds, Birmingham; Dr. R. Tiffen, Wigton; Justus; The Secretary of the Epidemiological Society; Mr. L. W. Marshall, Nottingham; A Member; Mr. D. S. Skinner, Lyme Regis; Mr. Sullivan, Dublin; Dr. Ransome, Manchester; Inquirer; Subscriber (Nottingham); Mr. T. Humphreys, London; Mr. H. Trestrail, Aldershot; Mr. S. Coupland, London; Dr. T. Hughlings Jackson, London; Mr. A. Warner, London; Mr. Jackson, Plymouth; The Secretary of the Royal Medical and Chirurgical Society; Dr. F. Griffiths, Sheffield; Mr. J. Marsh, Newark-on-Trent; Mr. Alfred Haviland, London; Dr. H. R. Wright, Knaresborough; Mr. Aldersey, Havant; Dr. Cobbold, London; Dr. C. J. B. Williams, London; Dr. J. E. Pollock, London; Dr. Burney Yeo, London; Dr. John Ogle, London; Dr. Crisp, London; Dr. Fry, Moate; Dr. Ellis, Crowle; Mr. V. Jackson, Wolverhampton; An Associate and a Life Teetotaler; Mrs. Crosse, London; Dr. Humphry, Cambridge; Dr. Steele, Liverpool, etc.

LUMLEY LECTURES

ON

THE CONVULSIVE DISEASES OF WOMEN.

*Delivered at the Royal College of Physicians.*BY ROBERT BARNES, M.D. LOND.,
Obstetric Physician to St. Thomas's Hospital.

LECTURE III.—PART I.

Convulsive Diseases in the Non-pregnant State.—The Ovaries are in the Ascendant.—Menstruation compared with Pregnancy.—Increased Nervous Tension.—Ovarian Epilepsy.—Influence of Dysmenorrhœa, of Pain, of Blood-degradation, of Inherited Diathesis.—Neuralgia.—Hysteria Presupposes an Antecedent Diathesis.—Influence of the Mind, of Habit, and of Emotion.—Climacteric Convulsive Diseases.—Epilepsy.—Influence of Phosphatic and Uric Acid Accumulation, of Alcoholism.—The Psychological Phenomena.—The Treatment of Convulsive Diseases: Four Cardinal Principles.—The Induction of Labour Discussed.—Induction of Anæsthesia.—Bleeding.—Transfusion.

MR. PRESIDENT AND GENTLEMEN,—We have dwelt in some detail upon the convulsive diseases induced by pregnancy, labour, and the puerperal state, because these supply the most striking types, and illustrate the most forcibly the subject-matter of our theme. The types being determined, we shall be able to deal more rapidly with the convulsive diseases as they occur apart from the conditions of pregnancy.

The nervous system is still dominated by the sexual system. During pregnancy, the seat of the highest vascular activity is the uterus; the ovaries and breasts are greatly, though not absolutely, in abeyance. During lactation, the breasts exert, or should exert, the supremacy; but, as we have seen, the ovaries are constantly striving to regain the predominance of which they have been temporarily deprived.

When lactation is over, the reign of the ovaries is undisputed. And this is especially true in women who have never been pregnant. The uterus, indeed, responds to the periodical work of ovulation, undergoing certain remarkable changes; and the breasts feel the influence of the stimulus; but the manner in which they are affected is entirely sympathetic, or secondary upon the lead of the ovaries. Still, we may trace, very plainly, in the changes undergone during menstruation, a cyclical succession of action analogous to what is observed in the history of pregnancy. Ovulation, or ootocia, the work of the ovaries, is the first in order; menstruation, or the discharge of blood from the uterus, is the second phenomenon; turgescence of the breasts is the third. Everything is prepared. Should the male element arrive, there is a mature ovum ready for impregnation; there is an uterus gorged with blood, with a mucous membrane developed into a decidua, to furnish a nidus for the ovum; there are the breasts turgid, and ready to secrete milk, should the occasion arise. But for want of the necessary, or "fortuitous concurrence of atoms," the ovum decays, and all the organs subside into quiescence. This cyclical process, then, bears a close resemblance to pregnancy. Menstruation may be likened, by a not very violent figure of speech, to an abortion. It is a missed, or disappointed pregnancy. Such as it is, it involves the same changes in the vascular and nervous systems, up to a certain point, as does pregnancy itself. The rapid afflux or diversion of blood to the uterus, and the structural change set up in it, determined by ovulation, imply a correlative activity of the spinal cord. There is the increased nervous tension, provided for a specific purpose; and, in most cases, probably, this tension is even greater than the mere transitory work a missed pregnancy requires. There is an excess, often a great excess, of nervous tension, provided in anticipation of the possible consummation. Hence, the intense excitement of the whole organism, the turbulence of the nervous phenomena, often witnessed at the menstrual epochs.

Such phenomena, then, as we have seen to take place during pregnancy, we may expect to find reproduced during menstruation. And this deduction is amply justified by clinical experience. The chief point of difference lies in the fact that menstruation does not occasion those marked changes in the constitution of the blood which play so important a part in the history of pregnancy. We may, then, expect to find, in connexion with pregnancy, the more purely reflex nervous phenomena, *minus* especially the eclampsia, which is so intimately dependent upon uræmia.

Of these, epilepsy is the first I will recall to our attention. It is not necessary to dwell long upon this form of convulsion. Its frequent evocation by menstruation is familiarly known. Its first appearance

has been too often associated with the first menstruation, or with the early struggles of the ovary to carry out its function, to permit of any doubt as to the influence at work. In sound health, the generative organs being well formed, the function of menstruation is performed without difficulty; there is a well-balanced relation between nervous energy and the work to be done. There is no commotion. But introduce any one of several conditions, and the nice balance is destroyed; some morbid phenomena will almost certainly appear. It may with truth be asserted that, even in the healthiest women, there is evidence of exalted nervous action under the influence of menstruation. In most instances, the struggling nervous power is confined within physiological limits, or is controlled by the will. But suppose—and the case is a frequent one—the importation of a disturbing element in the form of struma, or of some subtle modification of structure derived from ancestral peculiarity, and the nervous system will react in abnormal degree and manner under the physiological stimulus.

Or take the case of obstructed, or morbid menstruation. Here there will be excess of irritation, importation of the element of pain, both together tending to exhaust the nervous energy, or to scatter it in abnormal directions.

Under either of these conditions, a fit of epilepsy, or of hysteria, according to the constitution of the patient, may explode. If the organic predisposition be strong, such a fit may break out under the simple irritation proceeding from the ovaries, and their appendage, the uterus. That is, it does not appear to be necessary to postulate an attendant unhealthy condition of the blood, although such condition is so frequently present at the onset of menstruation.

But there are many cases in which the due manifestation or action of nerve-force is not conspicuously disturbed under the first trial. There is more or less resisting power, which we may suppose to depend upon a less decided organic defect or taint of the nervous centres. Hence, the latent proclivity to nervous aberration will only be brought out under repeated irritation. And the repeated irritation, arising from periodical pain and obstructed function, hardly ever fails to induce appreciable depravation of the blood. There can be no doubt that this new factor operates most powerfully in provoking the outburst of nervous disorder. Probably the depraved blood, partly by its negative qualities, partly by its positive qualities, so modifies the nutrition of the nerve-substance that a morbid diathesis may be created, as in the case of syphilis; or developed, as in the case of latent hereditary taint. Certain it is, that in many cases blood-disorder comes in to play an important part in the production of epilepsy and hysteria. Where the original proclivity to nervous disorder is not so great that the nervous centres yield at once, the assailing power, the ovario-uterine irritation, takes the citadel by slower approaches, gradually starving, exhausting, and degrading the nervous centres. It carries on the assault by the twofold operation of sapping the resisting power and of continually renewing the attack. Under these combined influences, nervous structure, originally but slightly affected, will in the end break down. Of this the examples supplied by the history of dysmenorrhœa are plentiful. Dysmenorrhœa commonly includes two factors. There is first, in many instances, difficulty in the performance of the proper ovarian function, mal-ovulation, or, to coin a more expressive term, *dysootocia*. This is a prime cause of pain. The other factor is the disturbance in the secretion and excretion of the menstrual blood, the proper function of the uterus. Impeded secretion and excretion almost infallibly entail disorder in the quantity of the discharge. Menorrhagia is a frequent attendant upon dysmenorrhœa; and in many other cases the flow is deficient. But there is another condition which has attracted less attention, but which is not less real. Dysmenorrhœa, in a large proportion of cases, implies retention of some portion of the secreted blood in the cavity of the uterus. This adds uterine pain to ovarian pain, doubling the force of the irritation, and introducing a new element of blood-impairment. Retained blood is liable to undergo a degree of decomposition, and hence to be a source of toxæmia. Thus we may have, and very frequently do have, as the consequence of dysmenorrhœa, a double degradation of blood going on, through hæmorrhage or loss, on the one hand, and through empoisonment by absorption of foul matter, on the other.

Todd said no nervous disorder is more certainly due to blood-disorder than hysteria; and Briquet says the influence of defective hæmatisation over the nervous susceptibility is nowhere more evident than in the action which chlorosis exerts over the economy, and in the predisposition to hysteria which results from this action. Out of 430 hysterical patients, he found 152 in whom chlorosis existed in a marked manner before the appearance of hysteria. This is quite true, so long as we regard the blood-disorder as simply a provoking cause.

The like explanation or statement will apply with equal point to neuralgia, which, in the large majority of cases in women, is produced

dysmenorrhœa and other ovario-uterine disorders attended by pain and exhausting discharges, which induce degradation of the blood, and therefore morbid nutrition of the nervous centres, and increased susceptibility to external impressions.

I do not profess in this place to discuss the various theories that have been advanced as to the nature or causes of hysteria. I shall content myself with expressing the opinion that the underlying essential cause is an inherent organic condition, constituting what may be called the hysterical constitution, just as we have an epileptic constitution. It may be, as some have conjectured, that there is a peculiar nervous temperament out of which may be developed epilepsy, hysteria, chorea, or insanity; the particular form which the nervous disorder may assume being determined by accidental circumstances. Of this I am not convinced. I see epileptics who are quite free from hysteria, and *vice versâ*. What we are most concerned with is, to know that, howsoever obscure the intimate physical condition upon which these nervous disorders depend, these disorders may never become manifest; in short, they may have no other than a potential existence, unless certain new conditions be introduced. These new or adventitious conditions are not necessarily inherent in the system. If they be warded off, or removed when they have effected a footing, the nervous disorders are averted, or may be cured. This means that we must direct at least a large part of our remedial forces, not against the nervous disorder, the hysteria, or the neuralgia, for example, as if it were a self-supporting morbid entity, but against the accidental and removable, exciting or maintaining, causes. Where we cannot discover such causes, or where we fail to dislodge them, we may be reduced to treat the epilepsy, hysteria, or neuralgia as a disease; treating it, in fact, as we do syphilis, by means of so-called specifics.

It is not much to the purpose to tell us, as some physicians who neglect the study of the diseases of the female generative organs do, that hysteria, for example, is a disease of the brain, and is not dependent upon disease of the ovaries or uterus. So long as they refuse to apply to these organs similar methods of precise observation to those which modern science applies to the study of the other organs, they cannot be credited with the knowledge necessary to give authority to their assertion. They may treat the brain; they may strive to restore the blood to soundness, to bring the digestive organs into order: all this they may do, with about as much success as is achieved in keeping a leaky boat afloat by baling out the water, taking no heed of the leak. It is like the labour of the Danaïds.

If it be true that dysmenorrhœa, menorrhagia, leucorrhœa, and other ovario-uterine disorders, lead to blood-disorder, which often precedes the outbreak of convulsive and other nervous diseases, it follows logically that we ought to begin by removing, if we can, these debilitating and irritating causes. By doing this, we may often succeed in restoring the nervous system to the *status quo ante morbum*; thus proving the correctness of the observation that the utero-ovarian diseases produced the nervous disorders.

But, whilst I dispute the doctrine that hysteria is an affection of the brain or of the mind, it is impossible to deny that the mind has a great influence, if not in the initiation of the disease, at any rate in provoking attacks and in aggravating them. It is, however, a grievous error to regard this influence as more than subordinate and secondary. It is rarely until the nervous system has been broken down by illness of some duration, that we see those apparently perverse and perplexing mental aberrations which often make hysteria the puzzle and opprobrium of medicine.

In the great majority of instances, at the beginning, the subject struggles resolutely against the hysteric explosion. But by and by, when, through continued assaults, the resisting power has become impaired, the mind is also weakened, and then it may be said to go over to the enemy, and to help in the outbreak of hysteric attacks. This reciprocal influence—this action in a vicious circle, or alternation of the brain and spinal cord—is just what we have seen to hold good in chorea, in epilepsy, in vomiting, and, in fact, in all convulsive diseases. Those most distressing cases where the erotic element becomes a part of the hysterical fit, are no real exceptions. The chief difference between these cases and those of ordinary hysteria lies in the greater gravity of the original nervous diathesis. Their close connexion with insanity has often been noticed. Not a few of these cases culminate in mania; and in all of them there is a substratum of mental disease which, howsoever anxiously we may try to ignore it, will probably declare itself sooner or later.

In hysteria, the influence of habit and of emotion is pretty sure to make itself felt after a certain time. This influence it is which generally accounts for the departure from periodicity which is often observed when hysteria, epilepsy, and neuralgia have become chronic. When the blood has become degraded and the nervous centres weakened,

under the protracted operation of the morbid factors, the attack is brought on by very much slighter causes than were necessary at the beginning. Hence it is that, after a while, a slight emotion, even moderate fatigue, gastric disorder, may excite an attack at almost any moment. But still the menstrual epoch is the period of greatest susceptibility. And I must here observe that in some cases, where periodicity appears to be the most utterly lost, the influence of ovulation is still the immediate exciting cause. It must be remembered that ovulation is a distinct function from that of menstruation. Menstruation is the outward indication of the ovarian process; but it is not a necessary consequence. It is not always coincident in time. It may not take place at all. The ovarian nîsus may begin a week or more before the menstrual flow; and it is the ovarian nîsus which is the chief cause of the central nervous erethism, and which at the same time supplies the centripetal irritation. This is no *petitio principii* invoked to bring apparent exceptions within a general law. There are abundant facts to prove this proposition, familiar enough to those who observe closely the phenomena of the ovario-uterine functions.

The periodical action of the ovarian nîsus is frequently observed in the arousing or exacerbation of mania, delusions, and other insane phenomena, in the inmates of lunatic asylums.

Climacteric Convulsive Diseases.—At the "turn of life", when the ovario-uterine functions are ceasing, the nervous system, it is well known, exhibits frequent and various perturbations. Thus we find giddiness, vertigo, actual syncope, a pseudo-paralysis marked by numbness and comparative loss of power of one side, impairment of memory, mental irritability, restlessness, culminating in some cases, especially where the nervous diathesis exists, in epilepsy, and even in insanity. Probably few women pass through this epoch without some nervous perturbation. It is a stage of transition and of trial for all. Vertigo, some degree of loss of memory, some disposition to utter *mal-à-propos*, to use the wrong syllable or word, some sense of distrust in the power of self-control, are extremely common. These perturbations may persist for months, even for years, before the balance is restored. During a great part at least of this transition period, the ovarian influence may be traced. There is more or less periodicity in the nervous disorder; and when the uterus and ovaries have undergone complete senile involution or atrophy, when all menstrual discharges have ceased, these disorders commonly subside or change their character.

The climacteric perturbation is often even more severe and more marked than what is observed at any previous period of life. Thus many women may have passed through the trials of puberty and of child-bearing without serious nervous disorder, and will break down at the menopause. Often, no doubt, this is the climax, the last ounce of a long-troubled sexual life. Exhausting labours, consequent uterine disease, the cares incident to the rearing of a family, tell at last, so that when the irregular and futile efforts which mark the close of sexual life are made, the nerve-force, missing its proper destination, breaks out in various aberrations. These nervous aberrations commonly entail irregular deviations from the proper order of the blood-distribution, as well as alterations in the quality of the blood. That menstruation exerts a depurating action on the blood, is an old idea. I believe it is a correct one. At any rate, when there is no longer a normal attraction or afflux of blood to the pelvic organs, the subject becomes liable to irregular determinations of blood to the head.

I have already said that I cannot here undertake to enter upon a critical discussion of the theories of the pathogeny of convulsion. But I may venture to repeat that clinical observation of the phases and conditions of climacteric epilepsy, or those of puerperal eclampsia, lends little support to the doctrine that it is the result of anæmia. On the contrary, in many cases epileptic fits occur in florid, robust women, who make blood fast, and that just at the times when the circulation may be said to be in the state of highest tension—that is, under the excitement of a menstrual nîsus. In a certain proportion of these cases actual extravasation of blood from the cerebral vessels—apoplexy—takes place. In another group of cases, it is true, the evidence of plethora is wanting. The vessels may be over-full, but the blood is watery, deficient in red corpuscles. In these cases it may, with more semblance of exactness, be said that the condition of epilepsy is anæmia. In a third group, the blood may or may not be deficient in red globules, but is obviously charged with noxious matter. About the climacteric the aberrant nervous distribution is attended by disorder of digestion, by disordered or obstructed secretion and excretion. The unsteady brain favours the general disposition to physical inertia; want of exercise increases the sluggishness of the great depurating organs. The liver, the kidneys, the intestinal canal, the lungs, the skin acting imperfectly, allow the products of tissue-waste and of the mal-assimilated excess of food to accumulate in the circulation. This is marked by the urine becoming loaded with phosphates, and sometimes with

uric acid. In some cases, which I have had special opportunities of watching closely, the outbreak of a fit of convulsion had been preceded by more than usual accumulation of phosphatic matter and of uric acid. It is interesting to remember that uric acid crystals are not seldom found in the urine and in the blood in the albuminuria of pregnancy. I am not aware of any distinct evidence in support of the conjecture that uric acid, as such, is the exciting cause of convulsion; and I am not prepared to accept the doctrine of Frerichs, that the cause is ammonia resulting from the decomposition of urea. I venture to submit—pretending to no recondite skill in humoral chemistry—that, until more precise correlative chemical and clinical investigations have been made, it is wiser to be content with the general conclusion that the poisonous convulsion-provoking element cannot be specified; but that it is to be found amongst the products that ought to be excreted through the agency of the lungs and glandular system.

In rather a large proportion of cases, including not a few in which the climacteric has not been reached, this loading of the urine with phosphates and uric acid is greatly occasioned, or increased, by the habit of resorting to stimulants. In these cases, vomiting is a frequent complication; and, in subjects not specially prone to epilepsy, constitutes the chief nervous disorder. Occasionally, albuminuria even is caused by the combination of alcoholism and phosphatic accumulation, and it may persist so long as to give ground for concluding that it depends upon permanent Bright's disease; but I have seen it vanish rapidly when alcohol was cut off, and when the glandular system was set to work, the nervous symptoms subsiding simultaneously.

In this class of cases may be easily traced the influence of the mind, of the emotions, in the evolution of convulsion; or perhaps it might be more correct in some cases to say that the poisoned blood takes effect first upon the brain, inducing disorder of the intellect, and that thus it becomes a more ready irritant of the spinal cord. In many cases of hysteria and of epilepsy the fit is preceded for several hours, for a day or more, by a strange alteration in the mind. The patient exhibits unwonted excitement, passion, suspicion; is irrepressibly loquacious, perhaps violent in action; complains of intense headache; she is, in fact, for the time beside herself. It is quite certain that perception is disordered, and the faculty of comparison suspended. The apparent untruthfulness of patients of this class is often a source of pain to those about them. In some cases, this untruthfulness is real. There is no saying more questionable than the toper's maxim, "In vino veritas". Alcohol is too often the enemy of truth; and this is never more clearly seen than in the conduct of those who have become the slaves of drink. But I refer to this subject for the purpose of offering a different explanation, which I am sure applies to many cases: the untruthfulness is apparent. There is untruth in reference to facts; but there may be no untruth if reference be made to the patient's own impressions. Under the mental perturbation of an impending fit—a state compounded of vertigo and delirium—the senses are subject to illusions, perception is distorted, and the false impressions are often crystallised as delusions, and so indelibly engraven on the memory. Something similar, I am certain, often occurs in persons whose faculties are impaired under the combined influence of nervous disease and the abuse of stimulants. I have seen persons who, on recovering from the disease and the associated alcoholism, have no longer shown any tendency to falsehood.

HYDRATE OF CHLORAL IN TETANUS.—Dr. Coryllos of Patras relates, in the *Allgemeine Wiener Med. Zeitung* for January 14th, the case of a lady aged 70, who, on August 27th, 1872, wounded the sole of her right foot with an iron nail. The injury caused her little inconvenience until September 12th, when spasms of the limb set in, accompanied with trismus. The next day, Dr. Coryllos found the patient complaining of painful tetanic spasms of the right leg, affecting chiefly the gastrocnemius, and of severe pain along the course of the crural nerve. The puncture made by the nail was visible; but there was no swelling, and scarcely any discharge from the wound. She could not open her mouth easily, and had frequent difficulty in swallowing. The cervical muscles were contracted; but those of the remainder of the body were not affected. She was ordered to take every two hours a tablespoonful of a mixture containing a drachm of chloral in two ounces of a mixture of equal parts of distilled water and orange syrup. The affected limb was rubbed three times a day with mercurial ointment and extract of belladonna. Two days later, as she remained in the same state, the dose of chloral was doubled; and the next day an eighth of a grain of acetate of morphia was given every two hours, alternately with the chloral. From this time she improved, and was well a month after being first seen. The morphia was given for four days only, four grains in all being used. The chloral was continued for fourteen days, in which time she took eighteen drachms.

CLINICAL LECTURES ON THE MENTAL AND CEREBRAL DISEASES.

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IV.—CANCER OF THE BRAIN.—(Concluded.)

ARE there any symptoms, from the presence or combination of which, cancer of the brain may be inferred to exist? If you dip into the literature of the subject, you will find contradictory answers to that question. Andral, who analysed forty-three cases, observed by himself or others, says, that there are no characteristic symptoms at all, whereas Guislain, who made a careful study of organic lesions of the encephalon, maintains, that special pathognomonic signs may be detected in every case. MM. Sauze and Aubanel suggest that cerebral cancer is often confounded with general paralysis, while Dr. P. Berthier writes an able monograph, *De la Folie Cancéreuse*. Without acknowledging any such absurdity as cancerous insanity—we might as well speak of tubercular jaundice, or fibroid leucorrhœa—I am inclined to believe that, with every heterologous growth in the brain, we have certain definite symptoms, in a certain definite succession. I admit that, in a certain number of cases, these symptoms are not sufficiently pronounced and isolated from other symptoms to justify a differential diagnosis during life; but I feel satisfied that, in a considerable proportion of instances, they are adequate to conduct us to a trustworthy conclusion, without any aid from the confessions of the *post mortem* room. When a patient, of cancerous dyscrasia, and with an open sore, say on the breast, becomes depressed and demented, slowly loses power on one side, complains of acute intracranial pain, and suffers from convulsive attacks, we have no hesitation in asserting, that a cancerous deposit has taken place in the brain. Cancer of the brain can, therefore, be diagnosed during life. The question is, can its existence be ascertained without the clue afforded by the open sore? Is there anything in the symptoms which points to cancer more directly than to other coarse lesions of the supreme nerve centre? In considering that question, it is, I think, necessary to divide all the symptoms which have been observed and described in cases of cerebral cancer into two great groups: the necessary and the contingent; the universal and the particular. The position of the tumour in the brain-mass, its rate of increase, the degree of irritation which it excites, or of softening which it induces, imply, of course, an infinite variety of what may be termed secondary or accidental symptoms, which will vary in every individual case. But the nature of the tumour, the cachexia in which it originates, the intracranial pressure caused by its growth, will be expressed in primary and essential symptoms, which will be identical in all cases. Putting aside the contingent, let us apply ourselves, for a few minutes, to the necessary symptoms. And first, as to the mental symptoms. You know that the cancerous cachexia has a peculiar mental, as well as bodily complexion associated with it: the emotions are dark and sallow, as well as the skin; a captious temper and a despondent tone of feeling are indeed as indicative of that change in the blood, or in nutrition, in which the cachexia consists, as any of the other somewhat vague signs by which it is supposed to manifest itself. When insanity occurs in persons of strongly cancerous cachexia, it is almost invariably of the melancholic type; and when the cancerous cachexia is strongly developed in an already insane person, melancholia is most frequently superinduced. Some of you will be able to recall to mind, as examples of these statements, Selina H., lately in Ward 25, who, in the course of a mammary cancer, gradually passed from a native sombreness of disposition to abject misery, leading to repeated suicidal attempts, and shaping itself into delusions, such as that her tongue was removed, so that she could never speak again; and Ralph W., who died in 18 Ward, and who, from being a cheerful, excitable old man, became wretched, and querulous and forlorn, when attacked by malignant disease of the pancreas. In cancerous marasmus, when anæmia and emaciation, and exhaustion, add their evil influence to that of the cachexia, the despondency proper to the cachexia is intensified, and is accompanied by a sense of mental debility that ultimately converts it into a settled despair. Few scenes more harrowing can, I think, be witnessed, than the death-bed of a patient who is consciously sinking under malignant disease, and who is writhing under physical and mental anguish.

In cancer of the brain, however, such a depth of despondency is rarely reached, and that is, first, because cancerous marasmus is not often attained, the tumour killing by its position before exhaustion is induced; and secondly, because the feelings are deadened and obliterated by the progress of the tumour. A moderate degree of melancholia, due to the cachectic state, and to interference with the cerebral blood-supply by the presence of the tumour of the cranium, is the first necessary mental symptom of cancer of the brain. That symptom has been present in the most marked manner in the four cases of cancer of the brain which have come under my observation. It is casually noted in many cases which I find recorded, and where it is not referred to it is fair to deduce, from the meagreness of the records, that it, like many other phenomena, had been overlooked. When a patient is seeking advice for what is presumed to be a bodily ailment, he will not, unless questioned, afford any information as to his mental experience, and, least of all, will he obtrude on notice a moderate degree of depression of spirits, which he does not himself regard as morbid, and perhaps connects with some real circumstance or event. Hence, moderate depression in cancer of the brain may well have escaped detection in many cases in which it existed.

The second reason which I gave for the moderate degree of the melancholia—which I have told you I look upon as the first necessary symptom of cancer of the brain—was because the feelings become blunted and obliterated as the malady advances. That statement contains the key to the second necessary or universal symptom, which is progressive mental weakness. I need not tell you that the effect of great pressure on the brain, as by depression of bone or lodgment of a large foreign body, is total suspension of its functions and unconsciousness; nor need I remind you that that power of subsequent accommodation, which the brain manifests when the pressure exerted upon it is slight in amount, is only displayed to a limited extent. A material amount of pressure cannot be exerted upon the brain without interfering with its action, and a steadily augmenting pressure will inevitably entail a steadily diminishing freedom of mental power. The brain must have room in which to work; and if that room be circumscribed, so will be its performances. We see this in hypertrophy of the brain, in apoplexy, in arachnoid cysts—and we may see it, if we look for it, in cancer of the brain. Whenever the magnitude of the tumour is such as to cause displacement or pressure, the mind becomes slow and laborious in action, like a heart beating in a water-logged pericardium. When its dimensions expand, the mind is more and more crippled and confined; memory fails, judgment is dethroned; attention can be fixed only by a grievous effort. At last, when the conquering tumour still further asserts itself, the mind is abolished, deep coma and then death ensue.

The case which formed the text of this lecture clearly exemplifies the presence of progressive mental weakness as causes of the cancer, and so did the three other cases which I have seen. Progressive fatuity I find also hinted at, or expressly designated, in many recorded cases of cancer of the brain. In all the ten cases of this disease, which Dr. John W. Ogle has reported with his usual faithful minuteness in the *Journal of Mental Science*, there were distinct evidences of failure of mental power. It was therefore with astonishment that at the end of his valuable observations I came upon these words, "Neither was there (in any case) during life (?) anything of the nature of mental imbecility, or any symptom of the various phases or forms of insanity." It seems to me that in every case there was indubitable mental imbecility, or rather progressive mental weakness, which is the second necessary and universal mental symptom of cancer of the brain, and which, with a moderate degree of melancholia, is the only necessary and universal mental symptom upon which I shall now insist.

Next, as to the necessary and universal bodily symptoms. Most important of these is pain in the head, severe and persistent, and confined to one side or region. This pain, although always present, is liable to exacerbations at irregular intervals, when it sometimes becomes excruciating, and compels moans and cries. Commencing with the first deposit of cancer, it continues with its growth, until sentiency is impaired and destroyed by the incursion of paralysis or coma. As long as it remains it is aggravated by strenuous bodily or mental exercise, by excess in wine, or by startling impressions upon the senses. How this pain is produced, we can only speculate. We have been taught that the brain-substance is absolutely insensible; and more recently we have been assured by Sappey that there are sensitive *nervi nervorum*. It may be by irritation of these *nervi nervorum*, or of the central expansions of the afferent nerves in the brain-mass, which is not perhaps so utterly insensitive as has been asserted, or by reference from a displaced or compressed centre of sensibility, that the pain of cerebral cancer is produced. But, however that may be, its existence is invariable, and its character almost unique.

But besides pain, there are other necessary bodily symptoms; and of

these, slowly gravescent paralysis is the most significant. The first establishment of the paralysis is often sudden—after an attack of convulsions, or a brief period of unconsciousness—and is probably due to some movement of the tumour, to some extravasation of blood, or to some yielding of brain-tissue; but when once inaugurated, it proceeds onwards, compromising more and more the strength of the side which it affects, for it is always hemiplegic in character. In this it is unlike the paralysis due to clot, which is generally mitigated for a time after the formation of the clot when it is contracting, or is at least stationary. Also, it is unlike the paralysis of clot in this, that without any fresh seizure, slowly, not suddenly, it takes possession, in a mild degree, of the side of the body opposite to that on which it was first manifested. As the tumour swells, it compresses not merely that hemisphere in which it is located, but that upon which it has no hold, and thus secondarily impairs its ingredient power.

The third necessary bodily symptom to which we shall advert, is muscular tremor or convulsion at some stage of the malady. Either at its outset, or when its advance is hastened by the rupture of a vessel, or when the motor centres are mechanically disturbed, or when the tumour becomes an eccentric irritation to these motor centres, a state of muscular agitation, confined to a few short convulsions, or spread over continued tremblings, coarser than those of delirium tremens, and lasting for days or even weeks, betokens that the lower motor centres are in some way involved.

The fourth necessary bodily symptom, never absent at some part of the progress of the disease, is perversion or enfeeblement of one or more of the special senses. The sight becomes dim and impaired, or is altogether lost, most commonly in one eye; or is perverted so that illusions or hallucinations are seen; or hearing becomes dull, or strange noises in the ears are heard, or intolerable tastes and smells assail the palate and nose, or distressing itchings torment some part of the skin. Diverse in character though these experiences are, they have this in common, that a disturbance of sensation is the essential constituent in each, and that that disturbance is referable to a centric change; and such a disturbance is always encountered when the centric change is due to cancer. Reflection will convince you that it is impossible for a tumour to grow to any size within the skull without interfering with the origins of the efferent nerves, directly or indirectly, by drawing them into its fatal meshes, by cutting off their nutrient supplies, by kindling neuritis, or occasioning atrophy; and experience will confirm the conclusion to which reflection carries you. In all tumours of the brain modifications of sensation occur, and, *à fortiori*, in cancerous tumours of the brain. In every case, by patient investigation, they may, I believe, be brought to light. But exploring the central nervous system requires as much perseverance, and toil, and perspicacity, as exploring Central Africa; so it may well be that such symptoms have occasionally eluded observation.

The fifth and last necessary and universal bodily symptom in cancer of the brain is the cancerous cachexia, or that morbid constitutional state of the blood and tissues in which malignant growths occur, and in which several outward and recognisable manifestations are usually not wanting. The dark muddy complexion, wasted body, feeble muscles, morose manner, and gloomy countenance of the victim of any serious organic disease, at once create a suspicion that it is of malignant nature, and are sometimes so characteristic as to convert a suspicion into a certainty. When cancer of the brain is secondary, these outward signs are for the most part markedly present; and even when it is primary, they are, I should say, invariably exhibited to such an extent as to insure their recognition by a keen and practised eye.

Having completed the enumeration of the necessary and universal symptoms of cancer of the brain, let us recapitulate them. Given a case, in which you have the following symptoms: 1. Depression of spirits; 2. Progressive mental weakness; 3. Severe pain in one region of the head; 4. Slowly gravescent hemiplegic paralysis; 5. Epileptiform seizures; 6. Failure of one or more of the senses; 7. The cancerous cachexia—what is the disease? Only one reply can be given to that question—namely, cancer of the brain. The first six symptoms point unmistakably to tumour of the brain, and the seventh points to the nature of the tumour. I allow, however, that the difficulty lies just in the seventh symptom. There ought not to be insuperable difficulty in any case of cerebral cancer in determining that there is a tumour of the brain, but there may be an almost insurmountable difficulty in deciding that it is cancerous. To relieve us from this difficulty, we must look to our pathologists for earlier and more precise indications of the cancerous cachexia in the blood or secretions, or in the outward configuration. When these are obtained, we shall have less hesitation in diagnosing cancer of the brain, and in pronouncing when an intercranial growth, proved to exist, is not tubercular, or syphilitic, or fibro-plastic, or gliomatous, but cancerous. Pray remember, however, we are not

left without aids to diagnosis beyond these which I have yet mentioned. The case which I have supposed is of the worst description as regards diagnosis. In actual practice you will find not merely the seven cardinal symptoms upon which we have dwelt so long, but other minor or secondary symptoms, which, though subject to great variations, often furnish valuable corroborative testimony. These I can only name. They include delusions of every dye—aphasia, altered affections, sudden impulses, morbid appetites, ptosis, muscular twitchings or rigidity, staggering gait, glandular enlargements, vomiting, interrupted circulation, and menstrual irregularities. These, or some of these, may complicate, but more often simplify, diagnosis, which is again facilitated by the absence of other symptoms distinctive of other organic diseases, and by considerations as to the age, history, and habits of the person affected. To show you how contingent are interlaced with necessary symptoms, I shall briefly describe a case to you. Maria S., a widow, 54 years of age, was received into this asylum on the 4th May, 1869. She had then been out of health for some years, never having altogether shaken off the grief occasioned by her husband's death, until the close of 1868, when she became silly and childish, and suffered from a fit, and horrible pains in her head. In the spring following, she had several fits and attacks of transient excitement. She also, by imperceptible degrees, lost the use of her left side; and in consequence of this, as she persisted in moving about, suffered several falls. When brought here, she was a pale, sallow, anæmic-looking woman—so thin, as to be described in the case-book as a living skeleton. She was in a fatuous state. Though garrulous and anxious to talk, especially about her own illness, no reliable information could be got from her, as her memory was utterly fallacious. She could not recall her husband's Christian name, and was oblivious as to all measurements of time, and names of days, seasons, and places. She was often unable to find the word which she wanted, and seemed to introduce into the sentence for which that word was required any other word that occurred to her at random. Her expression was careworn, and also singular, as she had exophthalmos and blindness of the right eye, and ptosis of the right eyelid. The pupil of the left eye was much contracted, and its margin was irregular. The mouth was drawn to the left; and the tongue, when put out, pointed to the left. The sensibility of the right side of the face was much diminished. There was almost complete loss of power in the left arm and leg; there was partial loss of power, with tremor, in the right arm and leg; there was a systolic murmur at the base of the heart, and a thick white fur on the tongue. During her brief sojourn in the asylum, Maria S. became more and more fatuous; her appetite for food being at some times voracious, and at other times altogether absent, so that she had to be fed. The paralysis of the right side increased, uncontrollable vomiting and diarrhoea came on, coma supervened, and then came death on the 15th June. At the necropsy, the brain was found flattened and compressed, and at its base was a cancerous tumour. This took origin in the right temporo-sphenoidal lobe, and extended inwards, being divided by a neck into two parts, each about the size of a small walnut; an outer part, fibrous, containing cysts and fluid contents; and an inner part, soft and pulpy, and of a pink colour, variegated by deep red blotches, and with a delicate fibrous matrix. The outer part was embedded in the temporo-sphenoidal lobe, and the inner lay in a sort of excavation, which had been formed by the absorption of portions of the body of the sphenoid bone, the orbital plate, and the pituitary body, and by displacement of the posterior, orbital, and surrounding gyri. It compressed the roots of the right olfactory nerve, the right optic tract and nerve, and the right fifth nerve.

The prognosis in cerebral cancer, when it is diagnosed, is of course as gloomy as can be: nothing but death, speedy death, can be predicted. It is not, perhaps, utopian to hope that, with the progress of therapeutics, some means may be discovered of resolving or controlling malignant growths. Distinguished and sober-minded surgeons have entertained that hope. At present, however, we must be content with smoothing the pathway to the grave, and with retarding, if that may be, the passage of our patient along that miserable thorny road. If the nature and position of the tumour could be satisfactorily made out during life, its growth might perchance be slackened or arrested by frequent faradisation; change of climate might also be beneficial. It is curious that, while in tubercle that remedy has been, and is, most fashionable and successful, in cancer it should never have received a fair trial; and yet cancer appears to be highly susceptible to the influence of climate. Abounding in Europe, it is rare in Egypt, Algiers, Senegal, and Arabia: even in England its distribution is partial, as Mr. Haviland has conclusively proved. Haunting low lying grounds through which large rivers, prone to overflow their banks, descend to the sea, it eschews dry and elevated districts. Surely the progress and propagation of cancer might be sometimes checked by a resort to those climates which are

least favourable to its growth. One of the great objects in cancer of the brain, as in cancer of any other part, is to relieve pain; and that, after all, is best accomplished by the employment of opium, or some of its preparations or alkaloids. The hypodermic injection of morphia is an inestimable boon; nepenthe is a benefactor—it can at least confer an euthanasia. Cannabis Indica acts well; and so, under certain circumstances, do chlorodyne, chloral, and chloroform—the latter being, of course, used with extreme caution. When convulsions occur, bromide of potassium, in combination with tincture of sumbul, is beneficial; and, when delirium and excitement have to be combated, ergot may be had recourse to, or alcohol freely administered, for the delirium is sometimes the expression of exhaustion.

EXPERIMENTAL RESEARCHES IN CEREBRAL PHYSIOLOGY AND PATHOLOGY.

By DAVID FERRIER, M.D.,

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PRELIMINARY NOTICE.

THE opportunity kindly afforded me by Dr. Crichton Browne, of experimenting on over thirty guinea-pigs, rabbits, cats, and dogs, in the pathological laboratory of the West Riding Asylum, Wakefield, has enabled me to arrive at certain results and conclusions which seem worthy of a brief preliminary notice, pending the publication of details of method, experiments, and illustrations, in the West Riding Asylum Reports.

The following is a summary of the more important conclusions.

1. The anterior portions of the cerebral hemisphere are the chief centres of voluntary motion and the active outward manifestation of intelligence.
2. The individual convolutions are separate and distinct centres; and in certain definite groups of convolutions (to some extent indicated by the researches of Fritsch and Hitzig), and in corresponding regions of non-convoluted brains, are localised the centres for the various movements of the eyelids, the face, the mouth, the ear, the neck, the hand, foot, and tail. Striking differences corresponding with the habits of the animal are to be found in the differentiation of the centres. Thus the centres for the tail in dogs, the paw in cats, and the lips and mouth in rabbits, are highly differentiated and pronounced.
3. The action of the hemispheres is in general crossed; but certain movements of the mouth, tongue, and neck, are bilaterally co-ordinated from each cerebral hemisphere.
4. The proximate causes of the different epilepsies are, as Dr. Hughlings Jackson supposes, "discharging lesions" of the different centres in the cerebral hemispheres. The affection may be limited artificially to one muscle, or group of muscles, or may be made to involve all the muscles represented in the cerebral hemispheres, with foaming at the mouth, biting of the tongue, and loss of consciousness. When induced artificially in animals, the affection as a rule first invades the muscles most in voluntary use, in striking harmony with the clinical observations of Dr. Hughlings Jackson.
5. Chorea is of the same nature as epilepsy, dependent on momentary discharging lesions of the individual cerebral centres. In this respect, Dr. Hughlings Jackson's views are again experimentally confirmed.
6. The corpora striata have crossed action, and are centres for the muscles of the opposite side of the body. Powerful irritation of one causes rigid pleurosthotonus, the flexors predominating over the extensors.
7. The optic thalamus, fornix, hippocampus major, and the convolutions grouped around it, have no motor signification.
8. The optic lobes or corpora quadrigemina, besides being concerned with vision and the movements of the iris, are centres for the extensor muscles of the head, trunk, and legs. Irritation of these centres causes rigid opisthotonus.
9. The cerebellum is the co-ordinating centre for the muscles of the eyeball. Each separate lobule (in rabbits) is a distinct centre for special alterations of the optic axes.
10. On the integrity of these centres depends the maintenance of the equilibrium of the body.
11. Nystagmus, or oscillation of the eyeballs, is an epileptiform affection of the cerebellar oculo-motorial centres.
12. These results explain many hitherto obscure symptoms of cerebral disease, and enable us to localise with greater certainty many forms of cerebral lesion.

ON THE RESULTS OF THYROTOMY FOR THE REMOVAL OF GROWTHS FROM THE LARYNX.

By MORELL MACKENZIE, M.D.Lond.,

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PREFACE.

THE current volume of the *Medico-Chirurgical Transactions* contains a paper by Mr. Arthur Durham, "On Section of the Laryngeal Cartilages for the Removal of Morbid Growths." The greater part of the article consists of a translation of certain portions of Planchon's *Faits Cliniques de Laryngotomie*, but an elaborate attempt is also made to show that my essay on *Growths in the Larynx* (Churchill, 1871) contains numerous inaccuracies.

Not being a Fellow of the Royal Medical and Chirurgical Society, I endeavoured to reply to the charges at the Clinical Society; but, the members of that body regarding my contribution as controversial rather than clinical, and as an answer to an attack made at another society, it was decided to withdraw the paper. With Mr. Durham's co-operation, I then offered the article, modified to some extent both as regards matter and manner, to the Royal Medical and Chirurgical Society. The Council submitted it to a referee, who proposed to omit or seriously modify numerous passages—in fact, nearly all those matters in dispute between Mr. Durham and myself. With a view of giving the same publicity to the defence as had already been given to the attack, I should have been willing to make some alteration; but I found that the changes proposed by the referee were of so fundamental a character, that my paper would have been deprived of its most essential features. Under these circumstances, I have been compelled to seek another channel for its publication.

It is, of course, always desirable in scientific matters to avoid personal controversy, but there are occasions in which personal explanations become necessary. The matter at issue between Mr. Durham and myself is whether a certain operation should be "earlier, more boldly, and more readily resorted to," as recommended by Mr. Durham, or whether it should be reserved for extreme cases, as advised by myself. The operation having been performed much more frequently abroad than in England, it becomes most important that the results of the operation in other countries should be accurately ascertained. In making my reports of these operations, I have been accused by Mr. Durham of numerous inaccuracies, and he has implied that I have "overstated the dangers and difficulties of the operation." On the other hand, I justify my reports, and point out the errors into which, I consider, Mr. Durham has fallen. It is thus that a scientific question has necessarily become a matter of personal controversy; and it will be seen that, whilst Mr. Durham has been allowed to make a personal attack on me, I have been prevented from replying to him at the Society where his attack was made, on the ground that my defence was personal and controversial.

The following paper is identical with that offered to the Royal Medical and Chirurgical Society; and the profession will now be in a position to form a judicial opinion, not only on the matter in dispute between Mr. Durham and myself, but also on the larger and more important question of the merits of thyrotomy for the removal of growths from the larynx.

In an article recently published in the *Transactions* of the Royal Medical and Chirurgical Society by Mr. Durham, "On Section of the Laryngeal Cartilages for the Removal of Morbid Growths," too favourable an estimate has, in my opinion, been taken of the operation of thyrotomy, whilst the correctness of my conclusions and the accuracy of my statements have been repeatedly impugned.

With a view of restoring the operation to its proper position, and of defending myself from the charges of inaccuracy, I venture to submit this paper to the consideration of the profession. The subject of thyrotomy, in so far as it refers to the removal of morbid growths, was

first brought under the notice of the profession in this country by Sir Duncan Gibb, in a paper published in the *BRITISH MEDICAL JOURNAL*, September 28th, 1865, which contained one case, under the joint care of himself and Mr. Holthouse, and a brief historical *résumé* of the subject.

In my essay on *Growths in the Larynx*, published in 1871, twenty pages were devoted to the treatment of morbid growths by "extra-laryngeal" methods, and great pains were taken to form a just estimate of the value of thyrotomy. The work contained a table (p. 92), in which nearly all the published cases of thyrotomy were placed. The indications and contra-indications of the operation, together with its results as deduced from the table, were also placed before the profession, and it was laid down "as a cardinal law that an *extra-laryngeal method ought never to be adopted* (even where laryngoscopic treatment cannot be pursued), *unless there be danger to life from suffocation or dysphagia.*"

Further, I expressed my belief "that the existence of dysphonia does not justify operations which, though easy to perform, may be regarded as capital," and that an "extra-laryngeal operation is not justifiable for the removal of a *small* growth in the larynx, unless that growth give rise to dangerous dyspnoea, and cannot be removed by a less serious method."

Six months after the publication of my work, Mr. Durham read his paper. In advocating the operation, Mr. Durham has not attempted to define the limits within which the operation should be performed. He neither confines it to cases in which there is dangerous dyspnoea or dysphagia, nor objects to its being done for the removal of small growths. He contents himself with enumerating the following propositions.

"First, that the dangers and difficulties attending it are neither so numerous nor so considerable as have been represented and commonly supposed; and

"Secondly, that the success hitherto achieved has been so marked and so indisputable, as to justify and encourage in any such case as may seem appropriate, an earlier, bolder, and more ready resort to this method than has hitherto prevailed."

In order to give the profession an opportunity of judging of the results of the operation, I have made out a fresh table of all the recorded cases of thyrotomy, and have arranged them in chronological order. In all instances where thyrotomy has been performed afresh, the original wound having completely healed up, the operation has been considered as a new case. All cases of cancer are printed in italics. [See Table.]

From an examination of this table my readers will be able to judge whether the dangers and difficulties of the operation have been overstated, and whether "an earlier, bolder, and more ready resort to this method" is to be encouraged. Instead of using the vague terms, "completely successful," "partially successful," "temporary benefit," and "negative," it will be better to consider the results of the operation, 1. In relation to life; 2. In relation to respiration; 3. In relation to voice; 4. In relation to recurrence.

In order to give an opportunity of reviewing, and, if necessary, of revising the facts on which my statements and statistics are based, in dealing with the results of the operation, I have furnished detailed lists of the cases considered under each heading.

With regard to the mortality after the operation, it appears that out of forty-eight cases two terminated fatally within a few days; two died at the end of a few weeks, and five succumbed at periods varying from six months to two years. In five of these fatal cases the disease was considered malignant.

The following is a list of the fatal cases, those of a carcinomatous character being printed in italics.

No. 10. Debrou, in 7 days, from metastatic abscesses.

No. 33. *Schrötter*, in 11 days, from *erysipelas* and *gangrene*.

No. 1. Brauers, in a few weeks, from *hectic*.

No. 8. Böckel, in 8 to 12 weeks, cause not stated.

No. 43. *Mackenzie and Wordsworth*, in 7 months, from *exhaustion*.

No. 46. *Mackenzie and Thornton*, in 7 months, from *dysphagia*.

No. 11. *Gibb and Holthouse*, in 1 year, from *exhaustion*.

No. 4. *Gurdon Buck*, in 15 months, from *suffocation*.

No. 5. *Rauchfuss*, in 2 years, from perforation of *oesophagus*.

Two other patients (*Ehrmann*, No. 2, and *Sands*, No. 7) died from disease independent of the larynx, viz., one from *typhus*, the other from cancer of the kidneys and suprarenal capsules. Though both these patients remained dysphonic, and in one recurrence took place within seven months of the operation, I have entered their cases as recoveries in relation to life.

Omitting all those cases which survived the operation more than a few weeks, there remain four in which death may be attributed directly to the operation or its effects—a mortality of 8.33 per cent. Mr. Dur-

TABLE SHOWING RESULTS OF ALL CASES OF THYROTOMY.

[All those cases printed in *Italics* are supposed to have been of a malignant or quasi-malignant character.]

No.	Date.	Operator.	BEFORE OPERATION.			AFTER OPERATION.			
			Age.	Sex.	Symptoms.	Mortality.	Respiration.	Voicc.	Recurrence, or Incomplete Removal.
1	1833	Brauers (<i>Journal de Gräfe et Walthers</i> , 1834, vol. xxi, p. 534).	40	M.	Dyspnœa	Death.	.. ..	Aphonic	.. ..
2	1844	Ehrmann (<i>Histoire des Polypes du Larynx</i> , 1850).	33	F.	Dyspnœa and aphonia	.. ..	Normal	Aphonic	In 7 months.
3	May 1851	Gurdon Buck (<i>New York Med. Journal</i> , May 1865).	51	F.	Dyspnœa and aphonia	.. ..	Canula always worn	Aphonic ("a whispering voice")	Whole growth not removed.
4	Sept. 1857	Gurdon Buck (<i>New York Med. Journal</i> , May 1865).	51	F.	Dyspnœa and aphonia	Death in 15 months from first operation, from displacement of canula	Canula worn till death	Aphonic	.. ..
5	1861	Rauchfuss (<i>St. Petersburg Medizin. Zeitsch.</i> , 1862, vol. v, p. 44).	Adult	F.	Dyspnœa; probably aphonia	Death in 2 years from perforation of trachea into œsophagus	Canula always worn	Aphonic (right vocal cord removed in operation)	Incomplete removal: "soon sprang up afresh".
6	1861	Gurdon Buck (<i>New York Med. Journal</i> , May 1865).	25	M.	Not stated	.. ..	Canula always worn	Aphonic (probably)	Not stated, but a "marked narrowing of the rima" resulted.
7	1863	Sands (<i>New York Medical Journal</i> , May 1855).	30	F.	Slight dyspnœa and dysphonia	.. ..	Normal	Modified ("Resonant, but not normal")	.. ..
8	1863	Böckel (<i>Extrait de la Thèse de Swebel</i> , Strasbourg, 1866).	24	F.	Dyspnœa and dysphonia	In 3 months	Normal	Aphonic	Recurrence of small rosy projections in 7 weeks.
9	1863	Busch (<i>Beobachtungen zur innern Klinik</i> , Bonn, 1864, p. 108).	43	M.	Dyspnœa and dysphonia	.. ..	Canula always worn	Dysphonic	.. ..
10	1864	Debrou (<i>Gazette des Hôpitaux</i> , May 2, 1863).	51	M.	Dyspnœa and dysphagia	Death in 7 days	.. ..	.. ..	.. ..
11	1864	Gibb and Holthouse (<i>Brit. Med. Journal</i> , Sept. 28th, 1865).	29	F.	Dyspnœa and dysphonia	Death in one year	Canula always worn	Clear for four months; afterwards aphonic. Constant dysphagia	In 4 months.
12	1864	Lewin and Ulrich (<i>Deutsche Klinik</i> , 1865, No. 52, p. 510).	16	F.	Dyspnœa and aphonia	.. ..	Normal	Modified (bass voice 22 days after; no further history)	.. ..
13	1864	Gilewski (<i>Wiener Medizin. Woch.</i> , June 28, '65, p. 142).	16	F.	Dyspnœa and dysphonia	.. ..	Normal	Dysphonic	.. ..
14	Feb. 1865	Gouley (<i>New York Medical Jour.</i> , Sept. 1867, p. 473).	6	F.	Dyspnœa and aphonia	.. ..	Normal for six months	Aphonic ("whisper")	In 6 months.
15	1865	Balassa (<i>Wiener Medizin. Wochenschr.</i> , Nov. 1868).	44	F.	Dyspnœa, aphonia, and dysphagia	.. ..	Normal	Normal	Recurrence.
16	1865	Körbelé (<i>Gazette des Hôpitaux</i> , June 13, 1865).	57	M.	Dyspnœa, aphonia, and dysphagia	.. ..	Canula always worn	Aphonic	.. ..
17	Nov. 1865	Gouley (<i>New York Medical Jour.</i> , Sept. 1867, p. 473).	7	F.	Dyspnœa and aphonia	.. ..	Normal	Aphonic ("a loud very distinct whisper")	Some irregularity of vocal cord, but no recurrence.
18	1866	Balassa (<i>Wiener Med. Woch.</i> , 1868, No. 93).	32	M.	Dyspnœa and dysphonia	.. ..	Normal	July 1867 Normal	Cure complete in 8 days; no history after that date.
19	1866	Voss (<i>Medico-Chir. Trans.</i> , vol. lv, p. 87).	4½	M.	Dysphonia	.. ..	Normal	Not stated	Recurrence in 6 months.
20	1866	Durham (<i>Guy's Hospital Reports</i> , 1866).	13	F.	Dyspnœa and aphonia	.. ..	Normal	Normal	.. ..
21	1867	Balassa (<i>Wiener Med. Woch.</i> , Nov. 11, 1868).	19	F.	Dyspnœa and dysphonia	.. ..	Normal	Normal	In 3 months.
22	1867	Voss (<i>Medico-Chir. Trans.</i> , vol. lv, p. 87).	4	M.	Dysphonia	.. ..	Normal	Not stated	.. ..
23	1867	Long (<i>Liverpool Hospital Reports</i> , 1867).	8	M.	Dyspnœa	.. ..	Normal	Dysphonic ("somewhat hoarse, especially when he gets a little cold")	.. ..
24	1867	Balassa (<i>Wiener Medizin. Wochenschr.</i> No. 92, 1868).	21	F.	Dyspnœa and aphonia	.. ..	Normal for a few months	Dysphonic	Recurrence soon after operation.
25	1867	Holmes (<i>Surg. Treatment of Children's Diseases</i> , 2nd edition, p. 311).	9	F.	Dyspnœa and aphonia	.. ..	Canula always worn	Aphonic	Not stated.
26	1867	Cutter (<i>Boston Medical and Surg. Jour.</i> , Feb. 1869).	53	M.	Dyspnœa and dysphonia	.. ..	Normal	Modified ("coarse and clear")	Soon after; date not stated.
27	1868	Balassa (<i>Wiener Med. Woch.</i> , No. 92, 1868).	22	F.	Dyspnœa and aphonia	.. ..	Normal	Normal	.. ..
28	1868	Mackenzie and Couper (<i>Essay on Growths in the Larynx</i> , Case 64).	66	F.	Dyspnœa and aphonia	.. ..	Normal for 2½ years (afterwards dyspnœa)	Normal for 2½ years, (afterwards dysphonic)	In 2½ years.
29	1868	Mackenzie and Evans (<i>Essay on Growths in the Larynx</i> , Case 69).	12	F.	Dyspnœa and aphonia	.. ..	Normal	Aphonic	.. ..
30	1868	Navratil (<i>Berlin Klin. Woch.</i> , 1868, No. 49, p. 501).	Adult	M.	Not stated	.. ..	Normal	Dysphonic ("voice harsh and hollow")	.. ..
31	1868	Navratil (<i>Ibid.</i> , p. 501).	20	F.	Dyspnœa and aphonia	.. ..	Canula always worn	Aphonic	Growth not extirpated.
32	1868	Navratil (<i>Ibid.</i> , p. 502).	30	M.	Not stated	.. ..	Normal	Dysphonic	.. ..
33	1869	Schrötter (<i>Medizin. Jahrbuch</i> , Wien, 1869, vol. xvii, 2nd Heft, p. 81).	63	M.	Dyspnœa and dysphonia	Death in 11 days from erysipelas and gangrene	Canula always worn	.. ..	Growth not extirpated.
34	1869	Mackenzie and Wordsworth (<i>Essay on Growths in the Larynx</i> , Case 87).	47	M.	Dyspnœa, dysphonia, and dysphagia	Death in 7 months	Canula always worn	Aphonic	In 2 months.
35	1869	Cohen (<i>New York Medical Record</i> , August 16, 1869).	Adult	M.	Dysphonia	.. ..	Normal	Dysphonic	Recurrence.
36	1869	Krishaber (<i>Gazette des Hôpitaux</i> , 1869, No. 103).	38	M.	Dyspnœa and dysphonia	.. ..	Normal	Normal	.. ..
37	1870	Gurdon Buck (<i>Trans. of New Yk. Acad. of Med.</i> , v. iii, pt. 10).	38	M.	Dyspnœa and dysphonia	.. ..	Normal	Dysphonic (rt. v. c. and aryt. cart. removed)	.. ..
38	1870	Denucé (<i>Bordeaux Médicale</i> , February 15, 1872).	54	F.	Dyspnœa and dysphonia	.. ..	Normal	Normal	.. ..

TABLE OF THYROTOMY, *continued*].

No.	Date.	Operator.	BEFORE OPERATION.			AFTER OPERATION.					
			Age.	Sex.	Symptoms.	Mortality.			Respiration.	Voice.	Recurrence, or Incomplete Removal.
39	1870	Durham (<i>Medico-Chirurg. Trans.</i> , vol. lv, p. 20).	7	M.	Dyspnœa and aphonia	..	..	..	Normal	Modified ("parents quite satisfied with condition of voice")	.. ..
40	1870	Durham (<i>Medico-Chirurg. Trans.</i> , vol. lv, p. 22).	8	F.	Dyspnœa and aphonia	..	..	..	Normal	Modified ("clear, but rather feeble")	.. ..
41	1870	Bryant (<i>Medico-Chirurgical Trans.</i> , vol. lv, p. 24.)	3	M.	Dyspnœa and aphonia	..	..	..	Normal	Normal	.. ..
42	1871	Langenbeck (<i>British Medical Journal</i> , Nov. 4, 1872).	28	M.	Dyspnœa	..	..	..	Normal	Normal (voice not affected prior to operation)	.. ..
43	Aug. 1871	Davies-Colley (<i>Medico-Chir. Trans.</i> , vol. lv, p. 25).	4	M.	Dyspnœa and aphonia	..	..	..	Canula always worn	Aphonic ("a husky, loud, whispering voice")	Recurrence in a few months.
44	1871	Ogle and Lee, (<i>Med.-Chir. Trans.</i> , vol. lv, p. 28).	5	M.	Aphonia	..	..	..	Normal	Normal	.. ..
45	1872	Mackenzie and Thornton (<i>Read at Clinical Society</i> , February 14, 1872).	24	M.	Dyspnœa and aphonia	In 7 months			Canula always worn	Aphonic	In 4 months.
46	March 1872	Davies-Colley (<i>Medico-Chir. Trans.</i> , vol. lv, p. 27).	5	M.	Dyspnœa and aphonia	..	..	..	Dyspnœa	Dysphonia ("voice audible, but by no means natural")	Recurrence shortly after.
47	1872	Semple and Thornton (<i>Read at Clin. Soc.</i> , Feb. 14, 1872).	2½	M.	Dyspnœa and aphonia	..	..	..	Normal for 3 months; canula reinserted in 6 months	Aphonic	Recurrence in 3 months; readmitted January 1, 1873.
48	Sept. 1872	Davies-Colley (<i>British Medical Journal</i> , Sept. 1872).	5½	M.	Dyspnœa and aphonia	..	..	..	Canula always worn	No report	No report.

ham only admits two deaths as resulting "more or less directly from the operation;" and, as far as I can understand, they are those of Schrötter and Debrou. To the former case I shall presently refer. In Debrou's case, after division of the thyroid cartilage, a tracheotomy tube was inserted, and, in accordance with the usual practice, left *in situ*. The patient died seven days after the operation from metastatic abscesses of the lungs. Debrou attributed the death to the use of the tracheal canula, and this ingenious explanation of the fatal issue has been considered reasonable by Mr. Durham. No further comment is required on this case.

The fatal cases which Mr. Durham excludes are those of Brauers and Böckel. The facts concerning these cases are as follows. Brauers' case was first published in the *Journal de Gräfe et Walther* in 1834, and in 1850 was included by Ehrmann in his classical *Histoire des Polypes du Larynx* (vol. xxi, p. 534). The patient's larynx was opened by Brauers on several occasions, and the growths treated with acid nitrate of mercury, actual cautery, etc. Nevertheless the growths returned; and, to use the exact words of the original report, "as the result of successive irritations produced by repeated cauterisations, the larynx passed into a state of scirrhus induration, hectic fever supervened, which *must necessarily lead to death*,"* although this had not yet happened at the epoch when the physician, the reporter of this case, gave us his account at Bonn. The exact expression in French is "devait amener necessairement la mort," that is, "must necessarily lead to death;" Mr. Durham has greatly qualified the expression by translating it, "which seemed almost certain to prove fatal." When it is borne in mind that Ehrmann was justly considered the greatest authority on diseases of the larynx, and that he was strongly in favour of thyrotomy, there cannot be the least doubt that had Brauers' patient survived, Ehrmann would have obtained knowledge of it. I have considered this as a fatal case. Mr. Durham, however, on the authority of Krishaber, stated that "the patient lived more than twenty years, and died of a disease quite foreign to the larynx."

As Dr. Krishaber produced no evidence of the survival of the patient, I wrote to him, and received the following reply.

"I read the statement in a Vienna medical journal in 1866, and signed, I believe, by Gilewski, that Brauers' patient survived the operation twenty years."†

After careful examination, I have not been able to discover any paper by Gilewski in a Vienna medical journal in 1866, but he wrote an article in the *Wiener Medizinische Wochenschrift*, June 28th and July 1st, 1865, and therein he stated that his own case and those of Ehrmann and Rauchfuss were the only three in which the operation had been performed. He was, therefore, at that date, altogether ignorant of the existence of Brauers' case. It would have been strange, indeed, if Dr. Gilewski, practising in the south of Poland, could have obtained evidence concerning the recovery of a patient who was supposed to have died thirty-three years previously in Belgium. It will

be seen, therefore, that there is no evidence whatever of the survival of Brauers' patient, but that all the evidence points to his death.

In Böckel's case (No. 8) the patient left the hospital after the operation, and died a few weeks afterwards, the exact cause of her death not having been ascertained. Notwithstanding that the patient was aphonic, that she had suffered from perichondritis as a result of the operation, that recurrence had already taken place—"small rosy projections" having been seen on laryngoscopic examination and cauterised—notwithstanding that, even when she left the hospital, she had a laryngeal fistula, and that she died so suddenly five or six weeks later, that the medical practitioner could not reach her before death, Mr. Durham quotes from the reporter that "it is probable that this unfortunate woman* succumbed to some intercurrent affection of her lungs, which she contracted in the rude climate of her valley," and himself adds, that "there is no reason for supposing that the death was in any way due to the operation;" but, I venture to think, it will be generally considered that the operation of thyrotomy or its results had a more immediate relation to the death of this "unfortunate woman" than "the rude climate of her valley."

Before dismissing this review of the fatal cases, I must call attention to Ehrmann's own case, my treatment of which does not appear sufficiently clear to Mr. Durham.

He states that "it is not quite clear whether Mackenzie reckons this as a fatal case of thyrotomy or not." Now, as there were ten fatal cases in my table, and I only reckoned nine deaths as resulting from thyrotomy or from disease of the larynx, it is evident that I did not include Ehrmann's as a fatal case. But, in addition to this, I expressly stated that "the case was justly considered one of recovery, and that death took place from typhus" (*Op. cit.*, note to p. 97). It would be difficult, in my opinion, to use language much more clear.

Dr. Sands's case (No. 7), which I have placed amongst those of malignant character (although it is extremely doubtful whether the growth removed from the larynx was really cancerous), was certainly a recovery as far as mortality is concerned. The patient died twenty-two months after the operation, having, however, always remained aphonic.

The actual mortality does not, however, give an adequate idea of the danger of the operation, for among these cases there were many "hair-breadth 'scapes." Thus, in Dr. Cutter's case (No. 27), (*Boston Medical and Surgical Journal*, Feb. 18th, 1869), the patient was almost suffocated during the operation; and, to use Dr. Cutter's own words, the return to complete sensibility was retarded by the accumulation of blood and mucus in the mouth, which ran down the trachea, and out of the artificial opening; it was also accompanied by profuse sweating and some flagging of the pulse." After the patient was put to bed "vomiting ensued, and a large amount of blood, mingled with mucus, was evacuated."

In one of Navratil's cases (No. 30), (*Berlin Klin. Wochenschrift*,

* The "unfortunate woman", on leaving the hospital, returned to the "rude climate of her native valley", Munster, in the Haut Rhin. After a short time, Dr. Dietz was summoned to attend her; but "death took place before the doctor could arrive at the patient's bed-side."—*Mémoires de la Société de Chirurgie de Paris*, tome page 561.

* The italics are not in the original.

† On receipt of Dr. Krishaber's letter, I wrote to Dr. Gilewski, asking if he had ever made such a statement, and, if so, on what authority; but, in consequence of Dr. Gilewski's death, the letter was returned to me through the post-office.

Dec. 7th, 1868, p. 502), the hæmorrhage was alarming, and the patient nearly died under the operation, from the quantity of blood which passed down the trachea. In another of Navratil's cases (No. 32), (*Ibid.*), the patient suffered from high fever after the operation, and expectorated a quantity of blood and pus; œdema took place round the wound, and the patient was in a very critical state.

In Schrötter's case (*Medizin. Jahrbuch*, Wien, 1869, vol. xvii, 2nd Heft, p. 81), the operator observed that, after dividing the thyroid cartilage, "holding open the borders of the wound with blunt hooks gave rise to such paroxysms of coughing and caused so much fresh hæmorrhage, that the examination could only be carried out for a short time;" and, further, "that the sputa consisted of pure blood even well into the night, and on the following day the expectoration was still coloured." By a clerical error in my thyrotomy table, it was stated that this patient died in seven hours instead of eleven days, as it should have been. I regret this error extremely; because, though original y occurring in an abbreviated tabular statement, it was subsequently accepted as a fact, and repeated in the text.

It is certainly remarkable that Mr. Durham, who has devoted nearly a page to the exposure of this clerical error of mine, and who has given up another page and a half to the description of Schrötter's case, besides referring to it on another separate occasion (*Op. cit.*, p. 29), does not once mention the prolonged and dangerous hæmorrhage which occurred, and which must have greatly prejudiced the issue of the case, even if it did not, as I believe it did, directly lead to death.

Mr. Timothy Holmes remarks with regard to his case (*Surgical Treatment of Children's Diseases*, 2nd edit., p. 311), "that the parts over the larynx were found to be peculiarly vascular." After the hæmorrhage caused by the preliminary incision had been stopped, the thyroid cartilage was divided. "The bleeding that followed was very considerable."

Again, the reporter of Mr. Davies-Colley's third operation (*BRITISH MEDICAL JOURNAL*, Sept. 28, 1872) remarks, "that the boy at one time ceased to breathe, blood having apparently run down the trachea into the bronchial tubes, and the chloroform acting powerfully on the lungs. But after artificial respiration had been carried on for several minutes the little patient recovered."

Mr. Durham even tries to qualify the only deaths he has at all admitted in the following words: "In each of these [cases] the fatal result was brought about in a manner by no means special to the operation, but, alas! of far too common occurrence in general surgical experience."

Upon this I have only to remark that when blood-poisoning ceases to follow operations, no doubt many surgical procedures will be adopted which are not at present in vogue; but that until that time arrives, septicæmia remains one of the contingent risks of all operations. On the other hand, the life of the patient is not imperilled by this danger when laryngoscopic treatment is adopted.

In referring to my observations on the mortality of thyrotomy, Mr. Durham has produced a very erroneous impression as regards my treatment of the subject. He has made it appear as if, whilst comparing the mortality of laryngoscopic treatment with that of thyrotomy, I have concealed the circumstance that the laryngoscopic cases in my essay were all benign, and that the thyrotomy table included some cases of cancer. By inference he leads his readers to suppose that I have made an unfair comparison between the two sets of cases. Mr. Durham remarks as follows:—"Considering the prospect of the operation in relation to the preservation of life, Dr. Mackenzie says, in division of the laryngeal cartilages, there is always some immediate danger to life, and nine out of the twenty-eight cases on record terminated fatally." If Mr. Durham wished to do justice to my views, it is strange that he quoted an isolated passage, and did not add the remarks on the same page (94) viz., "In six of the nine fatal cases in the thyrotomy table the disease was cancerous (or semi-malignant)."

So far from attempting to conceal the inclusion of malignant cases, I called special attention to their admission, not only in the passage referred to, but also in almost the same words when speaking of recurrence*, where I not only gave prominence to the inclusion of cancer cases, but pointed out the pathological character of the growths as a cause of their great disposition to recurrence. I also called attention to the inclusion of cancer cases at the head and foot of my thyrotomy table. It is certainly remarkable that Mr. Durham, who objects to my mode of dealing with the subject has himself adopted precisely the same plan, without any of the precautions which I have taken. In the fourth volume of Holmes's *System of Surgery*, page 584, Mr. Durham has published a table showing "the general success of different methods of

operating." In this table "operation through the mouth," that is, laryngoscopic methods of treatment are compared with "operations after external incision;" but Mr. Durham has not called attention to the inclusion of cancer cases amongst the operations after external incision. It will be seen, therefore, that whilst Mr. Durham finds fault with me for a mistake which I have not made, he has himself made the very mistake that he imputes to me.

[To be continued.]

ON THE TREATMENT OF SUPPOSED STRICTURE OF THE CERVIX UTERI.

By WILLIAM CUMMING, F.R.C.P.E., Edinburgh.

TRUE stricture of the cervix uteri is rare; not so rare, certainly, as is stricture of the urethra in the male who has not had gonorrhœa, but nearly so. Incision of the cervix, or hysterotomy, therefore, for the cure of stricture, should be one of the rarest operations in obstetric surgery. But of late years it has not been so; and it may be a legitimate inquiry, what purpose it has served when the consequences seemed to sanction its use, which unquestionably they often do.

1. There may be, or rather there is often, a quasi-stricture at the internal os, when there is congestion, hypertrophy, or other disease of the lining membrane of the uterus. This condition is relieved temporarily—it may even be cured permanently—by the hæmorrhage resulting from the incision. In my own experience, the relief generally is only temporary.

2. The same condition of quasi-stricture exists when there is hypertrophy of the body of the uterus—in many instances induced by the efforts to expel the clotted menstrual and the accumulating leucorrhœal discharges. In such cases, the hæmorrhage, coupled with adequate general treatment, reduces the hypertrophy, prevents accumulation, and helps to restore the healthy state of the lining membrane, and so relieves the supposed stricture.

3. The preceding condition is almost invariably connected with enlargement and congestion of the ovaries, either as cause or as effect; and the same hæmorrhage reduces and relieves this.

But the operation, if effectually and thoroughly performed, is one of very considerable risk, especially when followed by the introduction of sponge- or tangle-tents. The interesting mechanical, or rather dynamical, experiments of Dr. Matthews Duncan prove with what force these bodies act; and it is not difficult to estimate (if it were not sufficiently and disastrously confirmed by experience) the mischief that must in too many cases result from the laceration and irritation of the delicate textures cut into by the incision. How often this mischief has succeeded the operation, probably no one knows. Is, therefore, the operation altogether unjustifiable? I do not say so; but, as a cure of this quasi-stricture, it should be almost the rarest operation in surgery. Is it justifiable as a cure or relief of the conditions I have alluded to above? I believe not, for three reasons: 1. Because it does not, as a rule, either cure or more than temporarily relieve these morbid states; 2. Because it is always attended with danger; and that danger is increased the nearer the incision approaches to the internal os and the various plexuses adjoining, where the supposed need for the operation exists; 3. Because there is a much more simple, and, in my opinion and experience, less dangerous, treatment that may be employed with a larger probability of success. I cannot say utterly without risk, because every gynecologist knows that, while there are some uteri to which almost anything may be done with impunity, there are others to which nothing can be done without startling, even fatal, results. I have known the gentle introduction of a moderate sized bougie lead to violent metritis, extending to the appendages, and not recovered from without permanent mischief; and I have also been cognisant of the same leading to acute suppuration of the ovary. But these results are so rare that, except as warnings to be both preparatory and cautious, they need scarcely be taken into account; and my present belief is, that if the gentle depletion I am disposed to advocate were employed before using the bougie, such complications would, probably, never occur.

Assuming, therefore, that true stricture is extremely rare, and that incision of the ora and cervix uteri, with subsequent dilatation by tents, is unnecessary, and may be, and often is, injurious, but that the hæmorrhage resulting from it is beneficial, I have long practised, with fair success, scarification of the os uteri, followed by dilatation with graduated bougies. By scarification the amount of blood abstracted can be limited; as much or as little can be taken away as is thought necessary (which with leeches cannot be done); congestion of the lining membrane of the womb and of the ovaries is relieved and the pas-

* The following is the expression used by me:—"In six other cases, the patient died at the end of a few months; and in nearly all of these, recurrence had taken place. They were all, however, of malignant or semi-malignant character, and therefore the tendency to reproduction was no doubt very great."—*Op. cit.*, p. 97.

sages are relaxed. By this means the bougie is more easily introduced; certainly requires less force in its use; does not rouse or increase irritation of the canal and interior of the uterus, probably even soothes them: and if there be any deposition of lymph environing the cervix, facilitates its absorption.

It is satisfactory to observe that there is now a tendency to return to the more simple and less meddlesome treatment of uterine disease, and to discourage heroic modes, the details of which are sufficient to make one's hair stand on end.

SPINA BIFIDA CURED BY INJECTION.

By J. R. WATT, M.B.,

Consulting Surgeon to the Fever Hospital, Ayr.

THE following case of spina bifida occurred in my practice some time ago, and was considered an excellent opportunity for testing Dr. James Morton's method of treatment by the injection of a solution containing ten grains of iodine and thirty grains of iodide of potassium in an ounce of glycerine: this, with Dr. Morton's cases, make three treated in this manner, all of which have been successful.

On June 28th, 1872, Mrs. M. R., an anæmic woman, was delivered of her third child, a small and weak boy of full time. In the position of the third, fourth, and fifth lumbar spines, was a sessile semi-transparent flesh-coloured fluctuating tumour, as large as an ordinary sized hen's egg, and so sensitive that simple contact of the finger brought on fits of crying, during which the investing membrane became very tense. On firm pressure with the finger, a vacant space, bounded at the sides by bony ridges about half an inch apart, was found in the usual position of the vertebral spines; and, when viewed by the transmitted light in a darkened apartment, cords were seen passing near the surface. A pad of cotton-wool was placed over it under a firm binder, and the child was daily seen for a week. It moaned almost constantly, slept little, and took the breast badly. Its legs dangled, and no voluntary attempt was made to move them—slight movement of the toes being the only reflex action from tickling its soles, and the sphincters seemed very weak.

On August 2nd, the tumour was much larger, measuring eight inches in circumference. The most prominent part was ulcerated superficially; the lower border overhung the sacrum. Two drachms of clear fluid were removed by Wood's syringe (which was used throughout), care being taken to avoid the nerve-cords. The cotton pad and binder were replaced; and the child was ordered to have half a teaspoonful of spirits in water every three hours.

On August 3rd, the tumour was one-half less; from the needle-aperture drops of clear fluid still oozed, and from the soaked condition of the pad and binder a constant escape must have gone on. The child looked much exhausted, but had had no convulsive symptoms.

August 11th. The tumour was as large as before interference. From its upper edge a second quantity of two drachms was removed. The child was kept with the face down on the nurse's knee, with the back uncovered; and the aperture closed in a short time.

August 17th. A third quantity of two drachms was removed, and half a drachm of Dr. Morton's solution was injected. The child cried immediately. The spirits and water was continued.

August 18th. The child had slept very little, and appeared very weak. The tumour was unchanged in size, and along the left border a faint blush was present, which faded in about four days.

August 26th. The tumour was slightly decreased; the membranes were lax, and the fluctuation-wave less distant.

September 13th. The tumour was nearly level with the back, and was replaced by a large half-dried resistant scab. The child was firmer; the legs never moved together, but when the soles are tickled one or other leg was drawn up a short distance. The sphincters were more under control.

February 21st, 1873. A cake of firm condensed tissue occupies the site of the tumour. The child was much grown, plump, and thriving.

It may be remarked that, even although the tumour and the cavity of the spinal membranes communicated, as shown by the nerve-cords in view, and the greatly depressed fontanelle after the first withdrawal of fluid, yet no irritation spread along the cord from the injected solution, and the result must be considered successful.

MUNIFICENT CHARITY.—It is said that the "tri-literal" benefactor of many London charities, whose gifts the week before last amounted to £10,000, is one of the nephews and heirs of the late Richard Thornton, who left about four millions of money. —*Guardian*.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

THREE CASES OF HÆMATOCELE.

(Under the care of Mr. HULKE.)

MOST hæmatoceles, it is well known, originate in hydroceles, and this by the bursting of blood-vessels distributed upon the inner surface of the tunica vaginalis, either from external violence, which may be so slight as hardly at the moment to attract notice or to escape it altogether, or in consequence of vascular fluxions attending a transient increase of the subacute periorchitis, in which the greatest number of hydroceles have their origin. Where the quantity of blood thus added to the serum already present in the cavity of the tunica vaginalis is considerable, the course and treatment do not materially differ from those of an uncomplicated hydrocele. The coagula which remain after the fluid contents have been drawn off usually shrink, and finally disappear without occasioning any trouble. Where, however, the contents are principally blood and the coagula are bulky, the size of the swelling can be but little reduced by tapping, and an incision will be required for their removal. It usually happens that small portions of blood-clot remain, and their putrefaction makes the discharges excessively foetid, and is apt to induce purulent oedema and necrosis of the cellular tissue of the scrotum. In order to avoid these contingencies, the incision for the removal of the clots should be carried to the bottom of the hydrocele so as to afford a free exit at the lowest point, and the cavity should be syringed with sulphurous or carbolic acids, and the dressings moistened with the same. The careful observance of these measures will greatly lessen the intensity of the local processes, and diminish the surgical fever—matters of some moment in all, and especially in aged and feeble patients. In spurious hæmatocele, where the blood escapes into the cellular tissue, it is more rapidly absorbed than when in the tunica vaginalis; and rest, with the use of a discutient lotion, is generally attended with a cure.

CASE I.—A man, aged 42, was admitted into Forbes Ward on April 22nd, 1871, with a non-transparent fluctuating swelling of the scrotum, seven inches long and fourteen in girth, hiding the right testis. He said that there had been some swelling here for a long time; but, as it was painless, he thought nothing of it until about a fortnight ago, when it became tender and red and larger. Twelve ounces of bloody serum were drawn off with a trocar, after which the testis was felt at the lower and back part of the scrotum; at its outer side and also above it were two hard masses, presumably coagula. When he left the hospital some time later, these had already lessened.

CASE II.—A painter, aged 31, was admitted into Forbes Ward on January 18th, 1868, with a pear-shaped scrotal swelling, hiding the testis, and reaching as high as the external abdominal ring. It was very tense, it fluctuated indistinctly, it was not transparent, and it had a bluish tint when the skin was tightly strained over it. He said that six months previously, he had had the swelling tapped at King's College Hospital, when clear water was drawn off. After this the swelling gradually returned, and a fortnight before he came to the Middlesex Hospital he was aware of an alteration in its shape. He had had a hydrocele on the other side radically cured. The swelling was tapped, but only a little bloody serum ran out; and, as the bulk of the swelling was not appreciably lessened, the tunica vaginalis was slit open, a large quantity of blood-clot scooped out, and a drainage tube was passed from the wound through the bottom of the scrotum. Suppuration followed. Putrefaction of the portions of the clot which were left was prevented by daily syringing the cavity with a solution of carbolic acid and by antiseptic dressings, and he left the hospital healed at the end of a month.

CASE III.—A labourer, aged 69, falling from a ladder upon a beam, bruised his external genitals. Soon after, when brought to the hospital, his scrotum and the left side of the body of the penis and glans were inky-coloured, and the scrotum, principally its left side, largely distended and tense, but the testis could be plainly felt in its normal place. The scrotum was kept raised upon a pillow, and lightly covered with solution of muriate of ammonia. Ten days afterwards, the ecchymosis and the distension of the scrotum were nearly gone, and now several veins in the spermatic plexus were felt firmly plugged with hard coagula.

LEEDS GENERAL INFIRMARY.

CASES IN OPHTHALMIC PRACTICE.

(Under the care of Mr. OGLESBY.)

CASE I. Acute Glaucoma.—On December 14th, 1872, James Firth, aged 49, was admitted an in-patient under the care of Mr. Oglesby, suffering from acute glaucoma of the right eye. Two years previously, the vision of the left eye had been destroyed by the same disease. Several weeks before admission, slight premonitory symptoms warned him of the impending attack. His general health was good. He complained of seeing coloured rings round the candle when reading. He had had ciliary neuralgia occasionally during the premonitory attacks, but now stated that it was persistent. The cornea was clear and bright; one or more enlarged veins were perceptible, the anterior chamber was unaltered in size, and its contents were clear. The pupil was dilated and inactive; tension $\times 2$. Vision was limited to counting fingers; there was also contraction of the field of vision to a slight extent. Cloudiness of the vitreous body rendered any examination of the disc impossible. Mr. Oglesby performed iridectomy the day the patient was admitted; rapid improvement followed, and before leaving the hospital at the expiration of a fortnight, the patient was able to read No. 2 Jäger.

CASE II. Large Piece of Metal imbedded in the Right Eye.—John Smith, aged 54, railway labourer, presented himself at Mr. Oglesby's table complaining of loss of vision, and inflammation of the right eye consequent on a blow from a piece of metal some days before. Panophthalmitis had followed the injury, and the eye was destroyed. The vision of the left eye was materially affected, although no symptoms of sympathetic mischief were present. Yet the case was urgent from the fact that vision, which before the accident had been perfect, was now so much interfered with, that the outline of the window could with difficulty be distinguished. Mr. Oglesby removed the globe. Protruding from the sclerotic posteriorly, and near to the optic nerve, was a piece of iron of the size of, and similar in shape to, the thumb-nail. The man made a rapid recovery, and left the hospital two weeks after the date of his admission with perfect vision of the remaining eye.

GENERAL INFIRMARY, NORTHAMPTON.

TETANUS AFTER AMPUTATION, TREATED BY CHLORAL AND SUBCUTANEOUS INJECTION OF MORPHIA: RECOVERY.

(Under the care of Mr. MASH.)

WE are indebted for the notes of this case to Mr. Carruthers, House-Surgeon.

W. W., aged 27, a pale-flabby man, a labourer, was admitted on Feb. 4th, 1871. He was suffering from caries of the right knee-joint. He had long had cough, with very slight expectoration; and the apices of both lungs were infiltrated with tubercular deposit, not softened. There were deficient expansion of the chest-wall, dulness on percussion, and prolonged expiration. He also had angular curvature of the spine in the dorsal region. The urine was normal; appetite good. There was not much nocturnal spasm of the limb. He was allowed full diet with beef-tea and four ounces of port wine, and ordered to have five grains of compound soap pill every night. The limb was bandaged on a posterior splint. On the 7th, quinine was ordered.

On February 14th, circular amputation was performed at the lower third of the femur under chloroform; little blood was lost, and he rallied well. The medicine was discontinued, and twelve ounces of wine were given. On the following day, he ate a lean chop for dinner. After this he made favourable progress. The ligatures had all come away, and the stump was almost healed (carbolic acid lotion being used as a dressing), when, on March 2nd, however, seventeen days after the operation, great spasm and jerking of the stump came on, the discharge was suppressed, and the edges of the wound became oedematous and swollen. He had abdominal hardness and slight opisthotonos. Five minims of solution of morphia, equivalent to half a grain of muriate of morphia, were injected subcutaneously. Twenty grains of chloral hydrate three times a day, and a dose of castor-oil, were ordered. The symptoms, though temporarily relieved by the chloral and morphia (which was used every night), became more marked; and on March 3rd, trismus and risus sardonicus (very slight) showed themselves. The chloral was now doubled in quantity and given every three hours; and, in addition, a dose of calomel and colocynth pill was given, which acted freely. He was allowed full diet: two eggs, twenty ounces of port wine, and four ounces of brandy daily.

March 4th.—The abdominal hardness was better; but tympanitis was present, which was relieved by turpentine fomentations.

March 5th.—The tetanic symptoms were greatly improved, but his appetite had fallen off. He was ordered to take a draught containing a grain and a half of disulphate of quinine twice or thrice daily. The chloral was given at night only, the morphia being omitted. He had sponge-cake and tapioca pudding as diet. On the 6th, the spasms occurred about twice in an hour. On that day and the two following, he took a drachm of tincture of cannabis Indica every three hours. The symptoms, however, were not relieved by it to the same extent as by the chloral, and it created great nausea. In the evening of March 8th, there were great præcordial pain, very violent spasms of muscles, and characteristic perspiration. Half a grain of muriate of morphia in solution was injected into the epigastric region, and the chloral mixture was readministered. The wine was increased to thirty ounces daily.

March 9th.—There was less spasmodic jerking of the limbs, and the abdominal tension was less perceptible. The opisthotonos was relieved, he had slept well, and his appetite was better. The treatment was persisted in, sherry being substituted for port wine. For some days the patient continued relieved; the tetanic symptoms diminishing. On the 13th, the chloral was taken only twice in twenty-four hours. Morphia was used twice in twenty-four hours, giving great relief.

March 15th.—There was more jerking of the stump, which had previously quite subsided; the abdomen was very hard and tense. He had a sense of tightness and oppression at the epigastrium, which was relieved by the subcutaneous injection. There were some perspiration and clamminess of skin.

March 16th.—He was ordered to have two and a half grains of disulphate of quinine twice daily. Codfish and tapioca pudding were taken as diet. There was more spasm; risus sardonicus was perceptible. He slept well after the injection of morphia.

March 19th.—Two bottles of sherry were taken daily. Cotton-wool was applied to the stump, which was quite healed.

March 21st.—He was much better; complained of stiffness of the left leg. There was some oedema of the foot, and stiffness of the knee upon moving it. A grain of morphia was at this time given subcutaneously three times daily.

March 27th.—The morphia was given only twice daily, and reduced in quantity; the wine was also reduced. Stiffness of the knee was still complained of; his general condition was unchanged. He had some pain and jerking in the stump, which discharged slightly from the line of the cicatrix.

April 6th.—The abdomen was still rigid; but this was partially relieved by friction with ammonia linament.

April 16th.—The muscular irritability appearing still to continue, five grains of disulphate of quinine, dissolved in dilute sulphuric acid and water, were ordered to be injected twice a day. As, however, the patient was not relieved by the injection, it was discontinued. He gained flesh and strength gradually from this time; the stump, which had broken out, again healed; and he took his diet well.

April 24th.—Citrate of iron and carbonate of ammonia (of each five grains) were ordered to be taken three times a day. He complained of pleurodynia, which was relieved by the application of tincture of belladonna.

On May 6th, the wine was reduced to ten ounces daily, and he was allowed to get up with crutches. The morphia was reduced; of which he loudly complained, refusing to eat his dinner until an injection had been given. On two occasions, distilled water was given instead of the morphia solution; and until he discovered the difference by the colour, he did not find the deception out. This fact, coupled with the circumstance that his previously placid countenance was always contorted by a spasm when his attention was directed to it by queries as to his muscular condition, induced the belief that he exaggerated his symptoms somewhat. An electro-magnetic current was therefore applied to his leg. He improved greatly, and was discharged cured on May 25th.

REMARKS BY MR. CARRUTHERS.—Several cases of tetanus have unfortunately come under my observation during the last four years; and, amongst the various remedies employed, not one has given so much relief to the patient as chloral. Calabar bean reduces the spasm when it is injected; its action, however, is only temporary. There has been one case of recovery under its use, but lately it has not acted satisfactorily. Chloral not only relaxes the spasm, but induces sleep (a powerful aid towards recovery); and during its use I have never seen trismus or dysphagia ever become severe, even in fatal cases. We may therefore safely depend upon relieving two of the most distressing symptoms, even if we do not save life, by the administration of this remedy.

REVIEWS AND NOTICES.

WORKS ON PRACTICAL PHYSIOLOGY.*

THE systematic tuition of Practical Physiology in Great Britain was first begun in Edinburgh a good many years ago. The subject has until quite recently not been generally taught in the English schools. The recent regulations of the Royal College of Surgeons of England, however, having rendered it necessary for every school to attend to this subject, we may therefore fairly anticipate that, ere many more years elapse, English physiology will have regained something of the old position which it had in the time of Hunter, and, even more recently, in the time of Reid. For some strange reason, the physiology of this country has been almost swamped by microscopic anatomy. It might, indeed, almost be supposed that, in order to learn the actions of the tissues of the body, it is only necessary to look at them through a microscope. Let us be thankful that we have escaped from this umbra.

Many books on microscopic work have appeared in our country, and the practical chemistry of the urine has had an ample share of attention from writers. It is singular, however, how little adapted these books generally have been for the ordinary medical student. Two important handbooks, designed to meet the modern wants of students in Physiology, have now appeared—one by Dr. Hughes Bennett, the other edited by Dr. Burdon Sanderson. They belong to a new order of literature in English students' books, and are sufficiently important to make them deserve very careful examination at our hands. We shall make no apology, therefore, for detailing at length the results of a critical perusal.

The first work forms the third part of a text-book of Physiology by Dr. Hughes Bennett of Edinburgh. It is not, however, our intention to notice the general text-book. The part on Practical Physiology consists of three sections: 1. Practical Chemical Physiology; 2. Practical Histological Physiology; 3. Practical Experimental Physiology. The second section is written by Dr. Bennett; the others by his assistant, Dr. McKendrick. This part consists of only eighty-four small octavo pages. It is not bound separately, but is only to be obtained with the general text-book. The London book is of ampler dimensions and more important character. There is a volume of text comprising five hundred and forty-three octavo pages, and a good-sized volume of plates.

The chemical part of Dr. Bennett's work is the most satisfactory; the histological part the least so. The latter, however, begins well. A brief account is given of the microscope, and of the points to which regard ought to be paid by the student in selecting a suitable form of this instrument. The mode of measuring and demonstrating objects, and "how to observe with the microscope", are briefly but lucidly entered into. In a general account of the preparation of the tissues, the action of physical, chemical, hardening, and softening reagents is briefly entered into. We cannot but remark, however, upon the strangeness of the above classification. Is the process of hardening or of softening the tissues not due to physical or chemical agents? The staining, injection, and preservation of the tissues are described generally; and here the Practical Histological Physiology ends. The preparation of the special tissues and organs is quite omitted. If it happen that the student wants to know how he must proceed in order to prepare and study the eye, or the lung, or the stomach, or spleen, etc., he need not appeal to this book, for he will fail to get what he wants. It is difficult to explain the cause of this hiatus. It is like a play of *Hamlet* with the part of Hamlet omitted. The omission is so great that the value of the histological part of this work is reduced to microscopical dimensions. Dr. Bennett says (p. 525) that "there are numerous other practical details which it is useless to describe in words, as they can only be learned in the laboratory." Why, then, in a book, attempt to instruct students how to measure, demonstrate, and describe objects, etc.? The "other practical details" are just what we, and no doubt they, want to get at.

The part on Practical Chemical Physiology is very fair as far as it goes. In this, the author descends from the general to the special. Although the special *microscopic* examination of the various organs and fluids is omitted, the *chemical* examination of them is included. The part which treats of the urine is excellent. The description of the examination of the gases of the blood is, however, most imperfect. Indeed, this subject is treated in a way which is remarkable, considering how minutely some less important, but at the same time less difficult things, are entered into. Practical physiological chemistry appears to Dr. McKendrick to consist in analysing things, and yet the separation of fibrinogen and fibrinoplastin from the blood or other fluids is omitted. Some experiments with these substances might have been more profitable to the student, than a good many other things which he describes. The analysis of saliva is gone into, and the student is told that the solution of ptyalin obtained by the prescribed method "may be concentrated by evaporation, and its action on starch observed." Why omit to examine the action of saliva itself upon starch? He describes the analysis of gastric juice, but omits all experiments upon gastric digestion. What could be more instructive than a few experiments showing the influence of artificial gastric juice, or, it may be, the real thing, upon a piece of meat? The same remarks apply to bile and the pancreatic juice. In fact, the practical chemistry of digestion is omitted. Are the Edinburgh students actually taught how to analyse gastric juice, and not how to watch and test the effects of the digestive fluids upon aliment? It is scarcely credible. It is remarked at the end of the chemical section, that "it may be safely asserted that chemical physiology is still in its infancy." We cordially agree to that; but we cannot help adding that the author's notions as to the points which the students of this subject ought to study appear, in some important respects, to be still in their infancy also.

In the part which treats of Practical Experimental Physiology, we find a want of due sense of proportion. The experimental physiology of the properties of nerves and muscles is tolerably well done. Vision and hearing are entered into with considerable fulness. Helmholtz's ophthalmometer, and the mode of using it, are described at length. This instrument, we should think, is one which not one student in a thousand will ever employ. On the other hand, the ophthalmoscope is an instrument with whose use every medical student ought to be perfectly familiar. Judging from Dr. McKendrick's account, the image of the fundus termed the inverted image is the only one which is studied by the ophthalmoscopist. If the student is to perform experiments with the ophthalmometer, we think that he might also with advantage have been told how to observe the effects of atropia and physostigmia upon the iris. The physiology of the circulation may perhaps be considered to be more important for the general student than that of the eye or the ear, and yet this subject receives proportionally less attention than the others. The account of the influence of elastic tubes upon the pulse is imperfect, and indeed misleading. The blood-pressure is an important subject; there is none more so in physiology. The mode of using the kymographion is described. The mode of analysing the kymographic tracings is passed over; so is the use of woorara in such experiments; and it might have been expected that at least something would have been said about the influence of the pneumogastric and the depressor nerve upon the blood-pressure, and how the influence can be demonstrated. Moreover, the author seems to think that experiments upon the *heart* may be omitted from "Practical Experimental Physiology"; and so also may experiments on the brain and spinal cord, the pneumogastric and sympathetic nerves. He might surely have told us how to paralyse the vessels on one side of the head in a rabbit. Indeed, we feel obliged to say that Dr. McKendrick has rendered this section of the book remarkable on account of the important things which he omits. The section is much more a descriptive catalogue of physiological instruments than a guide to "Practical Experimental Physiology".

It is not our intention to allude at present to the general and special parts of Dr. Bennett's text-book; but we hope to have an early opportunity of subjecting them to criticism.

[To be concluded.]

CHAMPAGNE FOR PAUPERS. — The guardians of the Woolwich Union, at a recent meeting, had before them a recommendation of Dr. Bothwell, the medical officer, that "another dozen of champagne" be obtained for a pauper inmate, suffering from delirium tremens. The guardians, after some discussion, came to the conclusion that they would not be justified in complying with the recommendation, and refused to give the order asked for. Dr. Bothwell was informed of the guardians' decision, in order that he might have an opportunity of prescribing a substitute.

* *Text-Book of Physiology: General, Special, and Practical.* By John Hughes Bennett, M.D., F.R.S.E. Edinburgh: James Thin. 1872.

Hand-book for the Physiological Laboratory. By E. Klein, M.D., J. Burdon Sanderson, M.D., F.R.S., Michael Foster, M.D., F.R.S., and T. Lauder Brunton, M.D., D.Sc. London: Churchill. 1873.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 26TH, 1873.

THE MEDICAL ACT (1858) AMENDMENT BILL.

THE Medical Act (1858) Amendment Bill, sketched in the last number of the JOURNAL, prepared and brought in by the Right Honourable T. E. Headlam and Sir Henry Selwin-Ibbetson, Bart., has been printed by order of the House of Commons. Both gentlemen occupying prominent positions, and being held in high estimation in the house—one on the side of the Government, the other on that of the Opposition—and both unconnected with the medical profession, the question of medical legislation is thus removed from the sphere of party as well as from that of class legislation.

The Bill, as was stated, provides for the Direct Representation of the Profession in the General Medical Council, thus seeking to secure an object in accordance with the almost unanimous feeling of the profession. At each annual meeting of the Association held since 1866, as in Dublin in 1867, in Oxford in 1868, in Leeds in 1869, in Newcastle in 1870, in Plymouth in 1871, and in Birmingham in 1872, as well as at a special general meeting of the Association held in London in May 1870, for the express purpose of considering medical reform, resolutions were passed, with scarcely a dissentient voice, in favour of the necessity for direct representation. The Irish Medical Association, the President and Fellows of the King and Queen's College of Physicians in Ireland, and the Royal College of Surgeons in Ireland, have also passed resolutions in favour of direct representation. The Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, various medical societies in the large towns of England and of Scotland, as well as Branches of the British Medical Association, have petitioned the legislature for direct representation.

Ample proof is thus afforded that no measure of medical reform will be satisfactory to the profession, which does not embody clauses to effect this alteration in the constitution of the General Medical Council; and it is scarcely possible that any Bill can pass which may disregard the general wish of the profession in this respect. Nothing can be more striking than the anomalies at present existing in the formation of the Council: one illustration will suffice. For instance, the great Medical University of Edinburgh does not boast the possession of a representative for itself, as it is linked in representation with Aberdeen. On the other hand, Durham, with its one medical graduate of this year, boasts an exclusive representative, in whose election the clerical element, and not the medical, may be said to have triumphed.

The representative of the University of Cambridge is elected by the graduates in all the faculties, numbering upwards of 6,000, a constituency but very slightly leavened by the medical

element. In Durham and in Cambridge the election of the representative in the General Medical Council is therefore virtually in the power of persons unconnected with the medical profession. It would, indeed, be strange, with these facts before them, were the members of the medical profession to rest content without any control over the election of a single representative.

It has been objected that the introduction of direct representatives to the General Council would render it too numerous. This is mere matter of opinion. Some think a larger Council would facilitate the formation of good working Subcommittees; but, be this as it may, the difference between four and three, or even between thirty and twenty-four, is not so great as to be overwhelming. The question is simply one of detail, as must be well known to all practically acquainted with legislative proceedings. The Association has never sought to obtain as Direct Representatives of the profession more than one-fourth of the Council. Let those, therefore, who think the Council too numerous, seek to diminish its number by linking together in representation various corporations, as is the case already with all the Scotch Universities, and the Association will forego a like proportion. These are details to be worked out, if ever, when the Bill has passed the second reading; for the present, all honest advocates for Direct Representation should strive to secure the triumph of the *principle* in the legislature, and, well knowing the difficulties that beset and impede private legislation, support with all their power and influence, direct and indirect, the measure that has now been introduced.

Fortunately, a feeling has been evinced in the Medical Council itself that the profession is not sufficiently represented, and that, were it better represented, the General Council would have greater influence.

THE GOSPEL OF YOUTH.

DR. GEORGE M. BEARD has recently delivered before the Long Island Historical Society, in America, an address which pleads the cause of youth so vigorously as to deserve the gratitude of the ever-renewed rising generation. He stated that, from an analysis of the lives of a thousand representative men in all the great branches of human effort, he had made the discovery that the golden decade was between thirty and forty, the silver between forty and fifty, the brazen between twenty and thirty, the iron between fifty and sixty, and so on. The superiority of youth and middle life over old age in *original* work appears all the greater, when we consider the fact that nearly all the positions of honour, and profit, and *prestige*—professorships and public stations—and nearly all the money of the world, are in the hands of the old. Reputation, like money and *prestige*, is mainly confined to the old. Men are not widely known until long after they have done the work that gives them their fame. Portraits of great men are a delusion; statues are lies. They are taken when men have become greatly famous, which, on the average, is at least twenty-five years after they did the work that gave them their fame. Original work required *enthusiasm*. If all the results of the original work done by men under forty-five were annihilated, the world would be reduced to barbarism. Men are at their best at that time when enthusiasm and experience are most evenly balanced; this period, on the average, is from thirty-eight to forty. After this period, the law is, that experience increases, but enthusiasm declines. In the life of almost every old man there comes a point, sooner or later, when experience ceases to have any educating power.

In the whole recorded history of the human race, no great invention or discovery has been conceived and completed by any one over sixty. The

lecturer had also discovered by statistical examination that the golden decade for criminals was between twenty and thirty, nearly all the first-class crimes of the world being done by boys and young men under thirty-five. He had observed also that the same law applied to animals. Horses lived to be about twenty-five, and were at their best from eight to fourteen; this corresponded to the golden decade of man. Dogs lived nine or ten years, and were best for the hunt between two and six. Plants also appear to be subject to the same law. Fruit-bearing trees are most prolific at a time of their average life corresponding pretty nearly to the golden and silver decades of man. Children born of parents one or both of whom are between twenty-five and forty, are, on the average, stronger and cleverer than those born of parents one or both of whom are much younger or older than this. The same applies to the breeding of horses, dogs, and probably of other animals. The generalisation, broadly stated, is, that in all organic beings there is a period when the productive power is greatest, and this not late, but early—not far from the middle of the average life.

He affirmed that there occurs in old age a decline of the moral faculties, a loss of moral enthusiasm, as well as an intellectual decline. Far more than is supposed, the martyrs of history have been young men. The decline of the moral faculties in old age may be illustrated by studying the lives of the following historic characters: Demosthenes, Cicero, Sylla, Charles V, Louis XIV, Frederick of Prussia, Napoleon (prematurely old), Voltaire, Jeffries, Dr. Johnson, Cromwell, Burke, Sheridan, Pope, Newton, Ruskin, Carlyle, Dean Swift, Chateaubriand, Rousseau, Milton, Lord Bacon, Marlborough, Daniel Webster, Sumner, and Greeley. In some of these cases, the decline was purely physiological; in others, pathological; in the majority, it was a combination of both. Very few declined in *all* the moral faculties. One becomes peevish, another avaricious, another misanthropic, another mean and tyrannical, another exacting and querulous, another sensual, another cold and cruelly conservative, another excessively vain and ambitious; and others simply lose their moral enthusiasm or their moral courage, or their capacity of resisting temptation and enduring disappointment.

The lecture closed with these suggestions.

1. These facts should be considered in apportioning the work of the world. Positions that require mainly *enthusiasm* and *original* work should be filled by the young and middle-aged; positions that require mainly *experience* and routine work should be filled by those in mature and advanced life, or (as in clerkships) by the young who have not yet reached the golden decade. The enormous stupidity and backwardness and red-tapeism of all departments of governments everywhere are partly due to the fact that they are too much controlled by age. The conservatism and inferiority of colleges are similarly explained. Some of those who control the policy of colleges—presidents and trustees—should be young or middle-aged. Journalism, on the other hand, has suffered from relative excess of youth and enthusiasm.

2. It is sometimes a blessed thing to die young, or at least before extreme old age. The fame of William the Silent, of Henry IV of France, of Sidney, and of Lincoln, is probably far purer than if they had lived longer, and thus run the risk of moral decline. Thus a man may be immortalised by a murderer. If Daniel Webster had died a number of years sooner, his public fame would have been spotless for all time.

3. Moral decline in old age means *take care*, for the *brain is giving way*, and is very frequently preceded or accompanied by sleeplessness. Decline of the moral faculties, like decline of other functions, may be relieved, retarded, and sometimes cured, by proper medical treatment, and especially by hygiene. In youth, middle life, and even in advanced age, one may suffer for years from disorders of the nervous system that cause derangement of some one or many of the moral faculties, and perfectly recover. The symptoms should be taken early, and treated like any other physical disease. Our best asylums are now acting upon this principle, and with good success. Medical treatment is almost powerless without hygiene. Study the divine art of taking it

easy. Men often die as trees die—slowly, and at the top first. As the moral and reasoning faculties are the highest, most complex, and most delicate development of human nature, they are the first to show signs of cerebral disease. When they begin to decay, in advanced life, we are generally safe in predicting that, if neglected, other functions will sooner or later be impaired. When conscience is gone, the constitution may soon follow. Everybody has observed that greediness, ill temper, despondency, are oftentimes the first and only symptoms that disease is coming upon us. The moral nature is a delicate barometer that foretells long beforehand the coming storm in the system. Moral decline, as a symptom of cerebral disease, is, to say the least, as reliable as are many of the symptoms by which physicians are accustomed to make a diagnosis of various diseases of the organs of the body. When moral is associated with intellectual decline in advanced life, it is almost always safe to make a diagnosis of cerebral disease. Let nothing deprive us of our sleep. Early to bed and *late* to rise makes the modern brain-toiler healthy and wise. The problem for the future is, to work hard, and at the same time to take it easy. The more we have to do, the more we should sleep. Let it never be forgotten that death in the aged is more frequently a slow *process* than an event: a man may begin to die ten or fifteen years before he is buried.

4. These researches enforce the duty of especial kindness and charity for those in life's decline. The old are the wards of the young; and their moral defects, so often due to causes beyond their control, should at least receive as much consideration as diseases of a purely physical character. There should be at least as much charity for a tired brain as for a broken leg.

These views, startling as they may just now appear, will, Dr. Beard believes, in twenty-five years be regarded as commonplace. Their general acceptance will modify many medical, hygienic, and political theories and customs, and will tend to diminish much of the unhappiness of the family and of the social circle. Except, however, that they are overstated and exaggerated, we do not think that they are either as startling or as novel as their author considers them to be. Their element of untruth lies in this exaggeration, which the experience of sober physicians will easily correct; otherwise they are chiefly interesting as recalling to us known truths, which it is more and more the tendency of present thought to accept and to act upon. But there is little doubt that they afford matter for salutary reflection; and the very earnestness and rather exaggerated mode of aphoristic wisdom with which Dr. Beard clothes them serve an useful purpose.

MR. EDWARD BELLAMY has been appointed teacher of Operative Surgery at Charing Cross Hospital.

THE quarterly meeting and dinner of the Edinburgh University Club, London, will take place at St. James's Hall Buildings on Wednesday, May 14th; Sir Alexander Armstrong in the chair.

A South Durham and Cleveland Medical Society has been formed. Meetings are to be held during the winter months at Stockton and Middlesborough, alternately.

AN Italian edition of Dr. Cobbold's *Lectures on Practical Helminthology* is about to be published under the auspices of Dr. Tommaso, of Florence.

DR. JURGENSEN, lately extraordinary professor at Kiel, has accepted an invitation to the ordinary professorship of Materia Medica, with the directorship of the polyclinic, at Tübingen, in the room of the late Dr. Köhler.

THE Darlington Board of Guardians have presented Mr. W. H. Arrowsmith with a cheque for £50, as remuneration for extra work done by him as Medical Officer to the Darlington Workhouse Fever Hospital during the small-pox epidemic.

SIR THOMAS BEAUCHAMP has offered £100 a year for ten years to the Norfolk and Norwich Hospital, in the hope that nine others will follow his example.

A JUMP OFF LONDON BRIDGE.

THE *Guy's Hospital Gazette* mentions that in No. 26, Clinical Ward, there is a case of pleurisy produced by a jump off London Bridge. The patient states that during the whole time of her fall and immersion she did not lose her senses, and, on admission, she inquired into what hospital she had been brought. She was in the water ten minutes.

SIR D. SALOMONS, BART., M.P.

WE learn with pleasure that the senior member for Greenwich has passed successfully through the most dangerous period of his illness. He has been suffering from severe congestion of the lungs with anasarca, but is now slowly regaining strength, and is able to take food more satisfactorily.

THE MIDDLESEX HOSPITAL.

DR. ROBERT KING has been appointed Lecturer on Materia Medica and Jurisprudence to the Middlesex Hospital, in place of Dr. Divers, resigned.

THE ARMY MEDICAL SERVICE.

WE believe that a new warrant for the medical officers of the Brigade of Guards will shortly be introduced. Although its exact provisions have not yet transpired, we have heard it hinted that the regimental surgeon-majorcies of the Foot Guards may fall victims to the pruning-knife, and that a deputy surgeon-general is to be appointed for the brigade.

THE GERMAN SURGICAL CONGRESS.

THE second annual meeting of the Society of German Surgeons commenced on the 16th instant, when the members assembled in the hall of the University of Berlin, under the presidency of Herr von Langenbeck. A large number of the most eminent German surgeons were present, including, *inter alios*, Bardeleben, Baum, Billroth, Busch, Esmarch, Hueter, König, G. Simon, Textor, Volkmann, etc. Visitors from England, Russia, and Belgium, also assisted; Mr. Spencer Wells being among the number. Drs. Volkmann and Gurlt were appointed secretaries, and Dr. Trendelenburg treasurer. The scientific business was commenced with an address by Dr. Billroth on the Extirpation through the Neck of large Cancers of the Tongue seated far back. This was followed by a paper by Dr. Busch of Bonn on Wounds inflicted by the Chassepot rifle at short distances. A large number of the members and visitors afterwards dined together.

IMPORTED TRICHINOSIS.

DR. G. W. FOCKE, according to the *Berliner Klinische Wochenschrift* of April 21st, reports that a series of cases of trichinosis following the use of pork imported from North America, has been recently observed in Bremen. Twelve persons were infected by a gammon of bacon bought at an auction; the younger, from ten to twelve years old, were least affected, while the adults suffered more severely. In course of time, more cases of disease, traceable to the use of other hams, were observed; and, at the time when the report was made, the number of persons suffering from trichinosis exceeded twenty. Living trichinæ were found in the specimens of meat examined. The process of smoking only kills the trichinæ in the more superficial parts of the meat, leaving their capsules easily recognisable; while in the interior the meat is almost raw and the trichinæ are intact.

THE ENGLISH IN JAPAN.

DR. DIVERS, of the Middlesex Hospital, has been appointed to the Professorship of Chemistry in the new Engineering College at Jeddo. It is a Government appointment under the Ministry of Public Works, and a complete staff of professors and teachers will be appointed. The College buildings, including residences for staff and pupils, are on an

extensive scale; and, as the Government is acting very liberally in all matters, the staff may expect to be able to show the use of such an institution in a short time. In addition to his teaching duties, Dr. Divers will probably have much to do in advising the Government in the development of the resources of the country; and, as it is rich in metals, coal, bituminous shale, sulphur, etc., and vegetable products, his duties will be manifold and onerous beyond his ordinary professorial duties. The teaching will be carried on in English, and large numbers of students are expected to enter.

THE MEDICAL SCHOOL AT NETLEY.

THE session at Netley was opened on April 2nd by an introductory lecture from Dr. De Chaumont, Assistant Professor of Hygiene. The numbers attending the course are as follows: Candidates for Indian army, 16; for navy, 14; naval surgeons on half-pay, 6; army surgeons-major, 5; army surgeons, 12. The arrivals of invalids from India and other foreign stations have been very numerous lately, and nearly a thousand cases are now under treatment in hospital. Dr. Balfour, C.B., has arrived, and assumed the duties of Principal Medical Officer.

CHOLERA IN INSULAR POSITIONS.

AT a recent meeting of the Epidemiological Society, Dr. Smart, C.B., read a paper on Cholera in Insular Positions. After some observations on the limits of the three grand pandemics, and on the generally recognised modes of extension in them, Dr. Smart sketched the geographical distribution of the various groups of islands in which cholera had at any time appeared, stating what had been the reputed source of infection on each occasion, and the leading features of each epidemic. The phenomenon of endemication are those of causation and revitalisation of the disease, while those known as epidemic relate to its progress. In hot climates it has been found that the homes of marsh-fevers and dysentery are the cradles of cholera; yet, although thus related in their first beds, they must have had entirely different essential causes to account for their very different phenomena. Attention was next drawn to the correlations of cholera in its epidemic progress with other epidemic diseases, such as typhus, typhoid, and yellow fevers, small-pox, and influenza. There are many positive instances of direct infection of islands by boats or ships; and, although this has been denied at times, yet great allowance must be made for the uncertainty of the commerce carried on by boats which are generally exempt from quarantine in archipelagos or groups, as well as for the non-observance of restriction on ships from distant parts where cholera prevails, with perhaps diarrhoea among their crews. As cholera in its spasmodic form was carried in H.M.S. *Apollo*, in 1849, from Cork to near the coast of Brazil, a distance of 4,500 miles, and fifty-five days at sea, it follows that cholera in its diarrhoeic form, which lasts after the spasmodic type has ceased, may be conveyed by ships to a greater distance than that. In tropical climates, the season of the year, wet or dry, has great effect on the intensity of the causation of cholera. This is very observable in the West India Islands, where the dry and generally healthy season is that in which the epidemics of cholera have attained their climax, while the hot wet season is that for the growth of the endemo-epidemic yellow fever. The same relationship is traceable in the epidemics of Mauritius and Malta. If the capability of ships or boats to convey the disease into islands be accepted, it follows, that in these restrictive measures are to be relied on for the exclusion of the disease. Dr. Smart expressed his opinion that the views of the International Sanitary Congress are correct in the main, and that they may be carried out effectively in small islands, and with success, if the specific nature of concomitant diarrhoea be observed as an indication for action. The ocean-track is that by which cholera is conveyed with tenfold rapidity, in comparison with overland routes; and quarantine of ships, is of all things, the most efficacious in opposing the onward march of cholera. The commerce of England admits of no rigid quarantine, and she confides in hygienic and general sanitary measures for the mitigation of cholera when it has obtained its footing in her ports and in carrying out such measures our health-officers may find much

beneficial guidance as to the periods when they are likely to be most effective, by observing the meteorological phenomena which are found to co-exist in the growth and climax of epidemics.

BARON VON LIEBIG.

THIS illustrious chemist died on April 18th, at Munich, in his seventieth year. Born at Darmstadt in May 1803, he early showed his love for natural science, and especially chemistry. He studied at the Universities of Bonn, Erlangen, and Paris, and graduated in Medicine at Erlangen before he was twenty-one years of age. He was appointed, chiefly through the interest of Alexander von Humboldt, Extraordinary Professor of Chemistry at Giessen, and, two years later, Professor in Ordinary. He now commenced his model laboratory for practical chemistry, in which many distinguished chemists have been educated. The works which he published, written entirely by himself or conjointly with others, number between three and four hundred. Of these, the following are a few well known results of his genius: a memoir on *Fulmunic Acid and the Fulminates*; *On the Composition and Chemical Relations of Uric Acid*; a work on *Organic Chemistry in its Application to Agriculture and Physiology*; *Animal Chemistry, or Chemistry in its Application to Physiology and Pathology*; *The Motions of the Juices in the Animal Body*; *Researches on the Chemistry of Food*; *Familiar Letters on Chemistry, considered in its Relation to Industry, Agriculture, and Physiology*. He was elected F.R.S., London, in 1840, and received the Copley medal. An hereditary barony was conferred on him by Louis II, Grand Duke of Hesse Darmstadt, in 1845. In 1852, he became Professor of Chemistry, and afterwards Superintendent of the Chemical Laboratory, at Munich. In 1854, an European subscription of one thousand pounds was raised for the purpose of marking the value set by the public on his chemical and agricultural researches. Of this sum, £540 was devoted to the purchase of five pieces of plate, to be severally held by his five children as memorials of their parent. The rest was handed to Liebig. He was a member, honorary or corresponding, of almost all the leading Academies and learned Societies in Europe and America, and in 1861 was elected one of the eight Foreign Associates of the Academy of Sciences in the French Institutes. His funeral, which took place on Sunday last, was attended by the various professors of the University, by the civic functionaries, and by a large concourse of people.—We are indebted to Dr. George Harley for the following warmly appreciative personal sketch of the character and scientific influence of his deceased teacher and friend.

Another great mind has passed from among us: Liebig is no more. Chemistry, Medicine, and Agriculture, have alike to mourn the loss. The mind just departed was one far above the ordinary standard, and one whose greatest powers consisted in correct observation and broad generalisation—two widely differing gifts, not always to be encountered in the same individual. The uninitiated—and they must be but few in number—may ask why medicine should particularly mourn the loss of the chemist. To them we reply, that the vast advance which the last twenty years has seen in scientific medicine owes more to the direct and indirect teaching of Liebig than to that of any other man, past or present. It was he that simplified our modes of urinary analysis, and brought the solution of chemical problems within the scope of the consulting-room. It was his method of quantitatively testing for urea which enabled us to gauge the rate of tissue-change in health and in disease. It was his discovery of crystalline substances in muscular fibres—creatin, for example—which opened up to us the whole vista of what have been termed the “immediate principles”. It was he that led us out of the land of darkness in which we, with regard to the functions of digestion, assimilation, and respiration, had long wandered. Indeed, had he done nothing more than open our eyes to the important part played by chemical and physical forces in all the healthy and morbid so-called “vital processes”, medicine would still owe to him a deep debt of gratitude.

These are some of the direct advantages which medicine has reaped from his teachings, but how about the indirect advantages? Liebig was already a teacher at the early age of 21, and at 23 was full professor, in the University of Giessen. During the next quarter of a century, young scientific aspirants in chemistry, medicine, and physics, flocked to his laboratory from every quarter of the globe; and it is

not very many years since it was almost impossible to name any university in Europe where one or more of his pupils were not to be found as teachers propagating his views.

Although not a medical man, Liebig took a keen interest in every-thing medical (his eldest son he reared to the medical profession). Moreover, so deeply interested was he in the advancement of medicine, that he seldom failed to impress all his young medical friends and pupils with the high importance which he entertained of chemical and physical study in laying the true foundation of rational medicine.

In private life, Liebig was genial and entertaining—always communicating knowledge, sometimes in simple, sometimes in humorous, language, but never losing an opportunity of suggesting a new, or developing an old, idea. As an example of this willingness and promptitude in imparting knowledge, we may mention that one day, while sitting chatting with him after dinner, the conversation turned upon the great uniformity of Nature's laws, throughout both the vegetable and animal kingdoms, in the processes of nutrition, when he inquired if we were aware that vegetables digested their food, like us, by gastric juice? On our replying in the negative, he got up, rang the bell, and told the servant to go into the garden and pull a flower up by the root. The flower, root and all, was soon brought in (an *Iris Germanica*, we think). Liebig immediately took a portion of the root, squeezed out the juice, and, with a piece of test-paper, showed the intense acidity of the excretion, laughingly remarking, “It is with that they digest their food.”

On the other hand, he was never above taking a lesson, no matter from however humble a teacher. As we have said, he was the inventor of the volumetric urea process. In performing this analysis, the urea is ascertained to be all deposited by the solution turning carbonate of soda of a yellowish orange colour. This he recommended to be done by adding a drop to a solution of soda in a white vessel. As the test has to be frequently repeated, much time is thus lost, and great trouble is caused by having to wipe the plate clean after each individual testing. To us it had occurred that all this time and trouble might be spared by saturating a piece of white filter-paper with carbonate of soda solution, drying it, and keeping it in stock, and at each testing dropping a single drop of the urea-solution on the dry soda-paper until one showed an orange hue. Thus a fragment of paper four inches square does for a whole analysis, and entails scarcely a moment's loss of time. In 1861, being on a visit to Liebig, we incidentally mentioned this plan. Without waiting a minute, he went off with us to his laboratory (it being the long summer vacation, there was no assistant there), at once took down the reagents, and himself applied the test—manifesting as much interest and pleasure in the result of the experiment as if he had been but a mere tyro in chemistry. A man with such a turn of mind could not fail to gain and retain friends.

Liebig was particularly partial to England, and, up to about twelve years ago, visited it frequently. At that time, however, he had the misfortune to fall and fracture his patella, and was ever afterwards slightly lame, requiring the aid of a walking-stick. This, to an active, energetic man like him, was a great discomfort; and he informed us that it was this, and the difficulty he had in getting in and out of trains, which alone prevented his revisiting England.

Like the elephant's trunk, which can grapple with and overthrow the sturdy tree, or manipulate and play with the smallest pin, so could Liebig's mind grapple with the profoundest philosophy, or manipulate the commonest affairs of domestic life.

Those who knew him best, loved him most.

Contrary to what was stated in some of the daily papers, Liebig died from inflammation of the lungs. He was born on May 12th, 1803, and died on April 18th, 1873, being thus aged 70 years except one month.

THE PATHOLOGY OF THE BATTLE-FIELD.

We should strongly recommend all who are interested in military surgery not to lose the opportunity of inspecting a collection of paintings by the Russian artist, M. Basil Werechagin, now on view at the Crystal Palace. This is not the place to enlarge upon the artistic properties of these remarkable works, on the extraordinary individuality of local colour, or on the skill with which the steamy quivering haze of tropical heat has been rendered. In these respects they stand quite alone; but, as illustrating some of the phases of warfare, and some of its pathological results, they may be appreciated from a point of view which probably their talented author could hardly have anticipated. Painful as many of them must be from their intense realism to the ordinary observer, the surgeon may look upon them as almost rivalling the scientific accuracy of Sir Charles Bell, whilst they even exceed his pic-

torial power; and we may especially draw attention to one painting, in which a fortress is delineated, at the foot of whose walls a number of dead bodies lie. Most of our readers are, no doubt, familiar with the interesting paper communicated by Professor Longmore to the last army medical blue book, on the attitude assumed in death from gunshot-wounds; and this most interesting work may be very profitably studied in connection with the views of that eminent authority.

NEW PHYSIOLOGICAL INSTITUTE IN BERLIN.

THE foundation-stone of a new physiological institute in Berlin was laid on April 1st. It is to contain a large amphitheatre, several smaller lecture-rooms, a library, dwellings for the assistants and servants, and five laboratories—viz., one for physiological chemistry, one for physical physiology, one for vivisections, one for microscopy and embryology, and one for the private use of the professors. There are also to be dark rooms, with a southern aspect, for optical experiments, an aviary, and places for keeping animals for experiment. In addition, there will be a dwelling and laboratory for Helmholtz, a laboratory of inorganic chemistry, and one for pharmacology under the direction of Liebreich. The building is to stand in a garden, thus being free from the noise of the streets, and well supplied with light and air.

TEMPERATURE AS AN INDICATION OF FŒTAL LIFE.

ACCORDING to Cohnstein, the temperature of the uterus is a more certain indication of the life or death of the fœtus than either its movements, or the beating of its heart. The fœtus has a higher temperature than the mother, and imparts it to the uterus; so that this organ is warmer than the axilla, or even than the vagina. If the child die, the temperature of the uterus falls to the level of that of the other parts of the body, and even, Cohnstein says, below this, as the dead fœtus abstracts heat from it. This fall of temperature becomes perceptible two or three hours after the death of the fœtus, and may be ascertained by introducing a curved thermometer a little way beyond the inner os uteri. In this way, also, the diagnosis between intrauterine and extrauterine pregnancy may be assisted.

WEATHER AND DISEASE.

DR. ARTHUR RANSOME, of Manchester, writes to us as follows. In the able article in the JOURNAL of April 12th, "On Meteorology in its bearing on Health and Disease," Dr. Moore brings forward certain facts relating to epidemics drawn from the Irish mortality-tables. On most points his conclusions accord with those which I have ventured to deduce from the disease-returns of Manchester and Salford and St. Marylebone ("On Epidemics," BRITISH MEDICAL JOURNAL, Oct. 10, 1868; "Ten Years of Disease," BRITISH MEDICAL JOURNAL, Dec. 3, 1870). Yet there are some points of divergence in our observations. It would be interesting to learn how far these differences are to be ascribed to diversities in the climates of the different localities, and how much is due to the different methods of inquiry which were pursued. Thus, in his article, Dr. Moore remarks that in Ireland smallpox appeared to be "essentially a disease of winter and spring, being checked by a rise of mean temperature above 50 deg." At Manchester, in 1863, an epidemic prevailed which reached its culminating point in the week ending June, after the mean temperature of the air had for some weeks been over 50 deg.; and the St. Marylebone tables closely resemble those of Manchester. Again, measles is regarded as a disease of the spring and summer quarters in Ireland; and in the English towns, although somewhat irregular in its progress, it was mainly epidemic in winter and spring, except in the year 1868, when it reached its maximum in the week ending June 27th. It also showed a tendency to recur every year, whilst whooping-cough, which is ranked by Dr. Moore as an annual plague in Ireland, observed a most remarkable biennial cycle in the twelve years ending 1872. Scarlatina appears to have produced a very high mortality in Dublin until the ninth week of the new year; but in the English records of sickness it attains its real maximum in one of the autumnal months—September, October, and November; a fact which shows either that there is no close correspondence

between the courses of the epidemic in the two countries, or that the deaths from scarlet fever usually take place some weeks after the commencement of the attack. On the other hand, there is complete agreement in our conclusions as to the prevalence of continued fever; Dr. Moore finding that the deaths from fever were most frequent in the third and fourth weeks of the year, and that this mortality depended especially on the weather. And in the towns before named, the rise and fall of the disease entirely bear out Sydenham's statement, that fever "takes birth when spring passes into summer; it rises towards maturity as the year advances; with the decline of the year it declines also. Finally, the frosts of winter transform the atmosphere into a state unpropitious to its existence." It is probable that Dr. Moore may be able to bring into closer accordance the other points which I have mentioned; and, in any case, we may hope that these independent observations may throw light upon the natural history of epidemic disease.

SCOTLAND.

AT the meeting of the University Court held on the 16th inst.—Professor Huxley, Lord Rector, in the chair—Mr. James W. H. Trail was appointed Assistant Professor of Chemistry in the University of Aberdeen for the remaining six months of the present academic year.

THE DEGREES IN MEDICINE IN THE UNIVERSITY OF EDINBURGH.

THE following resolution was carried at the meeting of General Council on April 15th. "That it is resolved to represent to the University Court that the restriction by which a gentleman who has got the degree of M.B. is prevented from acquiring that of M.D., unless he has passed in Greek, and logic, and moral philosophy, within three years after taking the former degree, should be removed, so far as that he shall be allowed to appear at examination on those subjects at any future time."

DUNDEE "TEA".

It would appear possible that the pecuniary advantages of jute manufacture may be counteracted by a corresponding demoralisation of the sense of taste; at least it is otherwise difficult to imagine why Dundee should stand prominently out as refusing to acknowledge the superior flavour of tea to blacklead. Such, however, appears to be the case; for, of eighteen samples of supposed tea seized by the police of that town, all were found to contain one or more of the following delicacies: blacklead, Prussian blue, turmeric, carbonate of lime, china clay, starch. Some other commodities examined did not fail to testify to equal and singular eccentricities of taste on the part of the inhabitants.

THE MEDICAL CURRICULUM AT ABERDEEN.

THE election of Professor Huxley to the Lord Rectorship at Aberdeen was an event which, we foretold, would be of great and important benefit to the University. Bred under the liberalising influences of a medical education and of biological studies, he has entered on his duties at the Northern University able and prepared to support a liberal policy. He has at the outset of necessity been compelled, in a matter not immediately affecting medical interests, to set his face against local prejudices too long tolerated. Although Mr. Huxley's independent assertion of justice in the case specially alluded to has been, in the meantime, for obvious reasons, unsuccessful in gaining the desired results, he has prepared a rich and fertile soil for good fruit to come. His efforts to improve and simplify medical education and the preliminary branches demand from us a special expression of sympathy. He has on several occasions boldly and publicly attacked the fallacies of the medical curriculum of the present day, which has been built up to dangerous height, partly with the crumbling bricks and mortar of a past age. He has now given notice, that he will bring forward a resolution at the next meeting of the University Court to re-

form the medical curriculum at Aberdeen. He intimated at the late meeting that he had received a petition from the medical students attending the University, signed by nearly 200, requesting the omission of, or a substitution for, Greek in the compulsory preliminary examination. He stated that he considered the medical curriculum as somewhat overweighted with classics, and that some new arrangement would probably be exceedingly advantageous, especially in the matters of natural history and botany. The option or substitution of German or French, instead of a limitation to classics, would be most desirable. In the medical profession, the advantages derived from a knowledge of these languages far outweighs the benefits, great though they be, of an acquaintance with the history and literature of ancient Greece. With regard to natural history and botany, we understand that Mr. Huxley has expressed a strong opinion in favour of the view that, as these subjects at present interfere with the more strictly medical studies, the examination in them should come not later than the end of the first year. This view we have more than once expressed on former occasions.

IRELAND.

DR. W. J. THOMPSON has obtained the full superannuation allowance allowed by the Act of Parliament, on resigning as Medical Officer of the Inistioge Dispensary District, from failing health, after thirty-three years' service.

THE dispensary medical officers of the Carlow Union have memorialised the board of guardians of that district for an increase of salary, owing to the enormous increase in the price of all the necessaries of life. For this and other reasons, they ask the guardians, with the sanction of the Local Government Board, to give each of the memorialists an increase of £30 *per annum*. The majority of the guardians are favourable to the proposition; and it is expected that at the special meeting which will shortly take place, to consider the subject, the request of the medical officers will be granted.

QUARTERLY RETURN OF BIRTHS AND DEATHS REGISTERED IN IRELAND.

THE births registered during the fourth quarter of the year 1872 amounted to 34,093, affording an annual ratio of 1 in every 39.7, or 2.53 per cent., of the population; and the registered deaths to 22,434, a number equal to an annual ratio of 1 in 60.3, or 1.66 per cent., of the population. The average number registered during the corresponding quarter of the previous five years was 20,757.

SANITARY LECTURES.

THE eighth of the course of scientific lectures on Public Health was given on the 12th instant by Dr. Mapother, on the subject of the Prevention of Artisans' Diseases. He said that the special diseases which ill-regulated trades induce may be placed under three classes: 1, those due to the entrance of dust into the lungs; 2, those due to slow poisoning; 3, those which constrained positions or overwork in close rooms engender. Stone-cutters suffer from lung-affections by inhaling minute particles of stone, which irritate the lungs and excite inflammation. The working of flax is also very detrimental, giving rise constantly to asthmatic complaints. At paper-works the teasing of the shoddy, and at marine stores the picking of rags, create a most stifling and hurtful dust. The remedy for dusty trades was, first, to use a respirator which would filter the air. He had devised one some years since which was found to be very effectual, and cost only a few pence. It consisted of a wire gauze covering the mouth and nose, lined by a layer of cotton-wool a quarter of an inch thick. Other remedies were, ventilation by means of McKinnel's tube; the action of steam fans; and the exclusion from all labour requiring vigorous muscular and breathing efforts of persons under eighteen, whose organs up to

that age are not strong enough to resist ill-usage. Having referred to the diseases which occur among those who work with lead, copper, mercury, phosphorus, and arsenic, and the chemical and mechanical appliances for their prevention, he alluded next to the case of seamstresses. Weakness of sight, from over-use of the eyes, with badly arranged light, and indigestion, from bad and hasty meals and long sitting in a close room, are diseases which have been commonly observed among needle-workers, who number in Dublin between seven and eight thousand. The sewing-machine, he considered, was of service to the needle-worker; and no harm results, if the work be not continued for more than five consecutive hours. Working the treadles has led to illness from undue supply of blood to the lower half of the body; but steam and an ingenious magnetic apparatus have been substituted for foot-work at Salem, Massachusetts; and Hall's and Parson's treadles have been advised for the lessening of this labour by the Board of Health of that State.

CONJOINT EXAMINING BOARDS.

AT a meeting of the Medical Reform Committee of the British Medical Association held on April 9th, Dr. Edward Waters in the chair, the following resolution was unanimously passed.

"That, having heard from the Chairman, on the part of himself, Mr. Michael, and Dr. Stewart, a statement of the circumstances which led to Mr. Headlam's giving notice of moving for leave to introduce a Bill for the amendment of the Medical Act (1858), the Committee approve of their proceeding; appoint the Chairman, Dr. Sibson, Mr. Michael, and Dr. Stewart, a Subcommittee to watch the progress of the Bill; and instruct them, in concert with Dr. Headlam, to frame a clause expressly providing for the combination of the various examining bodies and the formation of conjoint examining boards, on the principles embodied in the scheme agreed on by the majority of the English corporations."

ANÆSTHETICS.

CHLOROFORM-INHALERS.

DR. SKINNER, of Liverpool, writes as follows. In the number of the JOURNAL for March 1st, which never reached me till this morning, having had to order an extra copy specially, I perceive that Mr. Marshall, of Dover, is of opinion, that "Skinner's mask is open to many objections; it gives too large a surface, and uses a large quantity of chloroform." I do not know his other objections, but I shall answer the two which he has mentioned. The largeness of the evaporating surface is no fault, the larger the better; the freer the admixture of air, and the easier can the dose be regulated. It may be pushed to either extreme, in drops or in full doses, and every shade between, as necessity requires. Mr. Marshall is probably not aware that my mask is only part of my method; that I never recommend the mask without the magazine, or bottle and drop tube. The mask is of no use without the bottle; at least, I should consider it unsafe in ordinary hands. As regards the largeness of the quantity of chloroform required for its use, that must depend upon the skill, tact, and experience of the party administering. I will take on myself to say, that in my own hands, from one to two drachms is the ordinary average quantity I use to render a patient perfectly insensible to pain, for the purpose of having one or more molars extracted, the time occupied being from two to five minutes, never more. I am speaking of the average. I have often timed myself with various dentists, and I have accomplished the same effect occasionally in from sixty to ninety seconds, with little over half a drachm of chloroform. For ovariectomy, and similar capital operations, the same holds good; although I generally take more time, as the effect has to be sustained, the most painful part of the operation being the first free incision. I have still to learn that any inhaler extant can accomplish more than, or even equal to, what I have above stated. As regards portability and cleanliness, there is no other its equal, although I say it myself.

THE Worshipful Company of Fishmongers have granted Fifty Guineas towards the building of the chapel for the patients of the Royal National Hospital for Consumption, on the cottage principle, at Ventnor.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 25TH, 1873. I

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

THE PATHOLOGY OF LEPROSY; WITH A NOTE ON THE SEGREGATION OF LEPERS IN INDIA.

BY H. V. CARTER, M.D., BOMBAY ARMY.

(Communicated by Dr. SYMES THOMPSON.)

IN this paper—the result of observations made in Western India during the years 1860 to 1871—leprosy was considered as a whole, and its diagnostic characters were stated to consist in (a) skin-changes, either produced by the well-known “tubercles,” or evidenced by alterations of rather atrophic character, which resulted in a form of “eruption” corresponding in its typical manifestation to the “Leuke” of classical Greek writers, now widely known in Western Asia as “Baras,” and having, it was thought, affinities with the “lepra” of Willan, etc., only that scales were wanting, owing to tropical influences on the skin. The name *Lepra leprosa* was suggested as suitable. Superadded to these visible changes was (b) a prior and progressive impairment of the functions of the cutaneous nerves and branches, the structural alterations in which were regarded by the author as the characteristic lesion of leprosy. Hence resulted the marks presented by lepers, one or other of which was the only infallible sign of their disease: the author knew no characteristic prodromata. Subsequent changes were slow in progress, and were indicative of malnutrition of the frame both local and general, and hence susceptibility to corresponding hurtful influences. There were no symptoms of visceral lesions peculiar to leprosy; and while it was true that lepers died bearing the marks of their disease upon them, yet there was neither order nor uniformity in the time or mode of their decease.

Next were considered the morbid anatomy and histology of leprosy. The structural changes observed were stated to be due to exudation or deposit in the skin and appertaining nerve-trunks of a firm, translucent, colourless, or pale-reddish material, which might be distinguished by the borrowed terms, hyalin-fibroid and hyalin-granular. In the skin, conjunctiva, and adjacent mucous membrane of the mouth and larynx, this deposit (here hyalin-granular) first appeared within or immediately beneath the membrane proper; accessory organs, and even the blood-vessels, were secondarily involved, but it had been noticed that the tactile corpuscles disappeared before other less sentient elements. In the nerves, this deposit (here hyalin-fibroid) first appeared between the individual nerve-tubules, and within their sheath—i. e., the neurilemma of the funiculus; the outer envelope of connective tissue was hardly changed. By accumulation of the new material the tubules were separated, compressed, emptied, and eventually destroyed.

The microscopic characters of this leprosy deposit were then referred to. The material seemed exudative, but might be derived from proliferation of connective tissue corpuscles; it underwent slight development, and was susceptible of degeneration. In sixteen necropsies of lepers consecutively dying in hospital, no trace of deposit was noticed in the muscles, bones, or any of the viscera. The brain and spinal cord were wholly free from such deposit, etc.

Then were mentioned the general characters and distribution of leprosy in Western India. Reference was made to the author's late report on this subject published in the *Transactions of the Medical and Physical Society for Bombay* for 1871; the previous volume for the year 1862 containing a description of the symptoms and morbid anatomy of leprosy.

Particular attention was invited to the three circumstances, that the disease was capable of being hereditarily transmitted, that society in India was minutely subdivided by caste regulations into sections within which alone was marriage permitted, and that certain races (the primæval) were apparently more largely affected by the disease than any others.

The author added that neither climate nor endemic influence had been shown to favour or check the prevalence of the disease; faults of diet, hygiene, or habit equally failed to account for its varied distribution. The population generally was affected to the extent of 1 in about 1000 inhabitants, but the proportion differed in the several races, and hence in localities occupied by those races more predisposed than others.

The seat, nature, and causes of the leprosy disease was then inquired into. It was affirmed that, so far as manifested, its seat was the cutaneous system, evidence to that effect being negative and positive.

The latter included certain interesting features revealed on dissection; thus, the cutaneous nerves were affected only, or chiefly and primarily, in that part of their course between the skin and the deep fascia of the limbs or trunk; and when the deeper-seated nerve-trunks of compound function were diseased it was only their sensory elements which appeared to be affected, and often those in continuity with skin-nerves. Motor paralysis was seldom marked in lepers who could crawl on, or bend, the stumps, which were sometimes all that remained of hands and feet. The author considered that there were trophic nerves in connexion with those termed sensory; and that nutrition, as a process, might be directly influenced by the nervous system. It was submitted that all the essential phenomena of the leprosy disease might be traced directly or remotely to the characteristic nerve-lesion.

As to the nature of leprosy, it was briefly stated that the existence of a dyscrasia or primary blood-change seemed hypothetical and even needless; it might be said that the proximate cause of leprosy resided in a faulty condition of certain tissues of the integument—a defect perhaps of development, certainly a quality transmissible to offspring.

Having regard to the fact that the inherited form of the disease was identical with that not known to be derived, the author surmised that the only true cause of leprosy might be hereditary or transmitted taint; or, in other words, a latent form of the affection itself. Respecting contagion, or inoculation, as causative influences, the author remarked on the absence of crucial facts. The grand test was necessarily wanting; and hence variety of opinion dependent on circumstances. As to endemic influences, it had been found that no one feature of air, soil, or water could be connected with the presence or frequency of leprosy. Europeans living long in India were virtually never affected with the disease. That malaria and leprosy were correlated did not appear.

Regarding an added note on the segregation of lepers in India, the author brought the subject forward rather to elicit opinion than to make assertion. It did, however, appear to him that the decline and extinction of leprosy in Europe during the middle ages was well and fully explained by the close, even if harsh, restrictions under which lepers were put by law and custom; and, holding this view, he recommended segregation as a fit measure for adoption in India, where the disease had been long established, showed no sign of diminution, and was constantly productive of much harm and suffering. Nor did there seem any other hopeful way of eradicating leprosy; for, in the author's opinion, the view that improvement in hygiene and general progress would lead, or had led to the extinction of this disease, was not sustained on a wide survey of available data.

The PRESIDENT suggested that leprosy had a nearer relation to such affections as lupus than to mere skin-diseases. He could not help thinking that it bore some relation to cretinism.—Dr. GREENHOW said that the subject of leprosy had occupied much of his attention. He had been a member of the Committee of the Royal College of Physicians appointed to advise the Government on the subject. Dr. Carter seemed to think that leprosy was sometimes contagious. He (Dr. Greenhow), after reading many papers and lectures on the subject, both English and foreign, had come to the conclusion that it was not so. He had no doubt that it was hereditary. He could point out that Dr. Carter had, both in this and in previous papers, done more than any other Englishman to advance the study of leprosy. He appeared, however, to ignore the special prevalence of leprosy in certain districts, as in Norway, where it was confined to the coast.—Mr. H. ARNOTT inquired as to the state of the spinal cord in leprosy. In the *post mortem* examination of a case at the Middlesex Hospital, the cord was found to present varicose enlargements; these had also been described by Daniellsen and Boeck. In the leprosy of the East and West Indies, however, the cord was said to be unchanged.—Dr. BUZZARD thought that the fact that the sensory rather than the motor nerves were affected might be explained by the circumstance that the nerves supplying the muscles were given off before leaving the fascia. He agreed with Dr. Carter in regarding the nerve-lesion as primary. The condition was comparable to that met with in the superficial lesions of nerves, such as had been observed by Paget and others to follow the pressure of callus. In America, Drs. Mitchell, Morehouse, and Keen, had observed symptoms very like leprosy to be produced by injury of peripheral nerves. Mere compression was not sufficient; there must be also some condition akin to neuritis.

A CASE OF AMPUTATION AT THE HIP.

BY RICHARD BARWELL, F.R.C.S.E.

Caroline L., aged 7, was admitted into Charing Cross Hospital under Mr. Barwell's care in September 1872. She had previously been under the care of Mr. Hancock with severe hip-disease, and that surgeon had, in the early part of 1871, excised the head of the bone, but during the operation, the thigh, a mere shell of bone, had broken

in two places. She went out after some months with bony union, but with open sinuses. When readmitted after the above date she was emaciated and feeble; there were several open sinuses; the liver was much enlarged. After watching the case for some time, the operation was decided on, and performed by Mr. Barwell on November 2nd. Hardly any blood was lost; the limb was almost devoid of muscles; the bone was carious and inflamed throughout. The child rallied, and after a time (corresponding with the occurrence of smart diarrhoea) the liver began to diminish in size. On the 1st of February the child went out with the liver much smaller. Certain deductions concerning the states of liver in different phases of disease were given.

Mr. THOMAS SMITH had a patient under his care in the Children's Hospital, in whom there was suppuration of the pelvis, with great enlargement of the liver and spleen; but, while the suppuration was still going on, the size of the liver became reduced, the spleen still remaining enlarged. The administration of alkalies had been proposed, but was not carried out. He asked whether Mr. Barwell had ever tried the plan of compressing the aorta in amputation at the hip.—Mr. H. ARNOTT had thought the small amount of blood lost remarkable. He would wish to know how the bleeding was arrested.—Dr. ANSTIE did not agree with a remark that had been made by Mr. Smith, that the condition of the liver in cases such as that described was due to an accumulation of cells.—Mr. CALLENDER pointed out that, unless care was used in compressing the abdominal aorta, the vena cava would be also compressed, giving rise to venous hæmorrhage. This might be obviated by applying pads of lint so as to press on the aorta.—Mr. BARWELL would have the aorta compressed in the way described by Mr. Callender if he were operating on a well-nourished limb. When bones were inflamed and carious, the bone was more likely to become fatty; while amyloid change generally attended necrosis.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 14TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Suppuration of the Elbow-joint: Puncture: Recovery.—Mr. MAC CORMAC exhibited a patient in whom he had eight weeks before punctured the elbow-joint and removed a quantity of pus. This had resulted in the complete recovery of the motions of the articulation. Alfred Kelly, aged 16, a rather delicate-looking boy, presented himself to Mr. Mac Cormac at St. Thomas's Hospital on January 17th. In May last, he was a patient in St. George's Hospital for an abscess in the upper part of the thigh; and for the last fourteen or fifteen months he had suffered from periodical attacks of pain and swelling in the right elbow. The joint would swell, become very painful, and then after three or four days the symptoms would subside, and the use of the joint be perfectly restored. He believed that in the first instance he had sustained a severe wrench of the elbow. When Mr. Mac Cormac first saw him, the elbow was much swollen, in the manner characteristic of effusion within the joint; the skin over it was red and very tense; distinct fluctuation and pitting of the skin could be obtained on pressure. The boy was suffering intense pain, which made him cry aloud at the very thought of an examination of the joint. His countenance bore a worn and anxious expression. His tongue was coated, and his pulse very frequent. The swelling and pain had commenced on the Monday previous, January 13th, without assignable cause; and the boy stated that he got no sleep or rest, not even taking off his clothes from that time till he came to the hospital. All the symptoms pointed to acute suppuration within the joint, which Mr. Mac Cormac accordingly punctured with the fine cannula trocar of an aspirating syringe, and drew off between three and four ounces of pus mingled with some flakes of lymph and altered synovia. The puncture was made opposite the line of articulation, and midway between the olecranon and external condyle. The boy was then sent to bed, and his arm placed on a well padded rectangular splint. The relief afforded by the puncture was immediate and permanent. The puncture healed at once, and it could now only be detected by a faint stain at the place where the needle was inserted. He remained in hospital rather less than four weeks, during which the improvement was continuous. His arm was, however, kept on the splint for six weeks. At the end of four weeks, there had not been the slightest return of pain, the swelling of the parts around the joint had gradually disappeared, and he was able to move the joint without feeling even uneasiness. On February 28th, the splint was removed. There still remained slight thickening of the lower end of the humerus, and also of the back of the olecranon. The boy could not fully extend the arm, but with this exception the movements of the joint were absolutely perfect. His strength and health had otherwise greatly improved. Mr. Mac Cormac, in presenting the

lad for the inspection of the members, said that, though the result of one case must be taken *quantum valeat*, he could not but regard it as furnishing much encouragement for the use of similar means on other occasions. The history of a case of suppurating joint seldom furnished so satisfactory a conclusion.—Mr. SPENCER WATSON referred to a case which had come under his own observation, in which the knee-joint was laid open by a circular saw. Suppuration ensued; but with injections of carbolic acid and a splint, the wound healed up. These cases showed, he thought, that suppuration within the joint was not so serious as was supposed, provided the cartilage did not become ulcerated.—Mr. MAC CORMAC, in reply to Mr. Willett, said that it was quite clear that the fluid was within and not around the joint.—Mr. BARWELL considered the case to be one of chronic disease, with supervening acute inflammation of five days' standing. The joint was then in a much more favourable condition for recovery. He used aspirators rather freely for disease of the joints, but he frequently found difficulty in their use from blocking up of the cannula by lymph. He had found that the withdrawal of fluid from diseased hip in children was often followed by much relief for several days.—The PRESIDENT considered also that the case was originally a chronic one, and that the pus resulted from an acute attack. He alluded to a case of pleuritis in which the cannula he used was blocked up by lymph. He was afterwards compelled to make an incision two or three inches long in the side, when five pieces of lymph in masses as large as oysters escaped. He had used the trocar and cannula, and the result had been stiff joints; but, occasionally, movement returned after suppuration.—Mr. BRUDENELL CARTER referred to the case of a man with acute inflammation of the knee-joint, in which a large quantity of fluid was evacuated by means of a needle, with complete recovery of the movement of the limb. He gave the details of a second case of a similar kind, which also ended well.

Spasmodic Torticollis, possibly having its origin in some Affection of the Spinal Cord.—The patient, George T., aged 50, was a copper and tin-plate worker, and was admitted into St. George's Hospital under Dr. OGLE's care in January last, affected by clonic spasm of the muscles of the neck, which occurred from time to time, and by which the right ear was drawn down towards the right shoulder, the chin twisted towards the left shoulder, the head being drawn somewhat backwards. Sometimes this twisting of the head was slow and gradual, but mostly consisted in rapid chorea-like jerks, and had to be controlled by the hands of the patient. The man was a well built, muscular person, and apparently in good general health; but he had a rather peculiar countenance, which appeared to be owing to a tendency to frown, and to an unusual fixity and smallness of both pupils. It was also noticed that the muscular furrows of the face were more marked than those of the opposite side. There was, however, no indication of spasm or want of equilibrium in any of the muscles of the face, eyes, tongue, or palate. The patient complained of weakness of the limbs generally, but there was no positive want of power, or any paralysis of any of the muscles of the limbs. There was, however, complaint of constant numbness and formication of the ends of the fingers on both hands, the skin of which, for about an inch or more, had, the patient said, peeled off, and was on admission unusually smooth, glazed, and insensible to touch, the nails being in places furrowed. The patient had observed that the nails in question grew very quickly. He also complained of odd sensations and numbness about the toes, which felt as if tied together (as if he were web-footed). Headache was also complained of, but the appetite and secretions were natural. With respect to the spasm of the cervical muscles, it was very variable, being absent during sleep, intensified when the patient was addressed and under examination for the most part, but not always; and always much worse after waking in the morning and during the early part of the day, subsiding towards evening. Frequently, and when severe, the spasms were accompanied by much pain, and often he could not remain out of bed owing to the distress which they occasioned. On examination of the muscles of the neck, there was thought to be some increased thickness of the right sterno-cleido-mastoid and trapezius muscles, but it was very slight; and no tenderness or enlargement of tissues about the cervical vertebrae could be discovered. On inquiry into the history of the case, it appeared that the present attack had existed several months, and he had been under treatment by Mr. Wood and Dr. Johnson of King's College Hospital; also that fourteen years ago he had been in the same way, only that the head was then always twisted to the other (the right) side, and he was then in St. George's Hospital for some time, having been cured by blistering, calomel, and galvanism afterwards. The previous illness followed an injury of the top of the head, which occurred shortly before he came under treatment, and lasted about nine months. Since his present residence in St. George's Hospital, he had been taking valerianate of zinc, and had subcutaneous injections of morphia and of morphia and atropine, which had generally quickened

the spasm and given good nights, after which he was always better the next day. Dr. Ogle had suggested to his colleague, Mr. H. Lee, that, in case of treatment not availing materially, it might be advisable to have recourse to division of the spinal accessory nerve; and on this point, as well as on the pathology of the case, he would be glad to have the opinion of the Society. The apparent cause of the original attack, the existing condition, the state of the pupils and of the ends of the fingers, in addition to the peculiar sensations of the fingers and toes, had rather led him to suspect some chronic but ill defined disease of the spinal cord in the neck.—Mr. THOMAS SMITH referred to a similar case which had been at St. Bartholomew's Hospital. The man turned out to be a malingerer. The present case was, he thought, of the same character, for the man had not worked for a very long time. His hands were very soft. Moreover, his old attack was on the opposite side.—Mr. BARWELL and Dr. SOUTHEY coincided with Mr. Thomas Smith in his suspicion.—Dr. ALTHAUS thought that the movement of the arm was feigned, and that the movement of the head was different from torticollis.—Dr. POORE said that there was a mental element in all these cases. He differed from the previous speaker, and thought the movement of the arm was in favour of real disease, and referred to the case of a female at present under his care with movement of the trapezius and arm at the same time. The continuous current had done good.—Mr. WILLETT pointed out that the tonicities of the affected muscles in Dr. Ogle's case was unchanged.—Dr. DYCE DUCKWORTH asked if there was any control over the movements of the patient in cases of torticollis.—Mr. SPENCER WATSON said that he had met with a case in which chloroform relieved the spasm.—Dr. POORE said that the spasms in his patient were not continuous, and therefore she was probably not a malingerer.—Dr. ALTHAUS recommended the subcutaneous injection of liquor arsenicalis in three-minim doses, increased one minim daily if the disease were not feigned.—Dr. OGLE, in reply, commented on the fact of the patient's being able often to keep the head straight, which would, when he was talked to, twist over to the side. This fact had been considered by some of the speakers as indicating malingerer; but he pointed out that this was almost characteristic of most neuroses like chorea, hysteria, etc., when no feigning was to be suspected. Watching the case, both in St. George's Hospital and at King's College Hospital, had not led to the suspicion of malingerer.

Foreign Body in the Right Bronchus.—Mr. BARWELL described the case of Charles Marshall, aged 17, who was admitted into Charing Cross Hospital under his care on November 20th, 1872. Ten days previously, he had inhaled a Punch-squeaker; symptoms of suffocation were severe, but on violent thumping passed off. Nine days afterwards, they recurred with less violence, and were more transitory. On admission, a dull aching was complained of at a spot half an inch from the sternum, on a level with the second costal cartilage; and here Dr. Poore heard distinct bronchitic *râles*. In two days, these had not only intensified, but bronchitic sounds were heard all over the right upper chest. On the 23rd, the patient was everted by proper adjustments; and on the third occasion the most intense sound moved to near the top of the sternum. Mr. Barwell opened the trachea, making a very small opening, and passed forceps into the bronchi and into the larynx, but did not find the whistle. On the third day after the operation, the wound had all but healed, and the sounds of the chest were quite normal. Hence it must be concluded that the body had been expelled by the cough, caused by a few drops of blood flowing into the trachea and had been swallowed. Mr. Barwell, by statistics gathered from different sources, showed that non-operation in these cases was very much more fatal than operation—viz., in the proportion of 44.3 to 12.7; and that those who recovered when the body had been retained more than nine days, suffered considerable loss of health—sometimes severe illness. Hence Mr. Barwell concluded that, whenever there was a sufficiently clear history and certain physical signs, it was the duty of the surgeon to operate; nor ought he to be deterred by fear of not finding the substance, since perfect recovery after such search was possible. Of such cases, Mr. Barwell adduced seven. One of these occurred to the late Mr. Liston.—Mr. MAC CORMAC asked why, if the opening was to do good, it was closed. Were the stools searched for the missing article?—Mr. HEATH thought that the physical signs were very slight for such a large body, and was of opinion that the likelihood of its being still in the air-passages was very small.—Dr. POORE said that there was a distinct bronchitic *râle* at the one spot, and nowhere else. The shape of the foreign body would not allow it to close completely the bronchus.—Mr. WILLETT thought that the body would pass into the larynx with extreme difficulty.—Dr. SOUTHEY asked if there were no other signs beyond the *râle* heard.—Mr. THOMAS SMITH thought that no foreign body, however small, could exist in the air-passages without producing more symptoms, and gave some of the results of his experi-

ence in support of this opinion. Perhaps the instrument stuck in the boy's oesophagus.—The PRESIDENT related some of the particulars of the famous case of Mr. Brunel, which was fully reported by Sir Benjamin Brodie in the *Transactions* of the Royal Medical and Chirurgical Society, and recalled the opinion of that surgeon that the opening in the trachea in such a case should be left patent.—Mr. THORNTON pointed out that Sir Benjamin had also advised that instruments should not be passed into the bronchi.—Mr. BARWELL, in reply, said that he had not examined the patient's motions, but stated that the boy had had diarrhoea. Sir Benjamin Brodie's conclusion on forceps had since been shown to be erroneous. He closed the opening in the trachea, because he did not wish to increase the mischief in the lung by admitting air. He quoted a case related by Gross, in which a similar body was retained for one hundred and four days, and then coughed up. The patient died at last of croup. In this case sibilus was heard over the chest, and blood was expectorated.

FRIDAY, MARCH 28TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Recto-Vesical Fistula: Colotomy.—Mr. CHRISTOPHER HEATH read a case of recto-vesical fistula in the female successfully treated by colotomy. The patient had twelve years before suffered from a pelvic abscess following delivery. Three years later she passed from the bladder some form of membrane, and from that date continued to pass fæces and flatus by the urethra. This gave rise to great pain and inconvenience, which were not relieved by any treatment. It being evident that the sac of the old abscess communicated with both the bladder and rectum, Mr. Heath opened the colon in the left loin in January 1872. The patient was immediately relieved from her sufferings and made a perfectly good recovery, continuing in good health and without any bladder-symptoms up to the present time.—Mr. HOLMES doubted the reality of a pelvic abscess. In a case of his own the recto-vesical fistula reappeared after cure, and the patient died. A communication between the bladder and the cæcum was then found. There was no trace of cancer or morbid deposit. There had been a simple ulcer of the bowel probably, which had become united to the bladder, and opened into it. It was quite possible that this tumour in Mr. Heath's case was the result of such ulceration and consequent irritation. The inconvenience and irritation of an artificial anus were not great, provided the opening were not too large.—The PRESIDENT considered the question of the existence of simple ulcers of mucous membranes interesting. Had Mr. Holmes often seen them?—Mr. HOLMES said only in one case.—Mr. MAC CORMAC asked what grounds there were for disregarding the part of the intestine affected. He remembered the operation being tried in a case and failing, owing to the opening existing in the small intestine.—Dr. SOUTHEY said, that as regards the site, we must rely upon the past history as to the existence of pelvic cellulitis, fever, dysentery, and the like.—Mr. HEATH said the operation was based on previous history. He considered the tumour was the original abscess. They examined the deposit in the urine carefully, and found only solid fæcal matter. Mr. Holmes's observations applied rather to the male than the female.

Acute Rheumatic Fever: Extensive Pericardial Effusion: Expected Necessity for Tapping the Pericardium: Recovery: Remarks on Paracentesis Pericardii.—Dr. JOHN W. OGLE related the case of a man, aged 34, who had had rheumatic fever fourteen days, but had been worse five days before admission into St. George's Hospital. On admission, there was a soft systolic *bruit* at the base of the heart, the action of which was increased. The pulse was 110, and the temperature 103 deg. He was treated with salines, and on the next day the respiration was 46 per minute. Leeches were subsequently applied to the cardiac region, but a decided pericardial to-and-fro friction-sound was established. Four days after admission, the respiration was very hurried; the cardiac dulness was greatly increased, uninfluenced by change of position; and friction-sounds were absent, and the natural heart-sounds very indistinct. Ten days after admission, increased distress, cough, orthopnoea, and physical signs showed that greater effusion in the pericardium had occurred, but the joints had become much less affected. The temperature on this day was only 98 deg. More leeches were applied and opium given, and subsequently digitalis and squill given in addition to other remedies. No good followed, but effusion with bulging of the præcordia became greater, and the respiration rose to 60 per minute. At this time the operation of tapping the pericardium was contemplated, the area of cardiac dulness having reached a measurement of six inches by seven inches. Blistering the pericardial region brought relief, and by degrees the effusion gave way; and eventually the patient, though suffering slight relapse both of the pericardial trouble and the joint-affection, quite recovered. The description of the case was accom-

panied by careful registration of the morning and evening daily temperature, and state of the pulse and the respiration. Dr. Ogle remarked that, as the rheumatic pains subsided, the temperature of the body diminished in spite of the setting in of the graver pericardial symptoms. This absence of increased temperature in pericarditis had been noticed by Wunderlich, and also by Dr. Russell of Birmingham. Dr. Ogle had found, in other cases of pericarditis and inflammation of serous membranes generally, how little the temperature was apt to rise. He also alluded to the good which, in the above case, followed the blistering; and, after showing that diagnosis clearly excluded all other causes of the general and physical signs except effusion in the pericardium, he dwelt on the necessity which a continuance or increase of symptoms would have occasioned for letting out the pericardial fluid, advocating the new mode of withdrawing fluid by means of the aspirator and fine needle trocar. Dr. Ogle sought the opinion of the Society on this matter, quoting cases in which it had been used. After referring to the history of the operation as given by Trousseau, Allbutt, etc., he alluded in detail to the only seven cases in which paracentesis of the pericardium had been performed in Great Britain, quoting the discussion which had taken place on the subject at the Edinburgh Medico-Chirurgical Society *à propos* of a case brought forward by Dr. Maclaren last year. At the previous meeting of the Clinical Society, when this communication was expected to be read, Dr. Ogle exhibited two varieties of pneumatic aspirators or suction apparatuses which he thought would succeed better than the ordinary trocar which had been used for paracentesis of the pericardium. Of these, one was a modification of Dieulafoy's, made by Weiss; the other, which Dr. Ogle preferred, as being more simple, manageable, and portable, was made by Hawksley, after a French model in the possession of Dr. Bowles, and consisted of a small brass syringe, which could, by a cock, be adapted to a bottle of any capacity, and an elastic tube to be also attached to the bottle, furnished with a capillary or other trocar. When used, the air was drawn out of the bottle, and the trocar having been introduced into the cavity containing the fluid to be drawn off, the fluid was sucked out into the bottle to replace the vacuum. Dr. Ogle dwelt on the urgency of large pericardial effusions, pointing out that any medical man might at any moment be called upon to provide a remedy; and cited cases of death in which, on *post mortem* examination, nothing was found but a distended pericardium, which, to all appearance, might easily have been relieved during life by an operation which had never been thought of, and one which Dr. Ogle, *pace* the surgeons present, considered worthy of more confidence than it had received.—Dr. GREENHOW thought it unusual to have so much effusion without rise of temperature. He thought there always was such a rise, and founded his diagnosis on it sometimes, especially regarding the onset of the pericarditis. He had never known the friction-sound disappear after effusion in pericarditis. There was often a slow pulse in pericarditis, especially when the effusion was subsiding. He would hesitate to tap, as he had always seen these cases do well without it.—Dr. BUZZARD remarked that Wunderlich was of opinion that there was no certain rise of temperature in rheumatism with pericarditis.—Dr. SOUTHEY said, that from observations made on cases of rheumatic fever with pericarditis, there was generally a high temperature for about twenty days. In ordinary cases there was a fall on the seventh, fourteenth, or twenty-first day.—Dr. OGLE, in reply, commented on the observations of Dr. Greenhow and Dr. Buzzard, as respected the presence of pericarditis without coincident material rise of temperature, and the persistence of friction-sounds even when a large amount of fluid existed in the pericardium, a phenomenon which was sometimes, but not frequently, met with.

EPIDEMIOLOGICAL SOCIETY,

JANUARY 8TH AND FEBRUARY 12TH.

Periods of Infection in Epidemic Diseases. By WILLIAM SQUIRE, M.R.C.P.—Dividing epidemic diseases into two classes as their period of incubation was long or short, taking small-pox as the type of the one and scarlet-fever of the other, Dr. Squire proceeded to show that in the former class the interval between the reception of the poison and its infectious reproduction consisted of a latent stage which was in most instances variable, and a stage of invasion nearly constant for each disease. In this latter part, certain initial processes of the disease were accomplished producing infection some time before the ordinary signs of the disease appeared, though not without signs of warning, the most constant one being a rise of temperature. Where a disease could be inoculated, the variable latent stage was reduced to a minimum; yet in small-pox eight days were then requisite for the necessary steps of the disease, and, so far as had been ascertained, four days more when taken by infectious inhalation; so that it seemed to be impossible for the illness to appear in less than twelve days from infection. It was

not likely that for the first week or ten days after exposure a person had himself become infectious; but facts were adduced to show that infection was set up certainly two days before the eruption of small-pox. The interval might not be attended with danger to those around, but it was most important to know what that interval might be for each special disease, so as to guard against an apparently healthy person setting up that disease elsewhere, so that a reasonable watchfulness should be observed until that time was over. A fortnight might be taken to indicate generally this interval for the first class of diseases; nor would they appear in less than eight days; whereas, for the second class eight days would generally be a sufficient precautionary interval, and many of them might appear in a much shorter time. The eruption of small-pox appeared nearly a fortnight after infection. This time must also be allowed for measles, though it would generally appear in less. Of forty cases detailed by the author, more than half showed the eruption from ten to twelve or fourteen days after exposure; in one it appeared in eight days, and in one after fifteen days from a definite exposure. Four other cases from sources of infection indefinitely prolonged appeared at fifteen, seventeen, and eighteen days; and one at interval of two months from the original outbreak, infection remaining in the dwelling. Many of the cases of measles showed that it was only in the catarrhal stage, the so-called sickening for measles, that infection was spread. At a day-school, a boy was kept in the class-room because he was dull with his lessons. Next day he was not well enough to come to school. The third day he had the rash of measles; and several of the boys in his class had measles within a fortnight. A visitor slept two nights with a little girl and left with slight signs of a cold, which two days afterwards were found to indicate measles. Ten days after the visitor left, the little girl had measles, necessarily communicated two, and possibly, three days, before the appearance of the rash. On the outbreak of measles in a family, it was too late to expect to prevent its spread to others, if they had been with those sickening until the rash appeared. Cases were given, where, on bringing children home at the height of the rash, and keeping them separated from other children in the house for three weeks, none of them took measles. Careful observation of the course of vaccination showed an analogy with the early stages of other diseases of the class, and a very close resemblance to what is seen in measles. The sudden febrile disturbance on the eighth or ninth day, with its sudden subsidence in the one case, was exactly parallel to what occurred on the throwing out of the rash in the other, so that in both the more characteristic part of the ailment was more nearly the end than the beginning of it. Though infection might begin in diseases of this class before the more prominent signs of the disease were declared, yet it did not persist so long as in some diseases of the other division. In scarlet fever, instances were given, where infection was communicated by personal contact sixty-six and seventy days from the commencement of the complaint, or from six to seven weeks after the special illness was over, while in measles it was generally sufficient to allow three weeks after it for infection to clear off; and mumps, as if in compensation for its long incubation period, seemed to be free from infection a fortnight after the disappearance of the last signs of the disease. Hooping-cough, though its affinities were with diseases of the second class, and like scarlet fever, continued to be infectious for two months, had the dangers of the first class in being infectious long before its most characteristic sign, the whoop, appeared. Its incubation-period was shown to be often nearly a week, but as its earlier symptoms were obscure, at least a fortnight must be allowed in this affection before a child who had been exposed to infection could be said to have escaped taking the complaint, and the danger of conveying it to others. The infection of hooping-cough could be conveyed, but seemed to be more diffusible, and not to cling so persistently to persons and things as that of scarlet fever. A frequent source of infection was in a person who, having had the disease once, and being thought to be safe from a second attack, takes the complaint again in a mild form, and gives it to others who may be susceptible of its worst effects. So it was not always safe in schools and families to admit a child who is said to have had hooping-cough, from a house where others were ill with it. Where children had taken the infection of measles and mumps, or of measles and hooping-cough together, the measles appeared first, mumps ten days after, and hooping-cough after two or three weeks. For several days of the measles, that disease only was communicated, a sort of clinical analysis of these diseases often being performed for us. An important point noticed in most of the instances given was, that those most in contact with the sick, whether in the same class, the same room, or same part of the room, took the infection more readily than those kept more apart, so that in a large well-ventilated school-room, it might be possible to limit very much the spread of these diseases. Compulsory attendance at school might be a necessity. Hooping-cough in a family where the children were

very young was an evil most important to avoid. Separate beds for children, and well-ventilated bed-rooms, lessened the severity of those ailments where they did not prevent them. Typhus continued to be infectious longer, after it was over, than typhoid. Extreme instances were given of variation of incubation in the latter. As infection was longer after inhalation than after the inoculation of some of the poisons, the question was raised whether it might not be still further delayed after deglutition or imbibition.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, FEBRUARY 5TH, 1873.

D. LLOYD ROBERTS, M.D., President, in the Chair.

The Enlargement of Spleen from Rickets.—Dr. RITCHIE mentioned a case of splenic enlargement due to rickets, which simulated malignant disease of the kidney. The patient, a male child, aged 2½, was extremely emaciated, and had a greenish-yellow complexion. There was great abdominal enlargement, especially on the left side, with swollen and tortuous veins. A somewhat globular solid tumour, five and a half by four and a half inches, occupied the left hypochondriac, umbilical, and left iliac regions. It did not move with respiration or palpation. Hæmaturia was present. No casts were visible. At the necropsy the tumour was found to be a greatly enlarged spleen, of very firm consistence, and deep purple-red colour. Under the microscope it presented the characters ably described by Dr. Dickinson—enlarged Malpighian corpuscles, irregularly swollen trabeculae, and increased development of the cellular and corpuscular elements. No reaction was obtained with iodine. The liver was similarly affected, but not to the same extent. The kidneys were smaller than natural, but appeared perfectly healthy.

Lardaceous Spleen.—Dr. LEECH showed a lardaceous spleen, weighing one pound and three quarters, taken from the body of a girl, aged 20. She had suffered from splenic enlargement for at least twelve years, and from hepatic enlargement for twelve months. She died from exhaustion, the result of uncontrollable diarrhoea, which commenced three months before her death. Prior to this she had not suffered from any discharge. She was not phthisical, and there was no evidence of syphilis. The pulpy parenchyma of the spleen was found infiltrated with amyloid substance; the liver had undergone fatty and lardaceous degeneration, and the pancreas and mesenteric glands were enlarged. The kidneys were not affected.

Movable Kidney.—Mr. CULLINGWORTH showed a man, aged 33, in whom the right kidney was movable, lying near the abdominal wall obliquely between the edge of the right lower ribs and the umbilicus. He was subject to occasional attacks of sudden and severe pain in the displaced organ, and was then incapacitated for a week or ten days. In the intervals he felt no inconvenience. No cause for the displacement had been discovered.

Removal of Scalp by Machinery.—Mr. BOUTFLOWER showed a young woman, whose scalp had been torn off by machinery twelve months previously. Owing to the extensive suppuration and the great vascularity, no attempt at skin-grafting had been made until within the last five months. Three or four pieces of skin had been removed from the arm every three weeks, without, however, altogether satisfactory results. The original wound was now half healed, with little or no contraction.

Torticollis terminating fatally.—Mr. LUND related the particulars of a case of torticollis in a single woman, aged 50, who became the subject of a very slight twist in the neck towards the right shoulder nearly twelve months before she came under his care. At that time the head was turned completely over to the left, the left sterno-mastoid and the left trapezius muscles being in a state of nearly constant contraction. This was suspended during sleep, but returned suddenly when she awoke; and was attended at times with partial loss of consciousness and some very slight transient left hemiplegia. The disorder seemed at first to yield to small doses of chloral and bromide of potassium; but these soon failed; and then, in succession, other medicines were tried, viz., the hypodermic use of morphia over the contracted muscles, anti-spasmodics internally, sulphate of zinc in increasing doses, galvanism of the relaxed muscles, and, finally, a prolonged use of the bromide of ammonium with ammonia. Each remedy seemed for a time to control the spasmodic movements, and then to lose its influence; and at last, after several weeks of great suffering, she sank from exhaustion, with the signs of simple cerebral congestion, intensely rapid breathing, dysphagia, imperfect articulation, and general prostration. Until about six days before her death the pulse was about 84 per minute, the tongue clean, the appetite moderate, and temperature normal. The mind was never disturbed, and the pupils were natural and not dilated, even very shortly before

death. A *post mortem* examination, thirty-six hours after death, showed the vessels of the brain intensely congested, traces of old inflammation in the arachnoid, a deficiency of fluid in the ventricles and around the medulla and upper part of the cord, and intense congestion of the choroid plexuses and the vessels of the velum interpositum, in which there were the remains of old extravasation of blood, which might by pressure have irritated the nerves issuing from the medulla oblongata and its neighbourhood. No change could be observed in the course of the spinal accessory nerves, and no tumour or tubercular deposit in any part of the encephalon. The grey matter of the medulla oblongata and the upper part of the cord was of an unusually dark colour. The two sides of the cord on section below the medulla oblongata were not quite symmetrical, the left being the smaller.

Pyelo-Nephritis.—Mr. ATWELL showed a case of long continued cystitis terminating fatally with pyelo-nephritis. There was incontinence of urine constantly for eighteen months, stated to have followed an attack of facial and partial paralysis of the right side from a nervous shock. The right pupil was dilated. There was no other evidence of paralysis. The sight was much impaired. The urine was highly purulent. There was constant vomiting, with constipation and pain in the bowels. *Post mortem* examination showed chronic cystitis, the bladder being much contracted and its walls thickened. The kidneys were completely disorganised, being riddled with abscesses. The pelvis and ureters were thickened and dilated. There was a fibroid tumour in the anterior wall of the uterus, and one also in the ovary; and an abscess in the posterior wall of the bladder. The intestines, large and small, were filled with semisolid faeces. There appeared no evident cause for the cystitis, unless it could have been originally set up by the irritation of a retroflexed uterus.

Composite Stethoscope.—Dr. RANSOME exhibited a composite stethoscope, combining an ophthalmoscopic mirror and an ear-speculum; also an instrument for demonstrating the bending of the ribs in forced respiration.

Lymphadenoma of the Heart of a Hare.—Mr. BRADLEY showed this case, and said that it was not observed during life, but after death the entire surface of the heart was found to be studded with soft tumours of a cheese-like colour and consistency, varying in size from a bullet to a pullet's or hen's egg; the bronchial, mediastinal, and aortic glands were also infiltrated with a similar substance. On microscopical examination, there was no appearance of cancer-juice or cells, but scraping the surface of the tumours gave great numbers of uniform-shaped cells resembling lymphatic cells, which were apparently imbedded in a fine stroma. Mr. Bradley stated that the specimen very closely corresponded to a case of lymphoma of the heart, related by Dr. T. B. Peacock in the *Philosophical Transactions* for 1872, which occurred in the person of a young man; and observed that in the rapid infiltration of the tissues, in the interference which they exercised upon the nutrition of the blood, in their invasion of many viscera, and in their general fatal tendency, these lymphatic growths possessed many features in common with the group of the specific malignant growths.

Scirrhus Cancer of the Bladder.—Mr. BRADLEY showed a specimen which was removed from the body of an old man of 75, who died about eight months after symptoms of vesical cancer had presented themselves. In addition to a constant slight loss of blood, mixed with the perpetually dribbling urine, he suffered from violent and frequently repeated attacks of hæmaturia. He died with symptoms of uræmic poisoning. The pain was somewhat relieved by opiate pills and suppositories, but anodyne injections into the bladder failed to afford any relief. After death the only organs found to be diseased were the kidneys and bladder. The ureters were enormously distended by the backward pressure of the urine, and the kidneys were in a state of advanced granular degeneration from a similar cause. The cavity of the bladder was very small, not capable of holding more than an ounce of fluid, the walls were very hard and an inch thick, and all trace of muscular structure was lost, the whole viscus being converted into a mass of scirrhus cancer.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, JANUARY 25TH, 1873.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Perihepatitis, with Cystic Growth.—Dr. EAMES showed the viscera of a man, who became enormously ascitic more than a year ago, and had also an icteroid tinge of the conjunctivæ, pain in the region of the liver, diarrhoea, and constipation. The abdominal surface veins were much enlarged and congested. He had been a hard drinker, had vomited blood, and occasionally suffered from piles. He died of bronchitis, the symptoms already described having returned in an aggravated form

during his last illness. The intestines were glued together in many places by old adhesions; the surface of the liver was coated with old and firm lymph, and the organ was on section found to be carnified. In the right kidney was one small cyst, and on the under surface of the liver lay an enormous cyst.

Hydatidiform (?) Cysts in Pleural Cavity with Cicatricial Markings of the Liver.—Dr. PURSER showed morbid specimens from the body of an unmarried woman, aged 35, the subject during life of anasarca and albuminuria. Some months ago the dropsy suddenly disappeared from the left side of the body, the right side remaining anasarca. The patient was again admitted to the City of Dublin Hospital two months ago, suffering from incessant vomiting; she lay on the right side. After death the right pleura was discovered to be full of a rather bright greenish fluid, limpid and abounding with thin-walled and transparent cysts, having homogeneous or faintly striated walls, in portions of which granules existed in little masses. There was no trace of either parietal or visceral pleuritis. The lung was compressed, but was everywhere crepitant. The heart contained colourless clots in its right chambers. The liver presented deep cicatricial fissures, especially on its upper and anterior surface. It was adherent to the diaphragm. In many places yellowish white nodules appeared approaching the surface, and sharply marked off from the healthy hepatic tissue. On section these were found to be opaque and cheesy, and they had the microscopical appearances of the ordinary caseous degenerations. The gall-bladder was full, but there was no obstruction of the duct. The spleen was adherent to the diaphragm, and of firm consistence. The kidneys felt like India-rubber, and were also firm, with their surfaces mottled. They had been the seat of parenchymatous nephritis, and had undergone amyloid degeneration. The suprarenal capsules were healthy; so was the stomach, except that it bore evidences of the result of incessant vomiting. Its pyloric opening was slightly constricted. The uterus was small and virgin, the vagina being closed by a healthy hymen. There was no sign of syphilis. The glands in the thorax and anterior mediastinum were enlarged and cheesy.

Multiple Cirrhosis of Lung, with Vesicular Emphysema.—Dr. HAYDEN showed the lungs of a man, aged 43, who had served nine years in the Indian army, and had suffered from fever and ague. He was admitted to hospital a short time ago while in a state of orthopnoea, cyanosed, with oedema of the lower limbs, and a weak and fluttering pulse. Urine was normal, but secreted in small quantity. The physical signs were those of general bronchitis with emphysema, and the heart's sounds were healthy and free from murmur. In the lower posterior pulmonary region was heard a sound which Dr. Hayden said might be termed an "amphoric sibilus," and from the existence of which he was able to diagnose a condition of vesicular or bleb-like emphysema. The patient died on January 19th. In various situations chronic interstitial pneumonia had occurred, trabecular bands passing into the lung from the thickened pleura. The microscopical appearances were those of the so-called "fibroid phthisis." Over the lower lobe of the left lung blebs were observed, clearly not merely subpleural, but actually in the pulmonary tissue. The trachea was somewhat dilated and hyperæmic, and the heart was rather dilated, weighing eighteen ounces. Dr. Hayden mentioned two points of special interest in the case: 1, the existence of distinct centres of chronic interstitial pneumonia; and 2, the diagnosis during life by means of a characteristic physical sign, that of amphoric sibilus, of a circumscribed vesicular emphysema.

Phthisis and Enteric Fever.—Dr. H. KENNEDY exhibited a specimen of the ileum from a patient who had died of acute phthisis after enteric fever. A man, aged 27, passed through an enteric fever last June. In the beginning of August he was still wasted, with some diarrhoea. A fortnight later the patient began to complain of his chest, pyrexial symptoms returned, he commenced to cough, and finally sank with well-marked symptoms of phthisis. The portion of the ileum exhibited presented traces of typhous ulceration. Dr. Kennedy then drew attention to the close relation between enteric fever and struma. He believed that this form of fever occurred only in strumous constitutions.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, JANUARY 17TH, 1873.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

Therapeutic Value of Conium.—Dr. H. KENNEDY said that hemlock acted as a restorative, especially in chronic and debilitated cases. But, to ensure its desirable effects, it must be administered in what Dr. John Harley had termed its "physiological dose." The preparation on which most reliance could be placed was the succus conii. The author gave an account of three cases in which he had lately used this drug

with marked benefit; viz., a case of glandular enlargement in a girl, aged 5; in a case of bronchitis simulating phthisis in a lady, aged 22; and in the case of a boy, aged 9, who presented symptoms of vesical calculus. The remedy was of great use in phthisis, asthma with chronic bronchitis, neuralgia, and chorea. Children bore hemlock and belladonna in proportionally larger doses than adults. The author generally gave hemlock alone, but occasionally he combined with it iron and bromide of potassium. Dr. Kennedy regarded the pharmacopœial doses of the preparations of hemlock as too small.

Neuro-retinitis.—Mr. H. ROSBOROUGH SWANZY reported the case of a girl, aged 19, very chlorotic, with dimness of vision of both eyes of two or three years' standing, and the subject of dysmenorrhœa. The vision had within the last year become worse at each menstrual period. The treatment in that case should be antiphlogistic in the first instance, for there was danger of the occurrence of atrophy of the optic nerve if inflammation were not quickly subdued. The artificial leech, blue spectacles, and mercurials were the means to be employed. The ophthalmoscopic appearances in the case were illustrated in a drawing from nature by Dr. C. E. FITZGERALD.—Dr. MAPOTHER asked if blindness was not caused in this case by anæmia, in a way analogous to the production of blindness in children from the presence of intestinal worms.—Dr. C. E. FITZGERALD said that in Mr. Swanzy's case the hypodermic use of strychnia had been tried in the first instance. Later in the treatment, the girl fainted on the application of the artificial leech.—Mr. SWANZY said chlorosis was by no means a necessary precursor of neuritis, although leucocythæmia was often followed by this lesion. He would not venture to treat active inflammation of the optic nerve with strychnia. In the case before the Society the kidneys were healthy, and the fainting on the application of the artificial leech he did not deem of much importance.

Crispatura Tendinum.—Dr. MORGAN brought forward a specimen illustrative of the affection so termed by Boyer. The question suggested itself whether the contraction of the lateral ligament of the finger joint was the primary lesion, or whether it depended on the contraction of the flexor tendons. The contraction of the lateral ligaments was the apparent cause of the deformity, and by the division of those structures a cure might possibly be effected. A case recorded by Allandale, in which a patient had his finger torn going through a hedge, and so was cured of the deformity, went to support this view.—Mr. WHITE mentioned some cases in which an operation appeared to him to be feasible.—The PRESIDENT believed that such operative measures would be successful only where the tendon alone was affected.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, FEBRUARY 12TH, 1873.

JAMES DUNCAN, M.D., in the Chair.

Etiology of Enteric Fever.—Dr. HENRY KENNEDY, in a paper on this subject, said that he believed that the investigation of the constitutional conditions under which typhus and enteric fevers arise in different individuals had been almost entirely neglected. The varying characters of different epidemics of fever, the varying mortality of typhus and typhoid fevers in different localities, and the varying type of fever in individuals belonging to the same family, all seemed subject to this constitutional element. He considered that the strumous diathesis strongly predisposed to the enteric fever. Patients who suffered from this disease were generally of delicate and florid complexion, fair, often blue-eyed, and with cicatricial markings on the neck. This view explained the hæmorrhages, and the lung-affection often terminating in rapid phthisis. Dr. Kennedy concluded by alluding to the important bearing of the constitutional element on the question of treatment of fever.—The CHAIRMAN corroborated Dr. Kennedy's remarks as to the infrequency of phthisis as a sequela of typhus.—Dr. DARBY regarded fever as essentially a constitutional affection, capable indeed of being guided, but not of being cured.—Dr. EAMES said that acute tuberculosis, which was occasionally a sequela of enteric fever, was very distinct from ordinary chronic or subacute phthisis. He did not consider that the exciting cause of typhus and of enteric fevers was identical. He admitted that strumous patients, when they contracted enteric fever, were more liable than others to hæmorrhages and to glandular engorgement. Dr. GRIMSHAW could not admit that the strumous diathesis had a striking effect in determining the type of fever. He believed that it was sufficiently made out that the prominent exciting cause of enteric fever was sewage contamination, while that of typhus was over-crowding. It was natural that forms of phthisis should follow enteric rather than typhus fever, for in the former disease typhus deposits were of far more frequent occurrence. Cheesy degenerations fol-

lowed, the system became infected, and the pneumonic processes of Niemeyer were set up.—Dr. WM. MOORE maintained that the line of demarcation between typhus and enteric fever was most distinctly drawn. He mentioned an instance of an outbreak of enteric fever, in which strumous and non-strumous subjects were equally affected.—Dr. JOHN HUGHES alluded to the recent prevalence of bronchitis as a complication of enteric fever. He could not agree with Dr. Kennedy as to the strumous origin of this form of fever.—Dr. LALOR agreed with Dr. Kennedy as to the non-existence of a specific difference between the two forms of fever. He suggested that the local application of the fever-poison to the intestinal mucous membrane in certain cases determined the enteric character of the resulting fever.—The CHAIRMAN observed that in his experience the strumous diathesis was not more distinctly marked in enteric than in typhus fever.—Dr. MORRISON (Newry) had observed an increase of enteric fever after large quantities of manure had been stirred up over districts of country.—Dr. H. KENNEDY replied to the remarks of the various speakers.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE annual meeting will be held at the Fountain Hotel, Canterbury, on Thursday, May 15th, 1873, at 3 o'clock; Mr. WILKS, of Ashford, in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, April 23rd, 1873.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

THE annual meeting of the above Branch will be held at the Town Hall, Royston, on Friday, May 23rd, at 3 P.M.; D. B. BALDING, Esq., President, in the Chair.

The dinner will take place at the Bull Hotel, at 6 P.M. Tickets, 13s. each.

J. B. BRADBURY, M.D., *Honorary Secretary*.

Corpus Buildings, Cambridge, April 19th, 1873.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held at the Freemasons' Tavern, Great Queen Street, London, on Wednesday, April 9th, 1873—present: Mr. G. Southam (President of the Council), in the Chair; Mr. Alfred Baker (President of the Association); Dr. Falconer (Treasurer); Mr. Board; Dr. Chadwick; Dr. Chevallier; Mr. Fowler; Dr. B. Foster; Mr. G. F. Hodgson; Mr. Nicholson; Dr. W. Procter; Dr. Rumsey; Dr. Roberts; Dr. A. B. Steele; Dr. Stewart; Dr. F. Sibson, F.R.S.; Mr. Heckstall Smith; Mr. S. Wood; Dr. Wade; Mr. White; and Dr. Underhill.

The minutes of last meeting were read and confirmed.

Read minutes of Journal and Finance Committee.

Resolved—That the minutes of the Journal and Finance Committee for the meetings of December 19th and March 9th be approved and confirmed.

The Treasurer presented his Financial Statement.

Resolved—That the Treasurer be requested henceforth to arrange that the Annual Balance-Sheet and such other monetary statements as may be necessary for its comprehension, be circulated to the members of the Committee of Council, one week at least prior to the date of the meeting at which the Committee of Council will consider it.

Resolved—That Mr. Hodgson be appointed a member of the Journal and Finance Committee.

Read minutes of Committee appointed to make arrangements for the Annual Meeting of 1873.

Resolved—That the minutes of the Arrangement Committee be approved and confirmed.

Read Report of Committee appointed by last Committee of Council on the annual election of the Committee of Council.

Resolved—That the same be approved, and the Committee reappointed, with power to add to their number, to consider the necessary alterations, and report to a future meeting of the Committee of Council.

One hundred and seven gentlemen were elected members of the Association.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE fifth meeting of this Session was held on Friday, February 28th, 1873. Present, FURNEAUX JORDAN, Esq., in the Chair, and thirty members.

1. *Compound Depressed Fracture of the Skull*.—Mr. SAINSBURY exhibited a lad aged 15, a miner, who, whilst stooping, was struck upon the back of his head by a large piece of rock. At first, there was insensibility, but consciousness soon returned. Upon examination, there was found over the occipital bone a small scalp-wound, with a depressed fracture of the bone beneath. The fracture radiated on the left side forwards apparently to the temporal bone; on the right side it dipped down towards the foramen magnum. From the left ear there was a thin watery discharge, which continued for some days. The patient gradually sank into a semi-comatose state, partially losing the power of speech, and upon one occasion retention of urine occurred. He ultimately made a rapid recovery, and at the time of the report (eleven weeks after the accident), was in perfect health. The depressed bone was easily discernible just below the superior curved ridge of the occipital bone. The advisability of trephining was carefully considered, and its adoption abandoned for the following reasons: the youth of the patient; the absence of symptoms of compression; the contiguity of the large cerebral sinuses; and the more than probable extension of the fracture through the base of the skull.

2. *Cancellous Exostosis of the Condyle of the Femur*.—Mr. VINCENT JACKSON exhibited a youth, aged 18, with a cancellous exostosis on the outer condyle of the left femur, of six months' duration.

3. *Abdominal Aneurism*.—Mr. OLIVER PEMBERTON showed a specimen, in which three sacculated aneurisms communicated with the abdominal aorta by a common opening, an inch and a half in length, situated at the posterior aspect of the artery, as it passed through the diaphragm. About one-third of the calibre of the vessel at that point was destroyed. The bodies of several vertebræ, and several ribs, were eroded. The sacs varied in size from an adult head to a duck's egg. The largest was situated in the abdomen, on the left side, and had pushed the viscera forwards to the opposite side. From the sudden accession of symptoms upon a severe fall backwards, in a previously healthy man, 29 years of age, Mr. Pemberton considered that the disease was of traumatic origin. The patient died of asthenia, ten months after the accident.

4. *Ovarian Cyst*.—Dr. SAVAGE exhibited an ovarian cyst, taken from a patient aged 48, at the Women's Hospital. It had existed about four years, with a history of three distinct inflammatory attacks, accompanied with vomiting, pain, and ascites. There was marked "facies ovariana." At the operation, the omentum was found to be adherent at five or six points. All bleeding was arrested by catgut ligatures, cut short and dropped in. A clamp was applied to the pedicle, and it separated on the eleventh day. The chief points of interest in the cyst were the extreme thickness of its walls, and the evidences externally of previous inflammatory products.

5. *Congenital Hydrophthalmia and Hypertrophy of Cellular Tissue of Eyelids*.—Mr. SOLOMON exhibited a photograph and sketches of a little girl, aged seven, affected with congenital hydrophthalmia, and an apparently nævoid disease of the eyelids, brow, and temple. The latter, however, after removal, was declared by Dr. Rickards, the pathologist at the General Hospital, to whom the specimen was sent by Mr. Solomon, to be an hypertrophy of the cellular tissue of the eyelids. The left lid measured an inch and a half from the outer to the inner canthus, and an inch and a quarter from the orbital ridge of the frontal bone to the tarsal border. When the child cried, the superior palpebræ underwent distension, as it seemed, from the filling of varicose veins and an erectile tissue. In the left, this condition extended under the brow and skin of the temple, and raised between the index finger and thumb, the tissues imparted the sensation of a varicocele set in a spongy substance. The hydrophthalmia was cured by excision of the anterior third of the globe, sutures being afterwards inserted: the lids were reduced by dissecting away the hypertrophied structure. These operations had resulted in a considerable alteration of the terrible deformity, and in the cure of a double ectropion; in the left, this was rendered more certain by producing adhesion to a very limited extent of the edges of the lids (a partial ankyloblepharon).

6. *Degeneration of Kidneys and Dilated Ureters*.—Mr. NEWNHAM showed kidneys in an advanced state of degeneration, the ureter of each being much dilated, which had been removed from a little boy, aged three years, who had been admitted into the Wolverhampton Hospital on November 5th, on account of retention and extravasation of urine, and whose death took place on November 16th. Upon ad-

mission, the mother stated that the child had always had some difficulty in passing urine, but never retention before he was brought to the hospital. The retention was relieved by the introduction of a catheter, and incisions were made into the perinæum and scrotum. At the *post mortem* examination the cause of obstruction was found to be a flap of mucous membrane, situated upon the floor of the urethra, half an inch from the neck of the bladder. It readily allowed an instrument, introduced through the meatus urinarius, to pass over it; but when the instrument was passed from the bladder end of the urethra the flap was raised, and no further progress of the catheter could be obtained.

7. *Cases of Encephalocele*.—Mr. C. J. BRACEY exhibited a case of encephalocele, with an aperture in the frontal bone, and a case of meningocele with an aperture in the occipital bone.

8. *Tumour in the Auditory Meatus*.—Mr. WILDERS exhibited a sebaceous tumour, which he had removed from the auditory meatus of a female, aged 31. The growth, which was about the size and shape of a large hazel-nut, was attached to the wall of the meatus, in close proximity to the membrana tympani. The patient made a good recovery, having quite recovered her hearing. Under the microscope the tumour was found to consist of large flattened cells, arranged in layers, enclosed in a firm membranous envelope formed of areolar tissue.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH : MICROSCOPICAL SECTION.

A MEETING of this Section took place in Queen's College, Birmingham, on March 20th; Dr. WADE, President, in the Chair.

Bony Deposit in the Choroid.—Mr. PRIESTLEY SMITH read a paper on the subject of bony deposit in the choroid, followed by remarks by Mr. Solomon. Mr. Smith's paper was illustrated by mounted specimens. It stated that almost every part of the eye had been found in a state of so-called ossification, but was, in some cases, most likely calcareous degeneration. Dr. Knapp of Heidelberg had pointed out that the seat of the two processes was determined by the amount of blood-supply. Calcareous degeneration is frequent in the lens, which has no blood-vessels. The diagnostic features were given. The presence of bone was no indication for excision, unless there were complications inducing sympathetic inflammation.

Specimens.—Mr. MANBY showed specimens of Hippuric Acid.—Dr. SAWYER exhibited a specimen of Crystallised Phosphate of Lime (Ca HPO_4) which he had found as an urinary deposit. This variety of phosphate of lime was first described in 1860 by Dr. Hassall. The crystals occur in flat oblong plates, which sometimes form crosses or rosettes by aggregation. Dr. Sawyer considered this one of the rarest of the crystalline urinary deposits.

Urinary Epithelium.—Mr. G. H. EVANS read a paper on urinary epithelium, showing various mounted specimens in illustration of the four principal varieties; namely, the (1) *large and small squamous*, resulting from vaginal or vesical irritation, the first frequent in leucorrhœa; (2) the *columnar*, widely distributed over the whole urinary tracts, and seen in various lesions of the urinary membrane, and not diagnostic of any particular disease; (3) the *irregular*, seen in inflammation of the pelvis of the kidney from calculus and other causes, and leading to a mistaken diagnosis of cancer. The cells vary in form, and have large slender tails, and resemble carcinomatous cell-elements. The fourth variety is found in acute Bright's disease, in the form of aggregated casts, globular in shape, and is significant of kidney-irritation.

Hæmatozoa.—Dr. HINDS read a paper on hæmatozoa in one of the lower crustaceans—*Asellus vulgaris*—illustrating the subject by reference to the recent discoveries of nematoids in human blood by Mr. T. R. Lewis, and the known existence of hæmatozoa in other red-blooded animals, as the dog and mole. The presence of the parasites was shown in the currents of the living animal. The parasites themselves, after exclusion from the body of the victim, were also shown under high power, and their various characters described.

BATH AND BRISTOL BRANCH : ORDINARY MEETING.

THE fifth ordinary meeting of this Branch was held at the Royal Hotel, Bristol, on Thursday, April 10th, 1873, at 7.M.; T. G. STOCKWELL, Esq., President, in the Chair.

Papers.—The following papers were read.

1. Mr. STEELE read some cases treated by Extension by Weight.—Mr. Stockwell and Mr. Leonard made remarks, and Mr. Steele replied.
2. Mr. DOBSON read a paper on a case of Excision of both Superior Maxillæ, and showed the patient.—The President thanked him, and hoped that the case would be permanently successful.
3. Mr. STOCKWELL read a paper on Epistaxis, and showed an ap-

paratus which he had used with great success in a most severe and dangerous case.

4. Mr. ORMEROD read a case of Strangulated Hernia following a Punctured Wound of the Abdomen.

5. Dr. W. H. D. BRADSHAW then read a paper on the Immunities from Disease of certain persons.

CORRESPONDENCE.

MEDICAL STUDY AT CAMBRIDGE.

SIR—I shall be obliged by your allowing me to answer, through your columns, inquiries which have reached me consequent on my letter in this JOURNAL for March 1, as to the course to be recommended to those who are anxious to pursue their medical studies, and take a medical degree, at Cambridge.

A steady intelligent student, who is well grounded in classics and mathematics, may commence at the age of seventeen, and he may thus take his degree, and be qualified to practise, before he is twenty-three.

He may enter as a non-collegiate student, which is the least expensive course. If he desires to do this, he should write to the Rev. R. B. Somerset, Cambridge, who will give the requisite information; and he will learn that the necessary cost of passing through a University course in this way is very little. Indeed, it may be nearly computed by calculating the cost of living in a lodging in this or any other town, with some addition for lecture and University fees which are not high.

The greater number, however, enter at one of the seventeen Colleges, in which case they pay certain additional fees to the College, and enjoy the greater social and other advantages which accrue to the membership of a College. A great many College students, however, live very economically; more so, I apprehend, than is generally supposed. In the *Student's Guide to the University of Cambridge*,* I have estimated the expenses at about £150 per annum, which agrees with the estimate given by the gentleman who wrote the article "on University expenses," in that book. It is not very important which College is selected. I do not think that any one offers greater advantages than the others to the medical student. Accordingly, medical students are to be found at all the Colleges. Trinity and St. John's are the two largest, and the applications for admission at Trinity are so numerous, that it is necessary to write to one of the tutors some months beforehand.† In the choice of a College, as in the choice of a medical school in London, the student is usually influenced by the recommendation of some friend, who advises the College with which he is himself acquainted. The College having been selected, the Tutor should be written to, and he will furnish the requisite information.

The student must reside during nine terms, that is, the greater part of each of three years; and he ought also to be in Cambridge, at his work, during the chief part of the vacations.

The first thing is to pass the "Previous Examination" in classics and mathematics, with which he will do well to include what are called "the additional subjects."‡ This examination should be passed in the second term of residence. Suppose the student to commence in October, 1873, he should pass this examination in March, 1874.

He then commences what may be called the first series of professional subjects, Botany, Chemistry, Anatomy and Physiology, and Pharmacology, and he should pass the examinations in these subjects before leaving Cambridge. Thus, the first M.B. examination in Mechanics and Hydrostatics, Botany, and Chemistry, may be passed in November, 1874, or in May, 1875. Then, devoting himself to Anatomy and Physiology (human and comparative), and to Pharmacology, he should pass the second M.B. examination in these subjects in May or December, 1876. The student will now have completed his Cambridge course, and the first series of professional subjects, and may proceed to London, or elsewhere, to pursue more fully and uninterruptedly the second series, Medicine, Surgery, and Midwifery. I say more fully and uninter-

* Published by Deighton, Bell, and Co., Cambridge. The expense is sometimes diminished by Scholarships or Exhibitions, of which a great number are given for Classics and Mathematics in the different Colleges. A list of those offered for Natural Science will be found in the number of this JOURNAL for Feb. 8th, p. 137.

† The tutors of Trinity College are the Rev. E. Blore, the Rev. C. Trotter, J. Prior, Esq., and R. C. Jebb, Esq. The student may be entered under either of these. The tutors of St. John's College are the Rev. Dr. Parkinson, the Rev. T. G. Bonney, and J. E. Sandys, Esq. In each of the other Colleges there is one tutor; and it is sufficient to address to "the Tutor of College, Cambridge."

‡ For particulars, see *Cambridge Calendar*, published by Deighton, Bell, and Co., Cambridge. The "Previous Examination", with "the additional subjects", is the preliminary pass examination in Classics and Mathematics for all students who purpose taking a degree through one of the honour triposes; and, having passed it, the student is free to pursue his course in Mathematics, Classics, Natural or Moral Science, or in Medicine.

ruptedly, because, during the last year, or year and a half, of his Cambridge time, he should have attended the practice of Addenbrooke's Hospital, and so been initiated in this, which I call the second professional series. He may pass his third, or final M.B. examination, and take the M.B. degree in December, 1878, or June, 1879.

Now I wish it to be clearly understood, to prevent disappointment, that, to accomplish this, the student must not only be well grounded in classics and mathematics when he comes up, but he must employ his time methodically and well while he is here. The examinations are serious affairs, and to prepare for them is serious work, which must be continued throughout the year, with about two months' intermission (two weeks at Christmas, two weeks at Easter, and a month in September), that is, through the greater part of the vacations as well as through the terms. The dissecting-rooms, the chemical and physiological laboratories, the museums and the hospitals, are always open; and the vacations, when there are no lectures, or fewer lectures than in term, afford the best time for working in them. The medical students who wish to accomplish what I have proposed, and what may reasonably be expected of them, must not imagine that they can "come up" and "go down" with the crowd of University students; they must be prepared to abide and work here, as most of them now do, much longer than the ordinarily required term of residence. They will find no difficulty in obtaining permission at their Colleges to do this, if they are known to be steady and at work. Indeed, a great number of the hard-working students of the University reside in Cambridge during chief part of the vacations, and do some of their best work in the vacation periods.

I may observe, that many of the students prefer to pass the examination for the Natural Sciences Tripos, and so take the degree of Bachelor of Arts *en route* to medicine. These pass the "Previous examination with the additional subjects," as I have mentioned, in their second term, and then devote themselves to Chemistry and Physics, Botany and Anatomy, and Physiology; and, if they acquit themselves well in these subjects in the Tripos examination, they are excused the first M.B. examination, and the Comparative Anatomy part of the second M.B. examination. This course necessitates a more thorough and prolonged study of Chemistry, Botany, and Comparative Anatomy, and is, on that account, to be recommended to those who desire to obtain a good knowledge of these preliminary subjects.

A third class of students proceed to the Arts degree by a classical or mathematical route, perhaps going out in the classical or mathematical Tripos, before commencing the study of medicine. This course requires longer time, which, to those who use the time well, is compensated for by their attaining a higher standard of general education.

The plan which is least to be recommended is that of attempting to combine medical study with the study of classics and mathematics. Whichever course the student takes, he should complete the examinations in these subjects before commencing his professional work.

I am, etc., G. M. HUMPHRY.

Anatomical Museum, Cambridge, April 16th, 1837.

GRANGE-OVER-SANDS.

SIR,—Your editorial remarks on the above place in the JOURNAL of the 12th instant would lead the profession, and through them the public generally, to suppose that visitors to this highly picturesque and salubrious locality were in danger of falling a prey to some dire epidemic disease, and that the principal landed proprietors and ratepayers were united in opposing needful sanitary reform. That this is certainly not *quite* the case must have been known to your correspondent, upon whose information you have based your comments, as the following facts will show.

An official inquiry was recently held at the Grange Hotel, for the purpose of considering the propriety of making the growing hamlet of Grange into a "special drainage district", on which occasion the following, amongst other obstacles, presented themselves to the adoption of such a course—the fewness of the population; the undesirability of the multiplication of small areas; and the fact that it was deemed consistent with the powers of the "rural sanitary authority" under the new Act, to levy a special rate for certain sanitary purposes, on the defined township of which Grange formed a part. Shortly after this inquiry, a meeting of the inhabitants was convened, when a committee of three gentlemen, then present—being principal owners of property in the place—were appointed to take the matter up and see what could be done; the chairman of the meeting and one of the three (W. H. Wakefield, Esq., of Kendal) voluntarily offering to obtain the opinion of a competent engineer as to the feasibility and expense of a general drainage-scheme and water-supply, strongly urged by the government

official to be thorough if undertaken at all. Mr. Bailey Denton has accordingly been here, and has since sent down some of his staff for purposes of survey: his report, however, has not yet been made public. The gentlemen referred to, largely interested in the welfare of the place, amid the dawning light of modern research; are surely manifesting thus far a disposition to combine the benefit of the visiting public with their own.

With regard to existing dangers, which have been dwelt upon in the local papers by one of the resident medical men some time ago, though not without manifestations of resentment from certain quarters, and lacking the impetus to action which it is to be hoped will be inherent and considered befitting the forthcoming medical officer of health, they are, happily, it is believed, with few exceptions, capable of immediate alleviation or obviation, by the frequent cleansing of cesspools and the thorough and efficient ventilation of soil and all other pipes communicating therewith, now acknowledged as a necessity even where the drainage is essentially good.

Though it is believed there are one or two private wells which cannot boast of entire freedom from organic impurity, which the health-officer will possibly officially notify, it is judged, from recent testing, that the "chief spring" alluded to in your notice is remarkably free from organic impurity; and its situation at the base of a limestone-hill of singular beauty, on which but very few houses are built, its point of issue being half a furlong from the nearest cesspool, together with the circumstance of its almost unvarying outpour of some 230 gallons per minute, according to estimation, would surely seem to afford ground to suppose that its danger of contamination is not so great as you have been led to suppose.

Notwithstanding the absence, hitherto, of special provision for outward escape of sewer-gas—a defect, it is supposed, still very generally unrectified at watering-places, especially where the water-closet system has been generally adopted for the convenience of the public—Grange-over-Sands has deservedly acquired an enviable notoriety as a health-resort; so much so, that sites for houses have been selected in the neighbourhood where there are not just the same advantages of shelter, and where there is exposure to the minor objections of agricultural enterprise, whose operations are not at all seasons equally salubrious; and, by way of proof, it may be stated that a gentleman who has resided forty years in the place informs me that he never knew or heard of anything like an epidemic disease in it.

In face of increasing knowledge, and of the prospective beneficial effects of recent sanitary legislation, medical men, here as elsewhere, may well fear lest their craft should be endangered. I have seen no claims for vested interests advocated in your columns: it must be that the profession are too much really interested in the public welfare and too philanthropic to make mention of it. By the way, may not this fact of no epidemic where there has been no general drain circulating medium for the dissemination of disease-germs, be urged in favour of the dry closet system? Sporadic and occasionally imported cases of zymotic diseases have now and then occurred, though, as far as I am aware, not for months past; but, with knowledge of causes and increased appliances, may we not justly hope to retain for Grange-over-Sands, as a pleasurable "health-resort", a reputation commensurate with its peculiarly delightful situation and picturesque and panoramic surroundings?

I am, etc., FIAT JUSTITIA.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

SIR,—A letter from myself to Dr. Rogers, not intended for publication, appears in your JOURNAL of to-day. There are three not unimportant errors of the press, which I beg leave at once to correct. In page 451, column 2, line 10, for "parishes" read "districts;" line 29, for "officers" read "officer;" line 42, for "subversions" read "subventions."

I am, etc., H. W. RUMSEY.

April 19th, 1873.

*** The letter was read at the meeting, and was handed to our reporter for publication, evidently under the impression that this was intended. Dr. Rumsey's opinions on subjects of Public Medicine are always weighty and full of matter for thought, and this was no exception to the rule.

THE PUBLIC HEALTH ACT.

NORTHAMPTONSHIRE.—At a meeting of the Urban and Rural Sanitary Authorities, held at Northampton, Mr. Alfred Haviland, Lecturer on the Geography of Disease at St. Thomas's Hospital, was elected Medical Officer of Health for the county, at a salary of £800 *per annum*. There were sixty-three candidates.

KING'S NORTON.—Mr. Francis Hollinshead has been appointed Medical Officer of Health to the Rural Sanitary Authority of King's Norton Union, at a salary of £100 *per annum*, for twelve months.

HAVANT.—Mr. W. H. Aldersey has been elected Medical Officer of Health to the Urban and Rural Sanitary Districts of Havant, for one year, at a salary of £63.

KNARESBOROUGH.—Dr. Henry R. Wright has been appointed Medical Officer of Health to the Urban Sanitary Authority of Knaresborough, at a salary of £60 *per annum*. Dr. Wright is Union Medical Officer for the Knaresborough District; but the two are distinct, and under different authorities, so that it is not a case of additional remuneration. The appointment is for three years. The population of the district is 5,402.

SHEFFIELD.—Dr. Francis Griffiths has been elected, by the Town Council of Sheffield, Medical Officer of Health for the Borough for a period of three years, at a salary of £600 *per annum*. There were in all thirty-five candidates.

CROWLE.—Dr. Henry W. T. Ellis has been appointed by the Crowle Local Board Medical Officer of Health for the Urban Sanitary District of Crowle and Eastoft, in the county of Lincoln.

SPILSBY.—Dr. J. West Walker has been appointed Medical Officer of Health for the Spilsby Rural Sanitary District. Salary, £210 *per annum*. Area, 140,000 acres. Population, 28,000.

EAST KENT.—Dr. M. K. Robinson, Medical Officer of Health for Leeds, has been appointed Medical Officer of Health for the East Kent Sanitary District, at a salary of £800 *per annum*. There were seventy-four candidates for the appointment.

BAKEWELL.—Dr. John Knox has been appointed Medical Officer of Health for the urban and rural district of the southern division of the Bakewell Union. Salary £75 *per annum*.—Dr. P. S. Fentem has been appointed Medical Officer of Health for the urban and rural district of the northern division of the Bakewell Union. Salary £75 *per annum*.

OBITUARY.

WILLIAM BRYDON, C.B., SURGEON-MAJOR BENGAL ARMY, AND HIGHLAND RIFLE MILITIA.

MR. BRYDON was born on December 9th, 1812. He received the rudiments of his education from Dr. Rawse at Bromley in Kent, and prosecuted the study of medicine at the University College, London, and the University of Edinburgh. He received the appointment of Assistant-Surgeon in the Honourable East India Company's Service, and landed in Calcutta in October 1835; and after a short stay there, was ordered up-country with European recruits. At Kurnaul he was temporarily attached to the Artillery and Her Majesty's 13th Regiment, till posted to the 4th Lancers (native) as Assistant-Surgeon. He went twice with Sir Henry Fane, and a third time with the Governor-General, Lord Auckland, on escort duty to Runjeet Sing's Court, then in all its glory at Lahore.

In 1839, he was put in charge of the 5th Native Infantry at Ferozepore, and marched with them through the Punjaub and Kyber pass, in the ill-fated expedition to Afghanistan. Here he saw much service when attached to Shah Soojah's 6th Regiment, and at the destruction of the robbers' forts in the Toormat Valley. Returning to Cabool before the disturbances broke out consequent on the vacillation of the British leaders, he was in the Balahissar for about three weeks; he then removed to the cantonments, and was in the fatal retreat in January 1842. He suffered unparalleled privations in the march through the tremendous passes and narrow gorges of the Koora Cabool from the fire of the enemy and the inclemency of the weather, reaching Jellalabad wounded in the knee, badly in the left hand, cut across by a sabre, and seriously in the head by an Affghan knife, which, but for a *Blackwood's Magazine* in his forage-cap, must certainly have killed him. He was thus the first and "last man" (the *soubriquet* by which he was known among Europeans in India), and gave the doleful tidings

of the fate of the army (including camp followers) of 16,500 that had miserably perished. He was one of the "illustrious garrison" that held Jellalabad under General Sale; and, on Sir George Pollock reaching the beleaguered fortress, was attached to the 33rd Native Infantry, and with that General retraced his steps to Cabool with the army of retribution, which, on its return to Ferozepore in 1843, was received with high honour by the Governor-General, Lord Ellenborough. From this time he was chiefly in the Bhopal State—the Begum of which was honourably distinguished for her loyalty to Britain in 1857—till promoted in 1849 to the rank of Surgeon and posted to the 40th Native Infantry, with which he was sent to Burmah in 1852, being present at the taking of Rangoon, Prome, etc.

After eighteen years of active service, he returned to his native land for three years on sick-leave, at the expiry of which India again, in the throes and convulsions of a rebellion, received his valuable services. During the siege of Lucknow, he was severely wounded in the lower part of the spine by a rifle-bullet, which passed through his body from the left to the right side, and from which he suffered during the rest of his life. In 1857, he was sent in charge of the field hospital from Lord Clyde's army at Cawnpore to Allahabad, holding various charges there, and subsequently being surgeon superintending at Dinapore. In 1859, he retired from the service on his well-earned laurels. Few medical officers have seen and passed through such arduous service, and none could grudge the honours conferred by his country in decorating him with medals for Jellalabad, Cabool, Burmah, clasp for Pegu, clasp for Lucknow, and Companion of the Bath in 1858.

Settling down in the quiet Highland retreat of Westfield, Ross-shire, he sought rest in country pursuits, yet was ever ready to administer relief to the many who sought his advice. He was carried to his last resting place in the Rosemarkie Burying Ground, followed by sorrowing relatives and the heartfelt regret of friends and neighbours, for a better and braver man than William Brydon one rarely met.

WILLIAM MOORE WOOLER, ESQ., OF DEWSBURY.

MR. WOOLER was a pupil of the eminent Mr. Hey, of Leeds, and was a fellow-student with the present Mr. Hey, under the late Sir Astley Cooper, at Guy's Hospital. He also attended the lectures and instructions of Lawrence, Abernethy, Carpue, and other celebrities of the times. Mr. Wooler settled first at Batley, a neighbourhood in which his family had occupied a respectable position for several generations, and where he soon acquired considerable local reputation. He was devoted to his profession, and while he gained the confidence of his patients generally by attention and skill, he won their affection (amongst the poor particularly), by acts of considerate kindness and generosity. Subsequently he removed to Derby, where he enjoyed a large and lucrative practice for several years. Later in life he returned to the West Riding, and resumed for awhile the active duties of his profession; but advancing age, his growing literary tastes, and competent means, gradually led to his retirement. He took a lively interest in the science of hygiene and public medicine. On these subjects he wrote and printed several treatises, which, though very discursive, and full of eccentric comment, abounded also in racy observations, and were in many respects before their time, the burden of the whole being his oft-repeated maxim, "Excess is the vital principle of error." Mr. Wooler suffered much from gout, and also from bronchitis, for which he was attended by his nephew, Dr. Clifford Allbutt of Leeds. He died rather suddenly, on the 19th February, at the age of 78, sincerely regretted by many friends, not least by the few survivors of his early and middle life.

WILLIAM BARTLETT, F.R.C.S.

WITH deep regret we announce the death of Mr. William Bartlett, of Ladbroke Square, Notting Hill, on March 31st, after a long and painful illness. He was the son of Mr. Bartlett, surgeon, of Great Bedwin, Wiltshire, and was born in 1808. He was the fifteenth student that entered University College, then the University of London. He studied also at the Middlesex Hospital, where he was dresser to Sir Charles Bell. In 1830, he became a member of the Royal College of Surgeons, and a licentiate of the Apothecaries' Company, and became a fellow of the College in 1855. He commenced practice in his native county with his father. In 1838, he came to Notting Hill, where he soon secured a very large and successful practice. For thirty-three years he held the office of surgeon to the Kensington Dispensary, his genial manners, kindness, and skill, making him an universal favourite with the poor. He was for several years a member of the Council of the Metropolitan Counties Branch of the British Medical Association, at the meetings of which he was a regular attendant. Some months ago he was

successfully treated for calculus in the bladder, by Sir H. Thompson; but a dilated heart, with all its distressing accompaniments, led to his death. No member of our profession has ever gained, and having gained, for ever held, more friends amongst his fellows; no practitioner has ever gathered round him more true and faithful patients; and their loss now, not only of a highly informed, well-practised, trustworthy surgeon, but of a true principled, straightforward, and affectionate friend and counsellor, they all deeply mourn and deplore.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 10th, 1873.

Barnard, Charles Edward, Hobart Town, Tasmania
Boddy, Evan Marlett, Camberwell Road
Knowles, Edmund, Cambridge
Gilmour, John Henry, Hurstbourne Tarrant
Neal, John Breward, Bodmin, Cornwall
White, George Bentley, Nottingham

The following gentlemen also on the same day passed their primary professional examination.

Lush, William Henry, St. Thomas's Hospital
Newman, John Jepson, Guy's Hospital
Williams, Trevor W. W., St. Bartholomew's Hospital

As an Assistant in compounding and dispensing medicines.
Hodges, Edwin Goodall, Aberdare, South Wales

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 17th, 1873.

Cooke, John, Hoxton Street, N.
Davey, Charles James, Witham, Essex
Dickinson, William Wood, Uffculme, Devon
Lucas, John Catchick, Russell Square
Lyddon, Charles, Albion Grove, Barnsbury
Pinching, Charles John William, Gravesend, Kent

The following gentlemen also on the same day passed their primary professional examination.

Brown, George, Charing Cross Hospital
Bevan, Adolphus, Guy's Hospital

As Assistants in compounding and dispensing medicines.
Allen, Charles Bowen, Richmond
Dixon, Henry Benjamin, Nottingham

MEDICAL VACANCIES.

THE following vacancies are announced:—

BALLYMENA UNION, co. Antrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ahoghill Dispensary District: £90 per annum, and fees.
BELGRAVE HOSPITAL FOR CHILDREN—Junior Physician.
BETHNAL HOUSE LUNATIC ASYLUM—Physician.
BOWNESS, Grasmere, Kendal, Kirkby Lonsdale, and Windermere Urban Sanitary Districts, and Kendal, East Ward, Sedbergh, Ulverstone, and West Ward Rural Sanitary Districts, combined—Medical Officer of Health: £600 per annum. Applications to C. Gardner Thomson, Esq., Kendal.
BRADFORD (Yorkshire) MEDICAL AID ASSOCIATION OF FRIENDLY SOCIETIES—Surgeon: £200 per annum and midwifery fees, house, rent, etc. Applications to W. B. Cawthra.
BRISTOL HOSPITAL FOR SICK CHILDREN—Resident House-Surgeon: £100 per annum, furnished rooms, coal, gas, and attendance.
BROADMOOR CRIMINAL LUNATIC ASYLUM—Assistant Medical Officer: £175 per annum, increasing to £200, furnished apartments, coal, gas, and attendance. Applications to the Medical Superintendent.
BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury—Resident Surgeon and Apothecary: £80 per annum, with £10 increase to £100, board, lodging, coals, and candles, in furnished apartments.
CARMARTHENSIRE INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.
CAXTON RURAL SANITARY DISTRICT, combined with several others—Medical Officer of Health: £800 per annum.
CENTRAL LONDON SICK ASYLUM DISTRICT INFIRMARY, Highgate—Assistant Medical Officer.
DUNDEE ROYAL INFIRMARY—Resident Medical Assistant. Applications to D. Gordon Stewart, Esq.
EDINBURGH ROYAL LUNATIC ASYLUM—Resident Medical Superintendent.
ELY RURAL SANITARY DISTRICT—Medical Officer of Health: £150 per annum.
ELY UNION—Medical Officer for District No. 5 and the Workhouse: £51 p. ann.
FARRINGTON DISPENSARY, Bartlett's Buildings—Resident Surgeon: £100 per annum, coal, gas, and unfurnished apartments. Applications to Samuel Green, Esq., 10, Swithin's Lane.
GORT UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ardrahan Dispensary District: £100 per annum, and fees.
HACKNEY UNION—Medical Officer for District No. 2: £80 per annum, and fees.
HOLYHEAD URBAN SANITARY DISTRICT—Medical Officer of Health.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
KIDDERMINSTER INFIRMARY—House-Surgeon: £120 per annum, rooms, coal, gas, and attendance.

LETTERKENNY UNION, co. Donegal—Medical Officer for the Churchill Dispensary District: £100 per annum, and fees.
LIMERICK DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent. Applications to the Under Secretary, Dublin Castle.
LISNASKEA UNION, co. Fermanagh—Medical Officer for the Maguiresbridge Dispensary District: £80 per annum, and fees.
MIDDLESEX HOSPITAL—Lecturer on Comparative Anatomy.
MORPETH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
NORTH DUBLIN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the No. 2 North City Dispensary District: £125 per annum, and fees.
NORTH LONDON CONSUMPTION HOSPITAL—Physician.
OWENS COLLEGE, Manchester—Brackenbury Professorship of Practical Physiology and Histology. Applications to J. G. Greenwood, Esq.
PICKERING RURAL SANITARY DISTRICT—Medical Officer of Health: £80 per annum.
PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—Junior House-Surgeon.
ROYAL COLLEGE OF SURGEONS, Ireland—Seven Examiners for the Fellowship and Letters Testimonial; Three Examiners for the Diploma in Midwifery; Three Examiners as to proficiency in General Education.
ST. LEONARD, Shoreditch—Dispenser: £120 per annum.
ST. THOMAS'S HOSPITAL—Lecturer on the Geography of Disease.
SEAMEN'S HOSPITAL, Greenwich—Visiting Physician. Applications to Kemball Cook, Esq., House-Governor and Secretary.
SUSSEX COUNTY HOSPITAL, Brighton—Physician.—Assistant-Physician.
THOMASTOWN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Knocktopher Dispensary District: £95 per annum, and fees. Applications to J. Bradley, Esq., Inisnag, Stoneyford.
WALKER URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum.
WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL and GENERAL BATHING INSTITUTION—Physician.
WESTMINSTER HOSPITAL—Assistant-Surgeon.
WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per annum, board, and residence.
WEST RIDING ASYLUM, Wakefield—Clinical Assistant.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CAMPBELL, W. Macfie, M.B., appointed Medical Officer to the Dingle Epileptic Hospital, Liverpool, *vice* C. Elliot, M.B., resigned.
HUGHES, W. R., L.K.Q.C.P.I., appointed Senior House-Surgeon to the Royal Southern Hospital, Liverpool, *vice* H. Harvey, M.B., resigned.
LLOYD, William, M.B., appointed Physician to the Carmarthenshire Infirmary.
***NICOLSON**, David, M.B., Assistant Medical Officer of H.M. Invalid Prison, Woking, appointed Assistant Medical Officer to H.M. Prison, Millbank, London, *vice* J. H. P. Wilson, Esq., who exchanges.
OWEN, A. Lloyd, B.A., M.B., appointed Surgeon and Agent to the Southsea and Langston Harbour Coast Guard Stations, *vice* E. Elliott, M.D., resigned.
***ROWLANDS**, James, Esq., appointed Consulting Surgeon to the Carmarthenshire Infirmary.
ROWLANDS, James David, Esq., appointed Surgeon to the Carmarthenshire Infirmary, *vice* *James Rowlands, Esq., resigned.
***SANSOM**, A. Ernest, M.D., appointed Honorary Consulting Physician to the Islington and North London Provident Dispensary.
SOBEY, A. L., Esq., appointed House-Surgeon to the West London Hospital, *vice* W. A. Ward, Esq., resigned.
TIMMINS, J. A. J., M.D., appointed Physician to the Carmarthenshire Infirmary.
WEBBER, W. L., Esq., appointed House-Surgeon to the West London Hospital, *vice* A. L. Sobe, Esq., promoted.
WILLIAMS, W., M.D., appointed Junior House-Surgeon to the Royal Southern Hospital, Liverpool, *vice* W. R. Hughes, L.K.Q.C.P.I., promoted.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

DUCKWORTH.—On April 21st, at Grafton Street, Piccadilly, the wife of *Dyce Duckworth, M.D., of a daughter, who survived only fourteen hours.

DEATHS.

***CROFT**, Charles Percy, M.D., at Newark-on-Trent, on April 7th.
EDWARDS, William John, M.B., Junior House-Surgeon to the Royal Infirmary, Preston, aged 23, on March 27th.
EVANS.—On April 19th, Paulina, third daughter of Charles Evans, Esq., Surgeon, of Bakewell, aged 15.
JACKSON, Richard Smart, Esq., Surgeon, at Plymouth, aged 64, on April 5th.
***MARTIN**, John, M.D., L.D.S., of Cambridge House, Portsmouth; Keydell, near Horndean, Hants; and Mentone, Les Alpes Maritimes, at Nice, aged 61, on March 23rd.
NICOL, Patrick, M.D., late Senior Physician to the Bradford Infirmary and to the Fever Hospital, at Plympton, South Devon, on April 13th.
NORTH, David B., M.B., of Tyrrell's Pass, at Moyalley, near Moate, aged 54, on April 8th.
SULLIVAN, W. P., L.K.Q.C.P.I., Staff Assistant-Surgeon Royal Army, at the Convalescent Depot, Wellington, Neilgherry Hills, aged 27, on March 14th.

A PAIN IN HIS TEMPER.—Alarming reports concerning the health of the Sultan are published, under reserve, by the *German Gazette*, which professes to have received telegrams from Constantinople, representing him to be suffering from frequent fits of furious irritation. Great consternation is said to prevail in official circles in Constantinople, and the dismissal of the Grand Vizier is daily expected. The members of the diplomatic body are, it is added, much embarrassed.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. T. S. Dowse, "A Case of Cerebro-spinal Meningitis terminating in Gangrene"; Mr. Spencer Watson, "On some Subjective Symptoms of Eye-disease, with Experiments"; Dr. Symes Thompson, "Cases of Perityphlitis."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

SALOP.—We do not think that the appointment could be demanded of the Guardians. The most proper course would be to make a representation of the circumstances to the Local Government Board.

WE are much indebted to Dr. Stanley Haynes for his prompt communication.

DR. GARDNER (Box).—The reports will appear so soon as we have been able to complete the publication of the two series now appearing.

DR. PERCY LESLIE.—It is hardly worth while to take any further notice of the eccentricities and self-contradictions of which our correspondent complains. They can do no harm now. If the cause is a good one, it depends on its friends to make it prosper; criticisms, weak or strong, cannot keep it down.

INQUIRER.—Dr. Barnes has not published a paper on Pain occurring in the intervals of Menstruation; but the subject is incidentally referred to by him in a paper on Dysmenorrhœa in the last volume of the *Obstetrical Transactions*. A paper on Intermenstrual or Intermediate Dysmenorrhœa was read last year before the Royal Medical and Chirurgical Society by Dr. Priestley, and was published in the BRITISH MEDICAL JOURNAL for October 19, 1872.

THE ANTIVACCINATION MANIA.

BUT that we have received several copies of the subjoined circular, it might be considered impossible that any one would be at the expense of circulating such wicked trash.—From the *Daily Telegraph*, November 19th, 1872. "Health of Berlin.—The statistics of disease in Berlin are positively appalling. Typhus rages unchecked here; and our mortality-rate is higher than that of any other European city, not even excluding Rome and Madrid. It is estimated that the stench alone have been the cause of nearly ten thousand deaths in Berlin since last November. Round the Thiergarten, in the wealthy and fashionable quarter where house-rent is higher than in Paris or Vienna, children die like flies of marsh-fever, dysentery, etc. The undertakers and *pompes funèbres* enterprises are altogether unequal to meet the demands made upon them for accommodation and transport, so that it is no uncommon thing to see from seven to twelve corpses conveyed to the cemetery in one hearse. Only the other day, eleven coffins were thus carted along, piled upon one another, to one of our small intramural graveyards. When I tell you that the Berlin death-rate more than doubles that of London, you may realise the dangers to which residents in the German capital are exposed." And this is from one of the best vaccinated countries in Europe. The mortality is put down to bad smells, instead of the real cause (putrid matter), that is, vaccination.

INFLUENCE OF FOOD ON COLOUR.

SIR,—A question is being discussed in the *Journal of Horticulture* on the subject, "Whether a Canary's Colour can be influenced by its Food?" In the article to which I refer, the writer states "that the point for consideration is whether solutions of colouring matter, such as cochineal, saffron, etc., will enhance the colour of canaries: this is the point for consideration, and one on which I should much like to hear a few remarks from 'some eminent physiologist.'" It is the latter remark which has induced me to trouble you; and I should esteem it a favour if you will allow the question to be mooted in your JOURNAL, which is certainly in the hands of our most eminent physiologists.

April 22, 1873.

I am, etc.,
F.R.C.P.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DR. COURTTS (Banchory).—The master is, under the circumstances, morally bound, and we think could legally be compelled, to meet the medical fees.

GERMAN DEGREES.

SUBSCRIBER (Nottingham) writes:—"Can you inform the writer at which of the German Universities the degree of M.D. can be obtained; also, if the German language is necessary, and what other qualification?"

* * German Universities are legion; but we do not know which of them afford most facilities to English aspirants. No degree worth anything, we believe, is to be obtained from any without residence and a course of study—and this, of course, requires a knowledge of the German language.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the British Medical Association as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is, "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

"DRUNKEN ASSISTANTS."

SIR,—With "A Teetotaler" I am not prepared to sympathise with "drunken assistants." In their situations and responsibility assistants ought to be the very last to give way to intoxication. If they are excessively confined, they can devote the hours of confinement to study, the hours of recreation to amusement. Ought not assistants to think of the grave responsibility imposed on them? to be more manly and resist the temptation of drinking? What can be more unpleasant to a patient than to have his medical attendant drunk? He should think of his duty and honour to his principal, and that he degrades the most honourable profession by practising drunkenness in its folly, revel, obscenity, and beastliness. Let principals for the sake of humanity be more sympathetic, and be careful not to engage "drunken assistants," who are nuisances, disgrace the profession, and are the terror of their patients. The profession love social comforts and liberty, and hate drunkenness, and do not, like "Teetotaler," sympathise with it. If principals would not engage "drunken assistants" the evil would work its own remedy.

April 1873.

I am, etc.,
AN ASSOCIATE, A LIFE TEETOTALER, AND
A G. TEMPLAR.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, April 19th; The Manchester Guardian, April 23rd; The Aberdeen Daily Free Press, April 19th; The Bath Express, March 19th; The Birmingham Daily Post, April 23rd; The Western Mercury and Somersetshire Herald; The Shepton Mallet Journal; The Hull Packet; The Daily Bristol Times and Mirror; The Daily Express; The Birmingham Daily Mail; The Bath Express and County Herald; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Robert Barnes, London; Dr. Morell Mackenzie, London; Dr. George Johnson, London; Dr. D. Ferrier, London; Dr. Liveing, London; Our Paris Correspondent; Dr. G. M. Humphry, Cambridge; Dr. Rutherford, London; An Associate; Dr. Skinner, Liverpool; Mr. Lawson Tait, Birmingham; Dr. J. W. Walker, Spilsby; Dr. Heaton, Leeds; Dr. Waters, Chester; D. M. R.; Fiat Justitia, Grange-over-Sands; Mr. W. R. Smith, Huddersfield; Dr. Hughlings Jackson, London; Dr. H. B. Dow, London; Mr. R. D. Byers, Milford Haven; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Pathological Society; Dr. Sibson, London; Rev. H. R. Smith, Grange-over-Sands; Dr. Foss, Stockton-on-Tees; Mr. Sullivan, Dublin; Salop; Mr. Vincent Jackson, Wolverhampton; Rev. D. Charles, Aberystwith; Mr. M. F. Manifold, London; Mr. B. Blower, Liverpool; Dr. Gardner, Box; Mr. W. Whitehead, Manchester; Mr. Arrowsmith, Darlington; Mr. A. B. Squire, London; The Secretary of the Clinical Society; Dr. John Lowe, Lynn; Mr. C. Mayo, Winchester; Mr. J. Ewens, Cerne Abbas; Dr. W. R. Hughes, Liverpool; Mr. D. H. Brown, Paris; Dr. Rumsey, Cheltenham; Mr. T. Cattell Jones, London; Dr. J. H. Martin, Portsmouth; Dr. G. W. Timms, London; Dr. Stanley Haynes, Malvern; C. S. W.; Our Dublin Correspondent; Dr. Philipson, Newcastle-on-Tyne; Mr. Harper, Hackney; Dr. Porchester, Charleston; Dr. Dyce Duckworth, London; Dr. Sansom, London; Dr. Althaus, London; Dr. George Harley, London; Dr. Parsons, Dover; Mr. Taylor, Leeds; Major Knight, Alton, Cheadle; Mr. C. Bidwell, Ely; Dr. Handfield Jones, London; Mr. Foster, London; Dr. Mackey, Birmingham; Mr. P. D. Bennett, West Bromwich; etc.

LUMLEIAN LECTURES

ON

THE CONVULSIVE DISEASES OF WOMEN.

*Delivered at the Royal College of Physicians.*By ROBERT BARNES, M.D. LOND.,
Obstetric Physician to St. Thomas's Hospital.

LECTURE III.—PART II.

*The Treatment of Convulsive Diseases: Four Cardinal Principles.—
The Induction of Labour Discussed.—Induction of Anæsthesia.—
Bleeding.—Transfusion.*

Treatment.—Upon the treatment of convulsive diseases I have nothing new to offer in the way of remedies, or even of methods of applying them. The utmost I pretend to do is, to strengthen the rational basis, the principles, upon which the treatment should be conducted; and to show why certain agents, still of conventional reputation, should be rejected. The treatment of all convulsive diseases rests upon the same physiological and pathological foundation; and it is therefore most convenient not to pursue the details of treatment as applicable to each disease, but to sketch broadly the principles that apply to all, stopping, as we proceed, to point out such modifications as particular diseases require.

The principles of treatment flow logically from the view we have taken of the etiology and nature of the diseases we have to deal with. Four cardinal principles may be laid down for our guidance:

1. To moderate central nervous irritability.
2. To cut off emotional irritants or excitants.
3. To cut off peripheral irritants or excitants.
4. To eliminate all complicating morbid conditions.

To carry out all, or as many of these indications as we can, should be our aim in the management of all convulsive diseases. But the varying circumstances of different diseases and of different cases will prompt us to vary the order in which these indications shall be taken. For example, in all the convulsions of pregnancy the question surges up—Shall we try to subdue the central nervous irritability by putting an end to the pregnancy which produced it? The affirmative presents itself with cogent force. Yet it is not always possible or wise to resort to this measure, at least in the first instance. The indication is most clear when eclampsia breaks out after the sixth month of gestation. Here we have not only intense exaltation of nervous irritability, but an active blood-poison constantly keeping up this irritability, and which, we know from experience, will rarely disappear until the pregnancy which produced it is brought to an end. Often, indeed, the disease itself will determine the labour. In this case we have to follow the lead, and accelerate it judiciously. The urgency is pressing; every fit is a source of fresh danger to the brain. Prompt action, by averting one fit, may save life. Still we may err by precipitation. If we hurry on the labour too quickly—if, in short—we carry out what the French call the *accouchement forcé*, we may do irreparable mischief. The violence of the necessary manœuvres will be a source of so much irritation as to add to the severity of the fits, and to add the depressing influence of shock. There cannot, I am convinced by observation even more than by theory, be a more fatal error than to follow the precept still inculcated and practised by many, to deliver as quickly as possible. The simplest measure which involves the least possible irritation is the best. That is, to puncture the membranes and leave the rest to Nature, at least until we see she fails to carry on the process. And since even the gentlest examination is often enough to provoke a fit, I would advise the previous induction of anæsthesia by chloroform. Under the cover of this state, the catheter should first be passed to secure an empty bladder, and to procure a good specimen of urine for testing. Then, at the same sitting, the membranes should be punctured by a quill, stilet, or other suitable instrument. The diminution of the volume of the uterus by the draining off of the liquor amnii, lessening the pressure upon the vessels and the vascular tension, gives sensible relief. But another good effect generally follows; one, it is true, not without occasional drawbacks, but still a risk that must be encountered. The good effect is this: the moment labour is started, a call is made upon the nervous centres for nerve-force to be expended upon the uterus. This is its physiological destination; and if it can be kept steadily directed to this, its proper work, we may hope to obviate its diversion

to convulsion or other morbid action. It is, indeed, a matter of observation that uterine action will often excite a convulsion. But, upon the whole, I am disposed to think that it acts beneficially; and we shall be the less afraid of calling it into operation if we reflect—first, that labour must take place, and that it cannot be effected without this uterine action; and, secondly, that we can greatly diminish the excess of irritability by the use of chloroform.

The expediency of inducing labour when there is albuminuria without convulsion is more doubtful. As we have seen, it is not certain that convulsions will break out. I have at this moment under my care at St. Thomas's a woman pregnant for the first time, six months gone, who is known to have had albuminuria for at least three months. She is under close observation; but I have not thought it desirable to act without more decided indications. If headache, vertigo, dimness of sight or amaurosis, ringing in the ears, oblivion, delirium, or any sudden anasarca in the shape of swelling in the fingers or face supervene, labour will be immediately induced. Undoubtedly some risk is being run. Convulsions might set in without warning, and then aid might come too late. But the risk I have observed is certainly less when the albuminuria and attendant blood-poisoning assume the chronic character; so that when we know that this is the case there is justification for delay.

The induction of labour is the means of carrying off, or of discharging, the excess of nervous tension. But something more is commonly required. We cannot complete labour all at once. Sometimes we must wait, and, not seldom, when the nerve-force has once got into a wrong channel we shall fail to turn it all to the proper direction. Measures for moderating the excess of central irritability are almost always useful. The most available of these is the induction of anæsthesia by chloroform. It should be carried to the surgical degree—that is, to the extent of rendering the spinal cord irresponsive to irritation of the sphincters. The beneficial effect of this is sometimes very striking. The convulsive fit is rendered less violent; it is shortened. When anæsthesia is induced in anticipation of a fit, this may be almost entirely averted, and is sure to be moderated. The evidence in favour of chloroform has been greatly accumulating since Simpson's time. Chloroform blots out memory, one source of emotion; it cuts off perception, another source of emotion; it lessens reflex irritability. When chloroform or equivalent anæsthetics cannot be given, we must act on the same indications. We must procure absolute rest; exclude noise, light; avoid all suggestion of disagreeable ideas; avoid all irritation of the skin. All this is especially necessary at the acme of spinal and cerebral irritability when a fit is on or impending. But an essential condition for obtaining from chloroform the full benefit it is capable of giving, is to keep close watch over the patient, so as to be ready to administer it on the slightest warning of a fit.

How it is that chloroform acts in averting or shortening a fit may, perhaps, be explained by the following observation of Achille Foville. The cessation of an attack is the consequence of the asphyxia which itself produced. The quicker the asphyxia, the more quickly is its action felt upon the cord, rendering it incapable of reacting. Thus the danger is averted by its very excess. Chloroform, by inducing asphyxia, acts in a similar way.

But, whatever the explanation, the use of chloroform now rests upon a solid foundation of clinical facts. We should, however, be glad to have at our command some anæsthetic that would act with even greater rapidity. When a fit overtakes a patient, the action of chloroform is too slow; the respiration being to some extent suspended, we cannot get the vapour inhaled quickly enough. It is, therefore, my intention on the next occasion to administer the nitrite of amyl.

In fulfilment of the same indication we may derive great assistance from opium, belladonna, and bromide of potassium. A doubt has been entertained whether opium does not act injuriously by increasing brain-congestion. But I have seen excellent effect in allaying nervous irritability follow the subcutaneous injection of morphia; and the advantage of a remedy which can be so used in cases where deglutition cannot be turned to account is manifest. The value of belladonna in allaying spasmodic or convulsive action is often striking. I have seen nothing so effective in the whooping-cough of children. Its power over other forms of convulsion is incontestable. It may be given in quarter-grain or half-grain doses in the form of very minute pills every two hours until its toxical action is declared. It may be injected subcutaneously in the form of atropine, alone or in combination with morphia. One-thirtieth of a grain is enough for one injection.

When the patient can swallow, in the intervals of the fits, the bromide of potassium or of ammonium may be given in scruple or half-drachm doses every three or four hours. But in the first instance it is more useful to give a scruple or half-drachm dose of chloral. This, like chloroform, removes all emotional sources of irritation, and lessens the

sensitiveness of the nervous centres to peripheral irritation. The sleep it procures is eminently beneficial. I entirely concur in the praises which many practitioners have bestowed upon this most precious remedy in eclampsia.

We cannot yet discuss the treatment of eclampsia without referring to the practice of bleeding. To advocate anæsthesia is practically to condemn venesection. Not that there is any necessary antagonism, but that, as a matter of fact or of fashion, chloroform is superseding venesection. The modern contention has been between these two remedies. Statistics have been marshalled on each side, and, as usual, great has been the waste of words and of figures in the conflict. The laws of numbers are infallible, but not so the perceptions and the reports of observers; nor are individual cases of disease constant uniform quantities like abstract figures. I think the true clinical physician will prefer to base his judgment as to the value of different methods of treatment upon careful observation of the action of remedies and close critical comparison of cases. I am one of those who think there is more of fashion than of wisdom in the almost absolute oblivion of the lancet. But in this particular case I do not regret the disuse into which it is falling. It is very easy to tell of cases in which bleeding has been followed by recovery, and of other cases in which other treatment has been followed by death. I believe I have seen distinct relief ensue upon moderate abstraction of blood from the arm, or by the application of leeches to the temples. And where there is distinct evidence of plethora with marked engorgement of the vessels of the face it is judicious, I think, to apply eight or twelve leeches to the temples, but not to the exclusion of anæsthesia. In delicate women with a feeble circulation, bleeding in any form should be rigorously condemned. And we must not forget that the process of labour is usually attended by a loss of blood quite as great as is good for the patient.

In climacteric epilepsy, the abstraction of a moderate quantity of blood by leeches to the temples, or by cupping at the back of the neck, just before the expected return of the attack, is often eminently useful.

The second indication, to cut off emotional excitants, is one that is generally studied. It need not detain us: it is so obviously important, and the means of accomplishing it are so entirely dictated by the surroundings of the patient.

The third indication, that to cut off physical peripheral excitants, demands more attention. It is less understood in some of its details, and is too often practically contravened. It is desirable, then, to clear the ground of some of the relics of an irrational empiricism. The first impulse of many, when they see a person in a fit, no matter of what kind, is to dash cold water in the face. There may be no great objection to this in hysteria; in syncope it is undoubtedly beneficial; but in eclampsia it is decidedly injurious. I have seen it provoke a fit. Another not uncommon error in eclampsia is to apply blisters to the nucha, or mustard poultices to the calves. These applications do exactly what ought not to be done. The irritation they produce when the whole surface is in a state of hyperæsthesia, is doubly prejudicial. The immediate effect is often to excite a fit; and the continuous irritation set up in the skin can only keep up irritation of the nervous centres. There is no fact in medicine of which a stronger conviction has been forced upon me by observation than this, that all peripheral irritation is injurious in eclampsia. It is a sin against physiology. Hence the rule, when the situation dictates manipulation of any kind, to lull the system in the artificial sleep of anæsthesia before passing the catheter, before making a uterine examination, or proceeding to induce labour.

These principles of action apply with almost equal cogency to the treatment of epilepsy in the pregnant state; they apply with quite equal cogency to the treatment of obstinate vomiting in pregnancy. With regard to this latter affection, one or two special remarks may be permitted. When vomiting, in severe and uncontrollable degree, sets in about the third month, the question as to inducing labour presents itself with peculiar anxiety. On the one hand, if it be resorted to at once, there may be room for the misgiving that a grave step has been taken unnecessarily. On the other hand, the fatal progress is apt to steal on insidiously but rapidly, so that the time for hopeful action may quickly pass away. If the pulse have risen to 120 or 130, if it be small, indicating prostration; if there be marked Hippocratic countenance, considerable emaciation, continuous difficulty in keeping down food, sleeplessness, and especially any degree of delirium, it is highly probable that the induction of abortion will be too late. It may even provoke distress, which will accelerate the fatal issue. The same observations apply to obstinate vomiting in the latter months. The indication to interpose early is all the stronger if there be albuminuria, for the concomitant blood-disease will almost infallibly keep up the irritability of the nervous centres and the vomiting. But in several fatal cases which I have seen there was no albumen in the urine, so that, whatever poison there were in the blood, the condition was probably different

from that which we call uræmia. Comparing these cases with the phenomena of acute atrophy of the liver, and with other cases of rapid sinking in pregnancy, I cannot help suspecting that there is developed some graver systemic or organic disorder, than has yet been recognised. Death does not appear to me to be accounted for by the exhaustion from shock, for in some cases the fits were not very frequent or protracted. In some cases, I have no doubt, the delirium witnessed towards the close, the irritative fever, are the result mainly of starvation. The evil consequences of starvation are negative and positive. There is first, of course, defect of nutrition, so that the sufferer sinks from inanition; but there is also a peculiar empoisonment of the blood, resulting from the absorption into the circulation of waste material, and probably of some peculiar poison developed during the process of starvation. Blood so poor in every virtue that is wanted, so charged with noxious elements, may, it can well be imagined, not only fail to nourish the system, but may depress the whole organism, and set up diseased action incompatible with life.

It is wiser then to err on the side of safety to the mother, and rather to induce labour too soon than to temporise until it is too late. Unless we can, within a short time, get wholesome nutriment into the system, the system will feed upon itself, and the nervous centres, partaking of the general exhaustion, may soon be paralysed.

To counteract this progressive starvation is one of the greatest practical difficulties. Enemata of beef-tea, containing brandy or port wine, and sometimes half a drachm of chloral, are often of the greatest benefit. I am sure I have seen life saved by them, the patients being, by their aid, tided over a critical stage of exhaustion. But, in cases of extreme anxiety, there is another remedy which has not yet been sufficiently, if at all, tried, and which is full of promise. I mean the transfusion of blood. One successful case of transfusion in exhaustion from puerperal convulsions has been recorded.

In the case of exhaustion from obstinate vomiting, if used betimes, the prospect is better still; unless, indeed, the patient be struck with that deadly disease at the probable existence of which I have hinted.

In the chronic state of the menstrual or climacteric epilepsy—that is, when the fit has passed away, and when the indication is to break the morbid chain by preventing future fits, bromide of potassium, belladonna, and various metallic preparations, and a carefully ordered hygiene, are our chief allies.

I have not yet fairly tried Voisin's plan of giving the bromide, but it appears to me eminently deserving of being rigorously tested. It consists, as described in his admirable article on Epilepsy, in the *Nouveau Dictionnaire de Médecine*, in giving from two to twelve grammes daily, a few minutes before meals, and in persisting uninterruptingly for a year or more, testing the action of the bromide by applying a spoon to the epiglottis. When reflex nausea is no longer excited by this test, we know that the drug is acting on the rachidian bulb, diminishing its excito-motor force. As Voisin truly says, in a chronic disease we must have a chronic medication. Bromide of potassium must be an aliment. Diuretics must be given with it, and occasionally iron, to obviate anæmia.

About two years ago I saw, with Brown-Séquard, a young American lady, decidedly epileptic, the exciting cause being probably ovarian trouble. She had been taking for a year or more two-drachm doses of bromide; and there seemed no doubt that it acted efficaciously in averting the fits.

Trousseau's plan of giving belladonna continuously for one, two, or more years, is another way of carrying out the same indication. This, he says, is more especially useful in the epileptic vertigo. I am inclined to suspect that the disappointment at times experienced with these remedies is in some measure due to the want of perseverance in keeping up the full doses over a long space of time, and in many cases—my remark applies especially to women—to the neglect to treat the frequently attending ovario-uterine complications.

The value of the metals in the treatment of convulsive diseases has always been recognised. It would be impertinent on my part to dwell upon the subject. I would simply ask leave to mention that many years ago I proposed and extensively tried the combination of zinc with phosphoric acid. The diphosphate is soluble, and may be given as a syrup. It is somewhat apt to nauseate, and it might be preferable to give the insoluble phosphate in powder. I am not, perhaps, justified in saying that this combination is better than other metallic preparations; but I have certainly derived excellent effects from its use.

In cases where periodicity is marked, the indication is obvious to be on the watch, and so to prepare the system as to avert or to lessen the severity of the attack. In many cases there is no warning symptom to attract attention. It is, therefore, the more important to observe closely the conduct of the patient when the calculated time for an attack is coming round. There is often observed some increase of mental irritability,

headache, languor, a sense of uneasiness, perhaps a sense of dread of something impending. Sometimes, as I mentioned in the preceding lecture, there is marked increase of phosphates and uric acid in the urine; and on several occasions I have noticed nearly total suppression of urine for the day or two preceding an attack. The state of the urine should be observed; and, in any case, the secretions should be carefully regulated by alkaline salines, aloetic and mercurial pills, or Püllna or Friedrichshall waters. To meet the fit itself, chloroform should be kept at hand, and a bit of India-rubber to slip between the teeth. The attack, it is well known, frequently comes on in the night. This seems to be the time when the excito-motory system is most active. Evidence of this may be seen in the common occurrence of erection in children connected with the loading of the bowels and bladder. It is probable that a similar loading of the pelvic viscera may sometimes be the immediate exciting cause of a fit in women, especially when such an accidental condition coincides with the periodical nervous erethism. Since the attack is so likely to occur in the night, it follows that the patient should never sleep alone, and that the person sleeping with her should be instructed and prepared to administer the treatment necessary for the emergency. It would also be wise to increase the doses of belladonna or bromide of potassium about this time; and, if there be any threatening symptom, at once to give a scruple or half a drachm of chloral. By acting in this way, I have every reason to believe that fits have been warded off.

The indication to cut off all complicating morbid conditions is one that rarely admits of being fulfilled in the urgent cases of eclampsia and of the vomiting of pregnancy. Purgatives, and those not the gentlest, are commonly given in eclampsia, the motive being to remove any possible irritating matters from the intestinal canal. It is a routine practice, which is occasionally useful, as in those cases where a fit has come on soon after a heavy meal. An emetic would act better still; but in the majority of cases I do not think I have seen any good from the practice. Some violence is often done in forcing open the jaws to place calomel or croton oil on the tongue, and this is bad. It is very easy to do too much. The terrible anxiety of the friends around urges the physician to "do something". If he be not self-collected and wary, he falls into that worst fault in medicine, as it is in diplomacy, of exhibiting too much zeal; but anxious friends, the unskilled bystanders, can rarely appreciate "masterly inaction". Let the physician, then, show activity in removing all useless persons, who are likely to be the most mischievous critics, from the room; in removing all other sources of irritation; and in the administration of chloroform or other sedatives.

The elimination of all complicating morbid conditions is especially necessary in the prevention and treatment of the convulsive and other nervous diseases of non-pregnant women. In a large proportion of cases, indeed, this constitutes the greater part of the treatment. This applies particularly to neuralgia, to hysteria, and, in a lesser degree, to the epilepsy of the climacteric period.

I suppose the old doctrine of antagonism between certain morbid conditions is now exploded. Whatever ground there may be for the belief that certain poisons are mutually antidotal or neutralising, few will now maintain that the poison of variola is incompatible with that of scarlatina, that ague excludes phthisis, or that phthisis is favourably modified by pregnancy. It may be accepted as a general law, that any two diseases existing at the same time in the body aggravate each other, and increase the danger of the patient; and also that imperfect structure, or other abnormal condition, and disordered function of one organ, is the source of disturbance in the functions of other organs—hence the great rule in therapeutics, to give what relief we can by eliminating, as far as possible, morbid complications. Every such complication removed is a gain not only *pro tanto*, but also by the consequent alleviation of those remaining morbid conditions which we cannot at once cure.

The evidence in support of this precept rises to demonstration in many cases of hysteria and epilepsy associated with dysmenorrhœa; and the particular form of dysmenorrhœa which is most commonly the attendant and forerunner of nervous disorder is that which depends upon obstruction or partial retention of the menstrual fluid. It would be too wide a digression from our theme to enter with any detail upon the pathology and treatment of dysmenorrhœa; but I may state that the following sequence of facts is established by an overwhelming mass of clinical observations.

1. Beginning with the menstrual function, there is the pain which is one of the features of dysmenorrhœa.
2. There is gradual wear and tear of the nervous system, attended by degradation of the blood.
3. There is increased susceptibility to physical and mental impressions, marked in many cases by the outbreak of hysteria or of neuralgia, and in a more limited proportion of cases by epilepsy.
4. Where marriage ensues, it is generally unfruitful; proving again,

by another test, that there exists an impediment to the due performance of the ovario-uterine functions.

5. Where the obstruction is removed, as in most cases it can be, we find the preceding conditions gradually disappear. When menstruation is performed easily, the nervous complications, which are really epiphenomena, subside.

If, on the other hand, the dysmenorrhœa be cured early—that is, before hysteria, neuralgia, or epilepsy have shown themselves—these disorders will, in high probability, not appear at all. The presumption is great that they will be prevented, and that any *inherited* predisposition to them will remain dormant. The treatment, then, both prophylactic and curative, must be directed against the dysmenorrhœa.

In single women, dysmenorrhœa is the most frequent attendant or exciting cause of hysteria or epilepsy. In a certain proportion of cases, however, no abnormality of structure or function of the ovaries or uterus is apparent. The exciting cause may spring up elsewhere; but in all there is a special proclivity developed by the normal ovario-uterine stimulus.

In married women, and in those who have borne children, not only may dysmenorrhœa arise, but metritis, congestion, displacement, and other affections, are more frequent. They hardly ever fail to induce that general debility and nervous prostration which predispose to nervous disorders. It is generally a hopeless task to cure these nervous disorders, unless we begin by relieving the local disorders upon which they so greatly depend.

Before closing, I must beg leave to retrace my steps rapidly, and to sum up in a few propositions the principal points of my theme.

1. Pregnancy and labour require for their due fulfilment an extraordinary supply of nerve-force.
2. This extraordinary supply of nerve-force implies a corresponding organic development of the spinal cord.
3. The provision of an extraordinary supply of nerve-force implies a greatly augmented irritability of the nervous centres, rendering them more susceptible to emotional and peripheral impressions.
4. The disturbances in nutrition occasioned by pregnancy almost always entail some alteration of the blood, which increases the irritability of the nervous centres, and favours the evocation of any latent convulsive or other nervous diathesis, as chorea, epilepsy, or vomiting.
5. When the blood-change wrought by pregnancy is marked by albuminuria, a poisonous action of peculiar intensity is exerted upon the nervous centres tending to produce eclampsia.
6. Obstinate vomiting in pregnancy probably sometimes proves fatal by the development of an unknown organic or systemic morbid process.
7. Menstruation resembles pregnancy in giving rise to an exalted central nervous erethism; and ovulation is a primary exciting cause of epileptic, vomitive, and hysterical convulsion.
8. At the climacteric age, again, there is renewed susceptibility to convulsive disease.
9. Pregnancy, by evoking or producing convulsive diseases, under certain known and passing conditions, puts to the test the various theories of the pathogeny of these diseases.
10. The rational treatment of convulsive diseases in women must take into account the two great factors in the production of these diseases—namely, exalted nervous irritability under the stimulus of the reproductive function, and lowered or empoisoned conditions of the blood.

If it be objected that the views I have ventured to lay before you seem to be false in colour and form, wanting in breadth and perspective, I might reply, that to deny this absolutely would be to arrogate to oneself freedom from human infirmity. The mind, like a mirror, can only reflect the impressions which it receives. Our care must be to keep the mirror bright and even, so that it may reflect truly. This I have endeavoured to do; with what success, must be determined by comparing my reflections with those coming from mirrors that are brighter. One thing only do I ask. It is, that these mirrors may be so set as to take in the objects which have been reflected from mine.

YELLOW FEVER IN BAHIA. The *Gazeta Medica da Bahia* of February 15 and March 15 contains two parts of an interesting report, drawn up by a special committee, on the epidemic of yellow fever, and on the sanitary measures to be taken in consequence. The article contains a series of recommendations on the course to be adopted with regard both to the ships in harbour, and to the hygiene of the city itself. Among other things, the committee recommend the local government to take effectual and energetic measures for correcting the irregular manner in which sanitary proceedings are carried out, for destroying sources of infection, for enforcing the regulations relative to articles of food, and for providing a suitable system of drainage.

RESULTS OF THYROTOMY FOR THE REMOVAL OF GROWTHS FROM THE LARYNX.*

By MORELL MACKENZIE, M.D. Lond.,

Physician to the Hospital for Diseases of the Throat; Senior Assistant-Physician to the London Hospital; etc.

[Continued from page 461 of last number.]

Secondly. The result of the operation, when considered in relation to respiration, is by no means encouraging, for fifteen out of the forty-eight cases operated on had to wear a tracheal tube afterwards. The following are the cases: Gurdon Buck (Nos. 3, 4, and 6); Rauchfuss (No. 5); Busch (No. 9); Debrou† (No. 10); Gibb and Holthouse (No. 11); Köberlé (No. 16); Holmes (No. 25); Navratil (No. 31); Schrötter‡ (No. 33); Mackenzie and Wordsworth (No. 34); Davies-Colley (No. 43); Mackenzie and Thornton (No. 45); Semple and Thornton (No. 47).

Further, there were four cases (Nos. 14, 19, 24, and 46) in which the dyspnoea became so severe that thyrotomy had to be performed afresh; and one (No. 28) in which slight persistent dyspnoea occurred after two years and a half. Excluding this last case, however, it will be seen that, out of the forty-eight cases, the operation was entirely useless, as far as respiration was concerned, in 19 cases—i.e., in 39.58 per cent.

In several of the cases in which the respiration was good after the operation, there had never been any previous disturbance of the respiratory function; the actual percentage of unfavourable results is, therefore, considerably greater than appears.

Thirdly. In regard to voice, the operation is still more unfavourable; for, on excluding the two rapidly fatal cases, and Langenbeck's case, § in which the voice was normal before the operation, out of the remaining forty-five, eighteen were completely aphonic; nine were dysphonic; in five the voice was modified; in three, though the condition of the voice is not stated, there is a strong probability of the existence of aphonia or dysphonia. In only ten cases was a previously defective voice perfectly restored by the operation. As the result of the operation, in relation to voice, then, it was destroyed or modified|| in 77.77 per cent., and in only 22.22 per cent. was it restored.¶

In the following cases there was aphonia: Brauers (No. 1); Ehrmann (No. 2); Gurdon Buck (Nos. 3, 4, and 6); Rauchfuss (No. 5); Böckel (No. 8); Gibb and Holthouse (No. 11); Gouley (Nos. 14 and 17); Köberlé (No. 16); Holmes (No. 25); Mackenzie and Evans (No. 29); Navratil (No. 31); Mackenzie and Wordsworth (No. 34); Davies-Colley (No. 43); Mackenzie and Thornton (No. 45); Semple and Thornton (No. 47).

The following cases remained dysphonic: Busch (No. 9); Gilewski (No. 13); Long (No. 23); Balassa** (No. 24); Navratil (No. 30); Navratil†† (No. 32); Cohen (No. 35); Gurdon Buck (No. 37); and Davies-Colley (No. 46).

In the following five cases the voice was modified: Sands‡‡ (No.

* In the opening paragraph of this paper, published last week, the author stated concerning Mr. Arthur Durham's paper, which it criticises, "The greater part of the article consists of a translation of certain portions of Planchon's *Faits Cliniques de Laryngotomie*." Mr. Durham has forwarded to us a copy of Planchon's monograph. The only thing which we can find to explain Dr. Mackenzie's statement is, that a number of the cases quoted in Planchon are also quoted (with a proper double reference) by Mr. Durham—not in his paper, but in the appendix to it. Herein Mr. Durham acted loyally and justly; and Dr. Mackenzie's observation, which may easily be read to imply an opposite meaning, is, we think, unnecessary, and particularly unfortunate in its wording. [EDITOR BRIT. MED. JOUR.]

† In this case, the patient only lived seven days; and death was attributed to the use of the canula.

‡ In this case, the patient lived eleven days; and, owing to the impossibility of removing the growth, the canula had to be retained.

§ This case was operated on by Langenbeck (BRITISH MEDICAL JOURNAL, November 4th, 1871). There is no mention of the condition of the voice either before or after the operation. But as the vocal cords were normal in appearance (before the operation), and the growth was situated below them, it is probable that the vocal function was never disturbed. The patient was "cured", with the exception of a small fistulous opening, through which air passed when he coughed or otherwise exerted himself. This case is omitted in calculating the average in relation to vocalisation, and therefore the percentage is made on only forty-five cases.

|| In drawing up this percentage, I have included three cases (Nos. 19, 22, and 48), amongst those in which there was defective voice; there being strong presumptive evidence that the vocal function was impaired.

¶ Out of ninety-three cases treated by me *per vias naturales*, and contained in my essay already referred to, the voice was perfectly restored in seventy-five cases; in fifteen it was improved; and in three the result was negative—the patients discontinuing attendance before any result had been obtained.

** "The voice was sonorous." It may be remarked that sonorousness affords the essentially distinguishing feature of dysphonia from aphonia, the latter word implying absence of resonance, and the former impaired resonance.

†† "Vocal cords normal, but slow in their movements; there was an inflammatory swelling present at the anterior point of commissure. Tannin inhalations were ordered, and their continuance recommended until the inflammatory swelling referred to should disappear, and the voice recovered its clearness. The patient now departed hence."

‡‡ "Her voice never regained its normal tone, although it acquired a very considerable degree of resonance."

7); Lewin and Ulrich* (No. 12); Cutter† (No. 26); Durham‡ (No. 39); and Durham§ (No. 40).

In the following three cases the condition of the voice is not stated; but dysphonia, if not aphonia, probably resulted: Voss (Nos. 19 and 22); Davies-Colley (No. 48). In Langenbeck's case, as previously mentioned, the voice was never affected.

In only the following was a perfect voice regained; and in some of these, recurrence taking place, the recovery of voice was but of short duration: Balassa (Nos. 15, 18, 21, 27); Durham (No. 20); Mackenzie and Couper|| (No. 28); Krishaber (No. 36); Denucé (No. 38); Bryant (No. 41); Ogle and Lee (No. 44).

The most elaborate efforts have been made by operators to give favourable descriptions of the voice after the operation; and, if admitting it to be defective, they have attributed the dysphonia to some other cause than the operation.

Thus in one case, the patient is reported as speaking "in a very loud and distinct whisper". In another, the patient's voice is "clear, but sometimes hoarse and hard". Another patient enjoyed a "phonation coarse and clear"; but immediately after the operation, he had spoken "in a loud coarse whisper, resembling that of a sea-captain in a storm".

In Gilewski's case (No. 13), the hoarseness which came on was not considered to be due to the operation or recurrence of growth, but was attributed to catarrh. In Busch's case (No. 9), the voice was strong enough, but hoarse on account of slight swelling—not of the larynx, but—of the trachea! Concerning this patient, who was dysphonic, and wore a canula, with ascending and descending branches, the author remarks that the "general condition was very satisfactory". In Mr. Durham's second case (No. 39), it is stated that the parents were "quite satisfied with the condition of his voice"—a statement which conclusively shows that the voice was not normal. In Mr. Davies-Colley's case (No. 43), it is stated that the patient "was able to speak plainly enough in a somewhat husky, loud, whispering voice". This is certainly a favourable description of an aphonic patient.

The very frequent occurrence of aphonia or dysphonia after the operation is probably to be explained by injury of the thyroid or arytenoid cartilages, or of the vocal cords themselves. Although such accidental injury is acknowledged in one instance only, it most likely occurred in many others. That the aphonia often results from injury to the vocal cords, is clearly proved by an examination of a number of cases published by Planchon,¶ in which the larynx was opened for the removal of foreign bodies.

In these cases there was no disease of the larynx which could account for the dysphonia; yet we find that, as the direct result of the operation, in three out of the eight cases that survived the voice was injured.

Fourthly. As regards recurrence, the operation does not present encouraging results. Excluding the rapidly fatal cases, and those of a malignant character, there remain 39 benign cases.** In fourteen of these recurrence is acknowledged to have taken place, and in one there was incomplete removal. In other words, recurrence or incomplete removal took place in 38.46 per cent of *benign cases*.

The following is a list of the benign cases in which there was recurrence or incomplete removal. Ehrmann (No. 2); Rauchfuss (No. 5); Böckel (No. 8); Gouley (No. 14); Balassa†† (No. 15); Voss (No. 19); Balassa (No. 21); Balassa (No. 24); Cutter (No. 26); Mackenzie and Couper‡‡ (No. 28); Navratil (No. 31); Cohen (No. 35); Davies-Colley (No. 43); Davies-Colley (No. 46); Semple and Thornton (No. 47).

Mr. Durham has objected to my treatment of Dr. Cohen's case. The facts are as follows. Thyrotomy was performed on a patient and a growth removed: to use the author's own words, "in a fortnight the

* "Though the patient spoke plainly, it was in a somewhat bass voice."

† "Phonation coarse and clear." In this case there was recurrence.

‡ "Parents were quite satisfied with the condition of his voice."

§ "Left the hospital between five and six months after the operation, speaking in a clear and distinct, though rather feeble, voice."

|| In this case the voice became hoarse two and-a-half years after the operation, owing to recurrence of growth.

¶ The cases in which there was dysphonia, are those of Pelletin (*Planchon's Faits Cliniques de Laryngotomie*, p. 48), Marjolin (p. 48), and Blandin (p. 59). In two other cases, the condition of the voice is not actually stated; though, as these cases are reported as recoveries, I have considered that the voice was restored in each instance.

** The total number of cases is 48. Of these, 25 were benign, occurring in adults; 14 were benign, occurring in children; 7 were cancerous; and 2 were immediately fatal.

†† The growth in this case recurred in the linear cicatrix of the wound, and it is not distinctly stated whether it was internal or external. Mr. Durham thinks that "it was probably the latter". Had it been external, however, it is extremely unlikely that such a trivial circumstance would have been reported.

‡‡ In this case, recurrence did not take place till two years and a half after the operation.

growth began to spring up afresh". The patient did not undergo thyrotomy a second time, but went to Europe, and submitted to treatment by which he was cured. The treatment consisted in the use of iodide of potassium and mineral waters, the employment of inhalations, and the local application of caustic solutions. The condition of the voice *resulting from thyrotomy* was not stated in Dr. Cohen's report. I accordingly remarked as follows—"Condition of voice not stated." Mr. Durham, in criticising this statement, observes (*op. cit.*, p. 56) that "the condition of the voice is alluded to very plainly; and Mackenzie omits to state that the patient returned after a voyage to Europe with only minute traces of the various operations in his larynx". In other words, I omitted to mention that, whilst thyrotomy altogether failed, the patient was subsequently cured by internal remedies and local medications. If Mr. Durham think that this circumstance is favourable to the operation, he is right to proclaim it.

In my former thyrotomy table I conceded Ehrmann's case as a recovery, but a more close examination obliges me to call attention to the fact that recurrence took place. The patient, it will be remembered, always remained aphonic till her death, seven months after the operation, from typhus. At the necropsy, "some small granulations were found on the left vocal cord"; and there was "a granulation somewhat larger, and of vesicular appearance, at the point of junction of the two vocal cords (*op. cit.*, p. 12). Had this patient lived, it is highly probable that in a short time a second operation would have been required.

In Dr. Cutter's case (No. 27) it is not stated at what period recurrence took place. The operation was performed on the 26th September, 1867, and on the 8th October the phonation was "coarse and clear". On the 17th October there was "a slight œdematous protuberance on the left vocal cord". On the 23rd, the vocal cords had their "normal pearly sheen". Without any fresh date being given, the author adds, "At the present time there is an appearance of a return of the disease on the right vocal cord." Mr. Durham has misquoted the author by omitting the words "at the present time", and has prefaced the remark as follows: "About sixteen months after the operation—*i.e.*, in February 1869—"there is an appearance", etc. Now, in Dr. Cutter's report, there is no mention of sixteen months, nor of February 1869; but in that month this case was published in the *Boston Medical and Surgical Journal*. There is no evidence as to when Dr. Cutter's paper was sent to the journal, nor as to the length of time it was kept before publication. In a note to my original thyrotomy table, I remarked on this case as follows: "Improvement in voice is reported; but as the growth recurred in less than a month, persistent aphonia would probably more correctly describe the condition." I have fixed the recurrence at or immediately after the last date given by the author. Mr. Durham has arbitrarily placed the recurrence at the date when the journal was published.

Mr. Durham, who deprecates any comparison as to the relative merits of thyrotomy and operations conducted through the mouth, nevertheless claims a relative superiority for thyrotomy as regards recurrence. He remarks, that "in all cases in which the nature of the growth is suspicious, greater security against recurrence may be obtained by the more complete removal that may be assured after the larynx has been opened and its interior fully exposed to view".

It will be seen that this statement contains two propositions. The first is, that "greater security against recurrence may be obtained by more complete removal". This is a harmless platitude with which all will agree. The second is, that "more complete removal may be assured after the larynx has been opened". This is a *petitio principii*, and is not borne out by facts; for, whilst out of ninety-three benign cases treated by myself with the aid of the laryngoscope, recurrence or incomplete removal only occurred in 9.6 per cent.; out of thirty-nine benign cases treated by thyrotomy, there was recurrence or incomplete removal in 38.46 per cent.

Nearly all my cases were watched for a long period after treatment had finished, and therefore there was ample time for recurrence. On the other hand, many of the cases of thyrotomy were reported within a few weeks or days of the operation, so that no time elapsed for recurrence to take place.

The history of the operation, indeed, shows that it is very difficult to effect complete removal when the thyroid cartilage is divided—far more difficult, indeed, than when the operation is conducted through the mouth. The causes of this difficulty are the following.

1. Unlike laryngoscopic treatment, where removal may be effected at repeated sittings, the external surgical treatment must be completed at a single operation.

2. The greater or less hæmorrhage which takes place necessarily renders the growths indistinct, especially after they have been themselves cut into and more or less removed.

3. The size of the opening into the laryngeal cavity, when the alæ of the thyroid cartilage are held back, is actually smaller than the upper orifice of the larynx.

The mere fact of the larynx being more immediately within reach when it is opened from without does not compensate for the disadvantages above indicated. It is difficult to understand how, in the face of these well-known circumstances, Mr. Durham could call it "a very obvious fact" that, by thyrotomy, more complete removal may be effected. Dr. Cohen of Philadelphia, one of the most distinguished laryngoscopists whom America has produced, justly remarks (*Diseases of the Throat*; New York, 1872, p. 448), that "the mere opening of the larynx is a matter of little difficulty, but the extirpation of a tumour with extensive attachments is a matter of great labour and responsibility."

Before dismissing the subject of recurrence, it may be observed that many patients who remained aphonic, and had to wear a canula permanently, in all probability suffered from recurrence, although such recurrence has not been acknowledged. The actual percentage of recurrence is, therefore, doubtless much greater than it appears.

I have now, I venture to think, successfully controverted, by reliable evidence, the two propositions laid down by Mr. Durham: "First, that the dangers and difficulties attending it are neither so numerous nor so considerable as have been represented and commonly supposed; and secondly, that the success hitherto achieved has been so marked and so indisputable as to justify and encourage in any such case as may seem appropriate an earlier, bolder, and more ready resort to this method than has hitherto prevailed."

I shall proceed to call attention to the fact that in those cases in which Mr. Durham thinks the operation especially indicated—*viz.*, in cases of cancer and in young children—the results are by no means satisfactory.

Out of seven malignant cases there is only one (No. 7) in which a cure was effected; and in that case it is very doubtful whether the laryngeal disease was cancerous. In all other cases the patients were not only no better than if simple tracheotomy had been performed, but in at least one of them (No. 47) the unfavourable condition was greatly aggravated, the operation having given rise to dysphagia, which probably shortened the patient's life.

In those cases in which benefit appears to have resulted, the benefit was entirely due to improved respiration—the result of tracheotomy and the use of a tracheal canula, not of thyrotomy.

In children, recurrence is met with in about the same percentage as in adults. Of the cases hitherto recorded of children at or under ten years of age, the growth has recurred in 35.71 per cent., whilst in adults recurrence has taken place at the rate of 36 per cent.

Out of twenty cases of benign growth in adults, recurrence took place in nine cases (Nos. 2, 5, 8, 15, 21, 24, 26, 28, 35); whilst in fourteen children recurrence took place in five cases (Nos. 14, 19, 43, 46, 47). As Mr. Holmes's patient (No. 25), however, left the hospital aphonic, and was obliged to wear the canula, it is extremely probable that recurrence took place in this case, and it is more than likely that it has happened in two other cases (Nos. 22 and 48). Should this be so, the proportion of recurrence in children would be considerably greater than it is in adults.

From an examination of the results of thyrotomy in young children, it will be seen that unfavourable results are obtained in a class of cases in which, *à priori*, good might be expected. On the other hand, Bruns has operated successfully *per vias naturales* on a child not more than five years old; and I have effected a complete removal in the same way in the cases of children aged four, six, and eight years.

One child four years of age has already had his larynx cut open no less than three times; another little boy not four years old has had thyrotomy performed twice. This case (No. 19) is very imperfectly reported by Mr. Durham, and in the heading of it he has described it as "incomplete". He remarks, however, at the conclusion of the report, that of course in the absence of further information of precise character it must be considered "complete". This is, no doubt, a clerical error of Mr. Durham's, and the last word is meant to be "incomplete". Were I, however, to adopt his method of criticism, I should at once make a grave charge against his accuracy, and remark, in his own words, that "it is obvious that in some way or other a serious mistake has been made, or else that an important oversight has occurred."

When we consider the results of the operation, the question indeed arises, Was the operation always necessary? I am sorry that I cannot answer this question affirmatively. In one case there were three excrescences—"two larger than pins' heads, the other as large as a pea". In two other cases, according to the drawings of the author, the growth was in one instance about the size of a split pea; in the other, that of a tare. In a fourth case there was only "a small growth"; and in a fifth, "a minute lobal excrescence." Who can justify so serious an operation as thyrotomy for such trivial affections? In Mr. Durham's own

cases it is extremely doubtful whether the operations, though successful, were justifiable. In none of the cases was there any urgent symptom calling for operation. Each patient had worn a canula for nearly four years; and, had the children been allowed to continue in the same condition a year or two longer, Mr. Durham would most likely have been able to remove the growth through the mouth, and would thus have saved the patients the risks of serious operations.

In Dr. Ogle's case, the operation was very skilfully and successfully performed by Mr. Lee, who, in practising thyrotomy, left the upper half of the cartilage intact. The patient was five years old, but it does not appear that any attempt had been previously made to remove the growth through the mouth. In this case, also, there was no urgent dyspnoea. Mr. Durham observes that "no one would now-a-days consider it justifiable to open the larynx to facilitate the removal of any growth or growths that could be easily, safely, and completely removed through the mouth." Are we to understand that a surgeon, unskilled in the use of the laryngoscope, who could not "easily, safely, and completely remove a growth through the mouth", would be justified in cutting open the larynx?

I ask this question, because the operation has been more often recommended by those who are not known to have possessed any knowledge of the laryngoscope, than by those skilled in the use of that instrument, notwithstanding that the actual number of laryngeal polypi coming under the care of laryngoscopists must be a hundredfold greater than that of cases seen by ordinary surgeons. Mr. Durham is, indeed, the only skilled laryngoscopist who recommends the operation, except under the most limited conditions.

Not only have many surgeons, quite unpractised in the use of the laryngoscope, performed thyrotomy, but, as I have pointed out elsewhere (*Lancet*, December 2, 1871, page 797), in one instance a growth was removed by Professor Bruns, *per vias naturales*, after Professor Schinzinger had failed in his attempt to extirpate it by thyrotomy.

Mr. Durham remarks in connection with one case, where the patient left the hospital aphonic, and wearing a tracheal canula, "at any rate the operation did no harm." In another case, he alleges "that no harm resulted from this abortive attempt." It may be observed, however, that this is not the kind of result which is usually considered as favourable to an operation.

The following is a brief summary of the results of thyrotomy, reduced to percentages, and placed in a tabular form. The table shows very clearly the different conclusions at which Mr. Durham and I have arrived. It should be stated that my table of forty-eight cases includes Mr. Durham's thirty-seven cases.

	Per cent. on 37 cases.	Per cent. on 48 cases.
	DURHAM.	MACKENZIE.
Complete success* ...	51.35	14.58
Partial success ...	18.91	22.91
Temporary benefit ...	10.81	—
Negative ...	8.10	—
Incomplete ...	5.40	—
Death ...	5.40	8.33
Severe dyspnoea requiring use of canula ...	—	31.25
Severe dyspnoea requiring fresh operation ...	—	8.33

I have also ascertained the following other results, which are based on forty-five cases, in which, the voice being affected before the operation, the patient survived more than a few days.

Aphonia ...	40.0 per cent.
Dysphonia ...	20.0 "
Modified voice... ..	11.11 "
Not stated, but probably defective voice	6.66 "
Recurrence, or incomplete removal ...	38.46 "

(Percentage based on 39 benign cases).

As a result of my own experience, and from the investigations I have made into the subject, I venture to submit the following propositions.

First. That the operation ought never to be performed for loss of voice alone.

Secondly. That in cases of cancer the operation is useless, except where the growth is very small and distinctly circumscribed.

Thirdly. That the operation should be confined to those cases in which there is danger to life from suffocation or dysphagia, and then only be performed after an experienced laryngoscopist has pronounced it impossible to remove the growth *per vias naturales*.

* Complete success is understood by me to mean recovery of perfect voice and perfect respiration, and absence of recurrence of growth; partial success to mean recovery of one function with injury to another, or temporary recovery of both functions, but subsequent recurrence of the growth. It is difficult to guess what meaning Mr. Durham attaches to the terms he has adopted; or, if he employ them in the same sense as myself, it is still more difficult to guess how he has obtained the results from his thirty seven cases.

WHO SHALL BE THE MEDICAL OFFICER OF HEALTH?*

By T. J. DYKE, F.R.C.S., Merthyr Tydfil,

President of the South Wales and Monmouthshire Branch of the British Medical Association.

THE discussions created by the provisions of the Public Health Act, 1872 (which made imperative the appointment of a medical officer of health in every district, rural, urban, or port), have brought prominently to the notice of the public, and of the medical profession, the inquiry as to who would be best fitted to fulfil the onerous duties of the office.

The public, through the boards of guardians and of health, have been severely exercised, and somewhat tormented, by the varying advice given them by the inspectors, authorised by the President of the Local Government Board to "negotiate" with them. In many districts they have been advised to dispense altogether with the assistance of district union medical officers, and to consign the supervision of the health of their localities to some one ubiquitous "Admirable Crichton;" in other districts the priceless aid which those district medical officers can give in the practical working of the Act has been justly appreciated, and many local authorities have wisely availed themselves of the knowledge which these gentlemen possess, and have engaged them to prepare preliminary reports upon the sanitary state of their districts.

The profession has also been severely tried by the consideration of various schemes for the division of the country into medical satrapies, in which the county-doctor with his thousand pounds a-year, would reign supreme; *except* that the laws as they at present stand would give him but a "secretary's warrant," for he would only have the right to report to his board. Happily, he would be powerless to cause his edicts to be obeyed; that duty would remain in the hands of the chief divisional inspector, who would in all matters carry out the orders of the central authority.

The profession has also been much exercised by the public action of its own members; who, having formed exaggerated notions of the labour to be done, have denied the competency of their brethren—men who possess the same diplomas as themselves—to perform the work; others again have gone so far as to say that gentlemen of our profession would be so unmindful of its honour, and so faithless as public servants, that they would wilfully neglect to carry out the functions they had undertaken, out of fear of pecuniary loss.

I, for my part, deny that medical men as a body have ever been found faithless in the execution of their public duties; and aver that no man has a right to cast a slur upon our honour by charges at once so groundless and so base.

I would, in answering the question with which I have headed this paper, ask you to consider it under the four following propositions.

1. The duties of a medical officer of health can be efficiently carried out by district union medical officers in rural districts, and by the medical officers of health in towns and ports.

The duties which the health-officer would have to perform have been plainly set out in the order of the Local Government Board under the date of the 12th November, 1872. These duties I would epitomise as follows. The health-officer shall inform himself of all influences injuriously affecting the public health in the district; this would be done by ascertaining the causes, origin, and distribution of all classes of diseases, and reporting to the sanitary board the ascertained sicknesses and mortality, classified according to diseases, ages, and localities. He shall further inquire, when necessary, into the wholesomeness or otherwise, of any meat, or any other article of food prepared for sale or intended for the food of man. It will be his duty to inquire into the existence of any offensive trade carried on near to human habitations, of any nuisance in or about, or any overcrowding of, any house; any or either of these being injurious or prejudicial to health; and lastly, to report, when necessary, upon any or all of these matters to the local authority.

These being the duties, what, in the opinion of a medical man, qualified by practical acquaintance with the details, should be the qualifications required for the faithful execution of the work? I have, for seven years, done the work in accordance with the spirit and the letter of the duties now set out by the Local Government Board; and I unhesitatingly and confidently affirm that district union medical officers could faithfully perform and thoroughly carry out the schedule of duties imposed by the orders of the Local Government Board.

2. In the second place, I would ask you to note that *every* district in England and Wales *must* appoint a medical officer of health to do the work as set forth by the orders of the central board.

* Read before the South Wales and Monmouthshire Branch.

The fact that this species of professional labour will have to be undertaken by medical men in every district will take away the sting which has hitherto attached itself to earnest workers in preventive medicine. Until now, tilled plots have been as oases in the desert. One district under an energetic public-serving board has been carefully watched and judiciously improved; in the surrounding districts, throughout whole unions, the causes provocative of disease have been unsought for, and therefore maladies have reigned unrestrained, and disseminated themselves everywhere. In such well-cared for districts, the officer of health, the active pulsating heart of the sanitary authority, has been a stumbling block of offence to those sanitary sinners, whose rented houses were unventilated, their pigstyes in close proximity to their kitchens, and the many-savoured manure-heaps the playground of their biped, four-footed, and feathered treasures. But, when, as henceforth, the *exception* shall become the *rule*, when every district must have its *preventor of disease*; one who, noting every cause capable of inducing disease, will be able by timely advice kindly given, or when that is rejected, by the more cogent means which the elected authorities may use, cause the removal of the pest-bearing nuisance; then the visit of the health officer, instead of being regarded with disfavour, will be hailed as that of a harbinger of health, and of a restorer of wealth to the householder and house-owner; for, be it well remarked, no cause more prominently and permanently reduces the value of household property than sickness.

I know, by practical experience, that a consummation so desirable is attainable. I know that every man who will kindly, yet firmly, require the observance of the sanitary laws, will be able thus to promote the public good. I believe that none will more eagerly join in furthering that desired end than the district union medical officer and his co-worker, the urban health-officer, for these are they who day by day personally see so much of sickness induced by preventable causes, so many fatal issues, promoted by nuisances which should have been removed; so many sad scenes of poverty and distress, which, while they harrow men's feelings, spur on the right-thinking to initiate means for their relief; and so much waste of individual and of public wealth, which is necessarily incident to the attendance upon the sick and the maintenance of the impoverished survivors.

3. In the third place, I would say that it is plain that no one can be so fitted for a *new duty, which is germane to his own profession*, in a well known field of labour, than he who by long professional acquaintance with the manifold details relating to people, to race, to habits, to habitations, to water-supply, and to drainage-discharge, is already fully qualified to instruct and advise the local authority.

Why should such an one be set aside? Why should he be deprived of the privilege of communicating this valuable knowledge acquired by so much toil and self-denial? Why should his professional acquirements be ignored, his local influence for good quashed, his zeal to do good contemned? Let it not be said that our voices are silent, our pens still, when it is even contemplated to appoint others to perform the duties which our urban and district union medical officers can and do perform well and truly; but let us each in his place, each in his way, stoutly stand up for them as being the fittest to be the units of the sanitary service, as those from whose labours, *when systematically directed*, the greatest good to the public health may result; the greatest benefit to the local sick may be derived; and the greatest economy of the public money may be obtained.

4. The last proposition I would place before you is this: it is expedient that each district should preserve its own individuality.

Holding that each community should in all things possess its own well defined freedom of action within the circle of the laws, I admit the needful necessity of central direction, but I claim the right that each legally defined district shall therein carry out the laws under such central supervision. Holding these views, I would strongly urge district boards now to stand each for its own liberty of action in sanitary matters. Remembering, however, that *action* is now and henceforth imperative, *the sanitary laws must be carried out*.

As, then, the duty of local authorities is now clearly defined—moreover, as it is imperative—I will hope that those who will carefully think over the matter will come to these conclusions, that it would be best for each union and urban district to administer the sanitary laws each in their own defined district; and that, in carrying out the new Public Health Act in its letter and in its spirit, they should confide to their union or urban health-officers the labour of freeing their district from the causes of preventable diseases, and thereby directly further the wise provisions of an intelligent legislator, save the persons of the ratepayers from sicknesses and deaths, diminish pauperism, and reduce the costs incident to the maintenance of the sick.

In conclusion, I would thus summarise the foregoing remarks:

1. In each of the unions into which the country is divided there exists a representative local authority, the Board of Guardians, to

whom the supervision of the public health in *rural* districts is confided.

2. In each district of each union the local authority now employs a medical practitioner, whose professional qualifications, local knowledge, and personal position aptly fit him for the duties of medical officer of health.

3. In *urban* districts the local authorities are bound to appoint a medical practitioner to act as officer of health.

4. Those members of the medical profession to whom these duties would be entrusted would faithfully, economically, and efficiently perform them.

A CASE OF URGENT AND PROLONGED DYSPNŒA COMING ON SUDDENLY AFTER LABOUR.

By J. J. PHILLIPS, M.D. Lond.,

Assistant Obstetric Physician to Guy's Hospital; Assistant Physician to the Hospital for Sick Children.

On the 30th December, I was requested to see Mrs. —, aged 36, the wife of a medical man. She had been delivered of her fifth child at two o'clock in the afternoon. The labour was in every respect natural. Nothing untoward was noticed until six o'clock, when she suddenly complained of oppression at the chest, and began to gasp for breath. Her condition soon became most alarming. I saw her in consultation with two or three medical men at nine o'clock. She was sitting up in bed, supported by pillows, and in her husband's arms. The dyspnœa was most urgent; the respirations were forty-eight per minute; the pulse, which was said to have been for some time imperceptible, could now be felt beating at the wrist at the rate of one hundred and forty per minute, very small; the respiratory murmur could be heard over the chest in front and behind; there was no abnormal sound accompanying the heart's action, but the first sound was muffled; the legs and the forearms were quite cold; the lips were livid; the face was pallid. She endeavoured on one or two occasions to speak, but could only articulate one word at a time. The history of the case and the symptoms seemed to point unmistakably to a coagulum in the pulmonary artery; and it seemed to us that the treatment should be directed to support the heart's action as much as possible, and this was done by repeated doses of brandy, which with some difficulty were swallowed in soda-water. Five-grain doses, increased to ten grains, of carbonate of ammonia were given at short intervals, and warmth was applied to the extremities. I remained about an hour. The case seemed hopeless. At nine o'clock next morning, however, I found her much relieved. She was able to assume more nearly the horizontal posture; the extremities were warm; the breathing was much more easy, and only thirty per minute; the pulse still very small, 120 per minute; temperature in the axilla, 97 deg. Fahr. Symptoms of improvement had commenced about four in the morning. Her husband and another medical man, who sat up during the night, believing that the carbonate of ammonia was doing good, had continued its use in increased doses, so that in twelve hours she had taken two hundred and ten grains of it. The stomach tolerated this large quantity in a remarkable manner. "She was a little sick two or three times." The brandy had also been continued, and she had taken a little beef-tea in the early morning. In the evening, she was in much the same condition as in the morning; frequency of pulse and respiration the same; temperature only half a degree higher (97.5 deg. Fahr.) She still complained of pain in her chest. During the night some hours of sleep were obtained, and next day she was more comfortable in every respect. The respirations had fallen to from twenty to twenty-five per minute; temperature, 99 deg. Fahr.; no abnormal cardiac sound. The strictest rest was maintained. On the sixth day there were some pyrexial symptoms; and on the seventh she began to suffer from severe sickness. The valuable advice of Dr. Herbert Davies was obtained, and she improved. I saw her again on the twentieth day after labour; she was still keeping quiet in bed; and the interruption to convalescence, for which I was desired to see her, was only of a temporary character.

Although I have not headed the above case as one of pulmonary embolism, the history which it presents, and especially the severe symptoms which persisted for so long a time, so closely resemble those observed in fatal cases of obstruction of the pulmonary artery, that it is difficult to explain the case upon any other hypothesis. It is true that in the great majority of cases of the kind the symptoms have rapidly increased in severity, and death has been the inevitable result; but a few cases during the puerperal state are to be found recorded similar to the present case, in which, notwithstanding the threatening character of the symptoms, gradual improvement took place. In analysing the

case just reported, it appears probable that a loose clot which had formed in the right side of the heart was driven into the pulmonary artery, giving rise to the urgent dyspnoea which supervened so suddenly. The patient told me that throughout the day she had felt a little shortness of breath. Given that a clot found its way into the pulmonary artery, it is of course quite conjectural what changes took place in it; but it is not improbable that a loose clot might undergo such contraction as to allow the gradual re-establishment of the circulation, coincident with the slow improvement in the general symptoms. Different opinions will doubtless be entertained as to the share which the carbonate of ammonia had in relieving the symptoms, by reducing the hyperinosis of the blood which existed at the time. The large quantity of this alkali which was taken in twelve hours is specially deserving of notice. I am not aware that it has been given continuously for twelve hours in such large doses at such short intervals. Dr. Richardson, in one of his valuable contributions to the subject of thrombosis, gives reasons for administering the liquid ammonia rather than the carbonate; but when this case occurred I had not read Dr. Richardson's remarks on this point. Another fact of interest in the case now reported, is the low temperature which continued throughout the day succeeding the most severe symptoms.

My friend Dr. Playfair, who has written so well on thrombosis and embolism in the puerperal state, in commenting upon a case similar to mine, objects to its being called one of embolism, and says that it should be designated a case of thrombosis. I have, however, preferred to speak of this case as one of embolism, believing that the coagulum was originally formed in the right side of the heart, and then pursued its short course as an embolism into the pulmonary artery, rather than that coagulation occurred *in situ* in the pulmonary artery itself.

THERAPEUTIC MEMORANDA.

ON THE USE OF A SPONGE-TENT IN EPISTAXIS.

SEVERAL notices have lately appeared on the difficulty of plugging the nares in cases of severe epistaxis, but I have not seen any suggestion made of using a sponge-tent for the purpose. It would be difficult to devise any remedy more simple in its application, and yet in the majority of cases I believe it would be found very effectual. The following case occurred to me lately. A single woman, aged 39, had on several occasions been suddenly seized with severe epistaxis, which she found very difficult to control. On February 15th, she was again attacked. After the bleeding had continued for several hours, I was sent for. I found that the nose had been crammed with bits of rag; that she was very faint; but in a short time the bleeding ceased without any interference on my part. On inquiry, I found that the menses had stopped about eighteen months before, and the epistaxis had come on at irregular intervals ever since. I consequently anticipated a return of it, and on March 22nd was summoned again. I immediately passed a large sized carbolised sponge-tent into the nose, leaving only the string visible to extract it. In a very short time the bleeding ceased; there was no recurrence of it during the night, and in the morning she extracted the tent herself with the greatest ease, and there was no hæmorrhage afterwards. She complained of no inconvenience or disagreeableness whatever from the tent.

D. S. SKINNER, L.R.C.P. Lond, etc., Lyme Regis.

CARBOLIC ACID INJECTIONS IN DEEP-SEATED INFLAMMATION.

HAVING lately had under my care three very serious cases of deep-seated suppurative inflammation successfully treated by injecting carbolic acid with oil or water, and not having seen any mention made of carbolic acid being used in the same way, I think it may be interesting to give a few particulars. Two of the cases were attacked with paronychia of a very violent character, extending to the tendon and bones. Having made free incisions, I injected into them, by means of a large brass syringe, a mixture of one part of carbolic acid in fifteen parts of olive oil (warm). The injections were partly made to pass into every structure. The immediate effect was very marked: the destructive inflammation was at once arrested. The injection was repeated three or four times; and, although the inflammation had extended to the periosteum, there was no loss of tendon or bone in either case, nor was the motion of a joint impaired. In one of the cases the whole hand was affected—so much so, that ten incisions were necessary to give free vent to the matter.

The third case was one of inflammation of the thigh extending to the deep-seated muscles, caused by a kick from another patient. Mat-

ter formed and incisions were made, and one part of carbolic acid in forty parts of water was injected, warm. The extent of the affected part was so great that I preferred water to oil. This man became greatly emaciated from the excessive discharge, the whole limb to the knee-joint being affected. The same beneficial effects followed the use of the carbolic acid injection in this case as in the others. It was continued for ten days, the limb being at the same time strapped with adhesive plaster. This man made a capital recovery, the limb being now (three months) as strong and well developed as the other.

The chief advantage, as it appears to me, in this mode of treatment, is the forcing the carbolic acid into the inmost recesses of the diseased structures, and at once arresting the further progress of the destructive inflammation. It is also most useful in altering the character of the pyogenic membrane in sinuses or large abscesses, checking in a marked manner the formation of pus, and, therefore, I think may be looked upon as a most useful remedial agent in the treatment of those troublesome cases.

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REVIEWS AND NOTICES.

WORKS ON PRACTICAL PHYSIOLOGY.*

[Continued from page 464 of last number.]

THE scope of the work edited by Dr. Burdon Sanderson is described in the preface. It is stated that the book is intended for beginners in physiological work; and that many subjects are omitted, either because they do not admit of experimental demonstration, or because the experiments required are of too difficult or complicated a character to be either shown to a class or performed by a beginner. We have, therefore, carefully examined the book by this light, and have endeavoured to judge the work as its editor intends it to be judged. The part on Histology is written by Dr. Klein; that on Blood, Circulation, Respiration, and Animal Heat, by Dr. Sanderson; that on the Functions of Nerve and Muscle, by Dr. Michael Foster; and that on Digestion and Secretion, by Dr. Brunton. The authors are all well known as working physiologists of eminence and great ability; and any book which bears their names has the stamp of genuineness, and demands careful attention. The power of writing for students is, however, not given to all; and this book, we regret to find, illustrates the fact. The book is expensively illustrated, and, generally speaking, the engravings are excellent; but a singular blunder has been committed in separating the engravings from the volume which contains the text. They are collected into a separate volume; and, if it had been desired to puzzle and weary the reader, a more successful device than this could not have been adopted. The confusion into which the book has been thrown is all the more unfortunate, considering that it is intended for students, who above all things object to unnecessary trouble. In the histological part, this confusion is most unfortunate. Many of the figures do not appear to be referred to at all in the text, and so excellent illustrations come to be overlooked. In some cases, the illustration is referred to; but even then the confusion may still be complete. *E. g.*, at p. 33, Fig. 8 is referred to. We of course thought that this would be near the beginning of the volume of plates. After a good deal of search, we found it on Plate XVII, along with Figs 52, 53, 54, and 55. Fig. 15 occurs on Plate XXIV, along with Figs. 63, etc. To take the plates away from the text was unfortunate; but to leave the reader to search for them in out-of-the-way places was still more so, and is certainly not a judicious way of encouraging the beginner. Dr. Klein is well known as an accomplished histologist and excellent investigator, destined, we feel sure, by his ability and conscientious devotion to science to render high service to it; but it must be said that, although his part of the work will be valuable to the teacher and to the advanced student who may wish to prosecute the study of any special subject in histology, it is, in our opinion, not at all a work adapted for the general student. Dr. Bennett begins his work by a brief account of the microscope, and certain general principles regarding the description, drawing, and mensuration of objects: just what the student wants. Dr. Klein completely omits all this. His introduction to the microscope is (p. 1): "Take a clean glass slide and an absolutely clean cover-glass, which, as we must use high powers (that is, objectives of which the focal distance is short), must be thin." If it be

* *Text-Book of Physiology: General, Special, and Practical.* By John Hughes Bennett, M.D., F.R.S.E. Edinburgh: James Thin. 1872.

Hand-book for the Physiological Laboratory. By E. Klein, M.D., J. Burdon Sanderson, M.D., F.R.S., Michael Foster, M.D., F.R.S., and T. Lauder Brunton, M.D., D.Sc. London: Churchill. 1873.

necessary to tell the "beginner" this, surely it would be of as much importance to tell him a great deal more in this connexion. By the time the student reaches the end of page 2, he is expected to know all about the objective (although he has only been examining a drop of blood); for he is told that, "if high powers are used, the *front glass* of the objective comes into contact with the cover-glass." Dr. Klein describes hot stages, the mode of making sections, of staining, of injecting, etc. Why omit the points to be attended to in selecting a microscope? Why say nothing to the "beginner" regarding the importance of drawing, in order to make him *really see* things—the importance of making him describe things, in order that he may be able to give a lucid account of what he sees? And why should mensuration not be enjoined, in order that he may learn how to get accurate notions of the size of things? In all this, Dr. Bennett is far more successful as a teacher. He evidently understands how to write for beginners; and it is to us quite as evident that Dr. Klein has yet to acquire this art. Strange to say, Klein omits most of what Bennett gives; and the converse also holds true. Dr. Klein gives much valuable information regarding the preparation of the tissues and organs. He is, generally speaking, too minute for the beginner, and does not even indicate the things to which the beginner should principally attend; and we can assure him that the medical student, for whom he writes, has no time to work through all that he prescribes. The "beginner" is introduced at once to a study of three kinds of colourless corpuscles in the blood of the newt. After puzzling as to how the student is to recognise these three varieties, we found, quite by accident, that two of the varieties are contained in a plate to which no reference is made in the text. In speaking of these corpuscles, Dr. Klein makes free use of the words "large" and "small", leaving the student to find out what is meant by these vague terms. If the student were told what relation the size of the "large" and "small" white corpuscles bear to the coloured corpuscles, he would at once get a definite idea, and might have a chance of escaping from the vagueness into which microscopists appear to be very apt to fall. When Dr. Klein, at the outset, tells the student (p. 1) to use "high powers" for the examination of the white blood-corpuscles, why does he not at once simply tell him what eye-piece and what object-glass he should employ, and have done with it? There is a great disadvantage accruing from indefiniteness. In the illustrations, the number of the ocular and that of the objective are generally put; but the number of times the object has been magnified is always omitted. Many persons will read the book who have no means of knowing the magnifying power of the combination of lenses mentioned; and we need scarcely say that the value of the otherwise excellent figures is on this account much diminished. The addition of the magnifying power would have been very easy, and for students, who are to be trained to accuracy, very important. In fact, Dr. Klein, while endeavouring to educate students in the preparation of the tissues, leaves them to become accurate microscopical *observers* under inspiration from other sources. If the student is to be taught by a *book* how to make sections, he might surely as well be taught by a book how to record and delineate what he sees.

But, although Dr. Klein has missed the mark as far as the general student is concerned, we repeat that his part of this book contains much useful information for the advanced worker in histology. But we fancy that even the advanced student would like to get rid of such vague statements as "sherry-coloured solution of bichromate of potash". Why not say at once the percentage strength of the solution, and not leave the student to guess at what is a "sherry colour"? Sherry, we need scarcely say, may be of very many gradations of tint. At page 89, it is stated that "Müller's liquid consists of two parts of bichromate and one part of sulphate of soda, in one hundred parts of water." This may be Klein's modification of Müller's liquid, but it certainly is not the original Müller's liquid as all the other books give it. As is well known, it contains bichromate of *potash*, and not bichromate of *soda*. We wish Klein had told us what he regards as a "very dilute solution of picric acid". Picric acid is much lauded by Ranvier. It would, therefore, have been important to give the definite strength of the solution. Even the advanced student will be puzzled to know what is meant by a "very dilute" solution. There has been a good deal of confusion regarding the term *protoplasm*; but we do not remember being told by any histologist that the *fibres of connective tissue* consist of *protoplasm*. Dr. Klein says (p. 45), in speaking of the development of connective tissue, that "the *protoplasm* subsequently undergoes a process of splitting, by which it is converted into *fibres*" (!). The development of connective tissue and of fat-cells is described, but the development of muscle and of bone is omitted. Epithelium, silvered and unsilvered, connective tissue, bone, and nerve-fibre, are illustrated by first-rate woodcuts; but, although the structure of ganglia, the liver, the kidney, cornea and retina, lymphatics, and even tubercle, is figured,

sections of the brain and spinal cord, ear, olfactory mucous membrane, skin, etc., are omitted.

We wish very much that Dr. Klein had not left us so much in the dark as to the sources whence he has obtained his methods. We were much struck by the fact that he has availed himself of Ranvier's somewhat recent discoveries regarding the structure of tendon, without the slightest mention of Ranvier's name. Of course, such a fact when discovered leads one to ask whether, in many other cases, we have or have not to thank Dr. Klein for what appears to be novel. We think Dr. Klein would have done well to imitate the excellent book by his countryman Frey, in copiously giving the names of his authorities. The omission of names is misleading to the student, and does not enable him adequately to estimate his relative obligations. Most of the drawings which illustrate the histological part are original, and, as examples of histological wood-cutting, many of these could not be surpassed.

We are sorry to be obliged to be so niggardly of praise regarding Dr. Klein's attempt to write for students, and we gladly turn to what we can conscientiously commend as well adapted for beginners: we mean the *Functions of Muscle and Nerve*, by Dr. Michael Foster. In this we perceive at once that we have to deal with an author who has carefully studied practical tuition. Precise directions are given to the student; great things are held prominently forth, and presented in bold outline to the student's mind; and the effect upon us has been to wish that Dr. Foster had written a good deal more of the book than he has done. All that this author gives is excellent. We observe, however, that in Bennett's book there is an account of an instrument for measuring the rapidity of the transmission of nerve-force. Foster leaves this out altogether. Of course the book is for "beginners"; but we should have thought that the mensuration of the swiftness of nerve-force would have greatly interested even them. Dr. Foster omits a great deal of matter which the advanced student would, we should think, be glad to obtain. However, we cannot grumble at this, though we regret it; for he really adheres to the editor's prefatorial thesis.

[To be concluded.]

NOTES ON BOOKS.

Posological Tables.—Dr. HANDSEL GRIFFITHS of Dublin has published a Posological Table for the use of students and others, in the form of a large table to be suspended on the wall. We do not find, however, that it possesses any advantages over other similar tables. It does not give any more information, nor does it supply it in an easier form. It is true, Dr. Griffiths has not followed the usual order: for instance, he does not arrange the remedies alphabetically, but according to their dose. Thus, under the heading of *Tinctures* he groups those administered in the same dose. The table, however, will probably be useful if suspended in a surgery for ready reference.

Syllabus of Materia Medica, for the Use of Teachers and Students. By ALEXANDER HARVEY, M.D., Professor of Materia Medica in the University of Aberdeen, and ALEXANDER DYCE DAVIDSON, M.D., Assistant Professor. London: Lewis. 1873.—The object of the authors in this small work is one most deserving of support: they advocate selection, or definition of subjects, in *Materia Medica* and *Therapeutics*; and oppose the indiscriminate and compulsory demands of the examining boards. They point out what is evident to common sense, but, unfortunately, not to many Examiners, that the system of requiring a knowledge of all the articles of the *Pharmacopœia* is unfair to students, and most prejudicial to their memories, and to their medical education. They propose that official relative-values be given to the articles and preparations, and that students be examined on the more important of these. They would make the mere recognition and naming of the primary articles co-extensive with the entire list, and give the students every facility for making themselves familiar with the specimens by handling and inspecting them at their leisure. They would restrict the class-teaching mainly to these selected articles, their preparations, and their relative values, as therapeutic agents, and would absolutely deny the Examiner any license beyond this. In pursuance of this plan, the authors, in the absence of an official authority, have arranged, according mainly to Dr. Garrod's "Essentials," the articles of the *Materia Medica*, the *Pharmacopœia* and other doses, giving to each a relative value which, they believe, will very nearly meet the views of the majority of medical men. This labour they have performed with evident care, and they have produced a handy guide of the relative values of our therapeutic agents, which will save the student much needless trouble and loss of time. In advocating the importance and value of the principle of selection in their own and other departments of medi-

cine, they show, however, we might almost say, an inexcusable absence of true appreciation of the scope of action of the Medical Council, in venturing to hope that the members of that talkative body will apply themselves to the preparation of a directory of the kind, or to any such practical work. The authors will have to depend on their own persistent labours in securing the adoption of their proposals.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 3RD, 1873.

THE MEDICAL ACT (1858) AMENDMENT BILL.

THE British Medical Association has good ground for congratulation, in the fact that two gentlemen of the standing of Mr. Headlam and Sir H. Selwin-Ibbetson have undertaken the charge of a Bill embodying the matured views of its Medical Reform Committee. The points aimed at have been brought before the Association year after year, and they have invariably received its continued approval and support. In 1871, there was reason to anticipate the attainment of what was desired; but the efforts of the Association were marred by rival attempts at legislation, in consequence of which, on the advice of Mr. Headlam, the Reform Committee suspended action, and left the field clear for the would-be legislators. No advantage, however, resulted from the forbearance of the Association; and the rival measures, being unsupported by the profession, literally collapsed. A favourable opportunity for action was thus lost to the Association during the year 1871. In 1872, the representatives of the parties who had thus effectually barred the action of the Association, gave no evidence of their existence. The present year was also in like manner rapidly passing away without any revival of their defunct Bills. It became manifest therefore, that, unless the Government or the British Medical Association moved, there was not the slightest probability of any advance to a satisfactory settlement of the question. The Government evinced no disposition to meddle with it; and, in its default, the British Medical Association, through its Reform Committee, again embarked in the struggle, and the renewal of their efforts has been followed by the introduction of the present Bill.

This Bill has received the sanction of the Association, and would have been gratefully accepted by it, as also by the profession generally in 1870, when an overwhelming number of petitions in support of the principles included in it inundated the House of Commons. It has been suggested by the promoters of the rival measures above alluded to, that this measure, which would have been acceptable in 1870, did not meet the requirements of 1871, much less those of the present day. The British Medical Association does not concur in any such opinion: it holds that the Medical Act, which was desirable for the profession in 1870, remains so now, and will be again supported by an equal or even greater number of petitions in its favour. Whoever may attempt to oppose the efforts of the Association will virtually be fighting the battle of those who are the open opponents of all reform, and who seek to maintain the present reprehensible, because varied and most unequal, mode of granting qualifications to practise the profession.

The Medical Act of 1858, though imperfect, was a great boon to the profession. The Bill now promoted may not be all that could be wished for; but, if carried, it will mark an era in the profession, by dealing a death-blow to any future attempt at unworthy competition in the granting of licenses, and by introducing the direct voice and influence of the profession, in just measure, into the Medical Council. Who are more fit to estimate shortcomings in professional education, and, therefore, to rectify them, than those who have had personal experience of their nature?

Should the present struggle for medical reform be successful, the Association will truly earn the gratitude of the profession; but, in order to succeed, care must be taken not to lose the substance while vainly grasping at the shadow.

THE NEW ARMY MEDICAL WARRANT.

WE have already referred to the strong feeling of discontent which exists in the army medical service on the subject of the recent Warrant. We learn that at a meeting of medical officers, held on the 5th instant, to consider the provisions of the New Medical Unification Warrant, March 1st, 1873, the clauses noted below were unanimously condemned. The report of that preliminary meeting is now being circulated for general information; and it is suggested that similar steps may be taken in each command, with a view of presenting a joint memorial to the Right Honourable the Secretary of State for War, embodying the following objections to its several clauses, and laying before Parliament and the profession in the schools, these objections to the lowering of the *prestige* of surgeons in the army, and the lessening of their pecuniary emoluments. It is also suggested that an united and immediate effort should be made, in order to have the obnoxious and retrogressive paragraphs repealed. To carry out this, the medical officers in each of the principal commands, through one of their number, should exchange views, in order that this most desirable object might be at once carried out.

The following objections are especially urged against the Warrant.

Clause 3. This is objected to, as by it a medical officer of fifteen years' service is deprived of *two shillings and sixpence per diem*, unless promoted.

Clause 4. By this, the relative rank of medical officers is lowered; for, although medical officers holding regimental commissions might, without injustice, be rated according to their regimental seniority, the same rule cannot fully apply when they are no longer regimental officers, but merely attached to regiments for the very limited period of *five* years. Under such an arrangement they must be always junior of the rank for choice of quarters, etc.

Clause 6. By this, forage is given according to duty, not as an appanage to the relative rank, as formerly—thus making the issue at all times uncertain, and depriving medical officers of the *status of mounted officers*. It also subjects them to much pecuniary loss from the frequent purchase and sale of horses, as the duties of different stations to which they are at all times liable to be sent, are very various; and it is also in direct contradiction to the Royal Warrant, 1858, and to the recent regulation as to the issue of this allowance to non-combatant officers (Army Circular 135, July 17th, 1872). By this clause, military surgeons are deprived of a privilege enjoyed since the formation of their corps.

Clause 12. By this, the larger number of promotions may be withheld from the senior surgeons—the system of selection being substituted for seniority.

Clause 15. By this, a great injustice has been done to medical officers of regiments by their abrupt removal from their different corps; as these officers entered the service on the belief that, being once appointed to a regiment, they would not be removed unless under exceptional circumstances. They consequently, at great expense, provided themselves with regimental appointments, expended large sums in band and mess subscriptions, and many paid equally large sums for exchange. They had hitherto regarded their regiments in the light of their homes, from which they are now taken away without the least warning or ceremony, and in a pecuniary sense have suffered severely without any provision being made to recoup them for their losses.

Clause 20. By this, retirement at the ages of fifty-five and sixty-five is no longer compulsory, and the junior officers are thus precluded from any hope of rising in their profession within a reasonable time.

Clause 29. By this, the rate of retirement after twenty years' service is continued at a maximum of twelve shillings *per diem*, and only that amount if promoted—a sum entirely inadequate.

By the issue of the Special Circular on Army Hospitals, the duties

and responsibilities of medical officers are much increased. These non-professional duties they were relieved from in 1858, as interfering with the due care and treatment of the sick.

No provision is made for promotion after fifteen years' service in the junior rank.

The whole of these clauses are retrogressive, and in direct violation of the provisions of the Royal Warrant (October 1st, 1858, clause 17); and of those of the Royal Warrant (Pay and Promotion, February 3rd, 1866 and 1870). By the first of these Warrants the relative rank of medical officers was directed to regulate "choice of quarters, rates of lodging money, servants, *forage*, fuel and light, or allowances in their stead, detention and prize money, as well as allowances granted on account of wounds or injuries received in action, and pensions and allowances to widows and families."

The clauses and spirit of this new Medical Warrant, the medical officers of the army must deeply feel as lowering their status in the service, as well as the prestige of their ancient and honourable profession.

WE are requested to state that Mr. Haviland's appointment as Medical Officer of Northamptonshire will not prevent the delivery of his lectures as announced at St. Thomas's Hospital.

THE Board of Guardians of the Warrington Union have lately increased the salary of Mr. Spinks, the medical officer to the workhouse and No. 2 district of the union, from £160 to £200 *per annum*.

THE autumn meeting of the Social Science Association will commence at Norwich on Wednesday, October 1st. About £800 has now been raised locally to cover the necessary expenses, but £500 is still required.

BARON ADOLPH DE ROTHSCHILD has founded and endowed a hospital for diseases of the eye at Geneva, at an expense of £20,000, which is wholly borne by himself. Dr. Barde of Geneva is appointed medical officer to the hospital.

OXFORD is to have its "Hospital Sunday," and an influential committee has been appointed to communicate with the clergy and dissenting ministers on the subject. The Heads of Houses are also to be invited to allow collections to be made for the same object in the chapels of all the colleges in the University.

SANITARY LAWS.

THE *Digest of Statutes relating to Urban Sanitary Authorities*, promised by Mr. Stansfeld in the course of last session, has at length been printed and presented to Parliament. It forms a handy volume of two hundred and fifty-six pages. It is of very little use to medical men.

THE FACTORIES' AND WORKSHOP ACTS.

THE reports of the factory inspectors, Mr. Redgrave and Mr. Baker, dated April 5, have been presented to the House of Commons. Mr. Redgrave comments upon the nine hours' movement, which has "certainly advanced among the trades in which men are chiefly employed," but he says that "in all the trades in which the nine hours' system has been adopted, there exists the power of working overtime, which alternative appears to be equally acceptable to masters and operatives," whereas, he adds, "in the application of the nine hours' system by a new Act of Parliament to cotton factories, etc., it is intended to prevent overtime, and hence the whole difficulty of the question." "It is far preferable," he says, "that masters and operatives should arrange these details (of hours of work and meals) between them than that there should be a stern Act of Parliament binding both parties down to something which is acceptable to neither." A very beneficial change has, he says, taken place in the working of the brickfields. The hours worked by milliners and dressmakers, he declares, are so much reduced that "they work under infinitely better conditions than has ever been the lot

of that class in the memory of man." Mr. Redgrave recommends that the Factory Acts should be consolidated, the Workshop Act of 1867 repealed, and all handicrafts not defined to be factories in any Factory Act, to be declared to be so under the Act of 1867. He and Mr. Baker disapprove of sending a certifying surgeon to small establishments, and have authorised the certificate of children's ages to be obtained at the residence of the certifying surgeon at the statutory fee of sixpence per certificate. Mr. Redgrave thinks that children should not be employed in factories under ten years of age.

"TINNED" HORSE.

ON February 6th (says the *Armidale Chronicle*) there was a sale of horses at the pound yards. The prices that ruled were not excessive. One young gentleman informed us that he purchased a Bucephalus for one shilling, and that one or two Rosinantes were exchanged for even the smaller coin sixpence. In Australia, it is not a question of who would walk, for everybody does ride; but, seeing that we already feed a few millions of English with our beef and mutton, it is almost a matter of consideration whether it would not be as well to cater for the peculiar tastes of their Gallic neighbours, and to supply the craving hippophagic appetites of the Parisians with a few consignments of tinned horse.

THE GREAT CHARITY.

UNDER this title, the *Boston Medical and Surgical Journal* again calls attention to the contribution by the Quaker philanthropist, John Hopkins, of something more than four millions of dollars, to build and endow a free hospital in Baltimore. It observes that this places his name before the world in company with those of Peabody, Baroness Burdett Coutts, Peter Cooper, Stewart, Girard, the Warrens of Boston, McDonough, and others who have made use of their wealth for the benefit of humanity. His plan is as practical as its inspiration was honourable. To give his fortune while he was yet alive and able to oversee the use of it, in connection with a trusted directory, is to accomplish his purpose to the best advantage of the institution, and to avoid the legal entanglements and *post mortem* trials which are a common sequel to similar legacies. Moreover, Mr. Hopkins makes a good use of his means when he unites his splendid hospital of four or five hundred beds with the medical department of the University, thus supplying a deficiency in opportunities for medical training that has heretofore been prominent in Baltimore. The building will, no doubt, be constructed on the isolated ward plan, so as to avoid the great addition to mortality which is constantly found to attend "stately buildings."

EUROPEAN CHILD-LIFE IN INDIA.

AT a meeting of the Medical Society of London on April 7th, Dr. Fayrer read a paper on this subject. The author pointed out how rapidly the infant European population was increasing in India, and contrasted the mode of life in that country twenty-five years ago with what it is now. The death-rate per 1,000 among the troops was 17.83, and among the officers 12.49. The question had been often asked, "Can the Anglo-Saxon colonise India?—i.e., can the race, unsupported and unrecruited from home, continue to reproduce itself and exist there? Could he, in short, do in India what he has done in America and Australia, people the country and displace or replace the autochthones and his older Aryan brethren who have become acclimatised during an occupation of many centuries?" Dr. Fayrer was of opinion that the data for framing a precise reply to this question did not exist, but his own firm conviction was that it could not be done; and he felt convinced that, had India been colonisable by the European, the position we now hold there would be very different to what it is. The European who becomes an item in the fixed population, and who leads an ordinary temperate and correct life, has expectations of living perhaps little below those which he might have had in England. About the year 1815, an asylum was founded in Calcutta for children whose parents were European; and it is from the reports of this society, numbering about 129 individuals, varying in age from one to eighteen years, that the following in-

formation is gathered. It was observed that the stimulating effects of an almost tropical climate asserted their influence; and, as a rule, the girl of sixteen or seventeen years was two or three years in advance of a girl of that age in an European climate. These children appear to have a great immunity from diseases peculiar to the country, as well as others of a severe kind: thus no cases of cholera, diphtheria, scarlatina, croup, pleurisy, pneumonia, ophthalmia, phthisis, dengue, or malarious cachexia, have been known among them for many years, previous also to the author's observation. The death-rate is about double that in England, as the following table will show.

	England.	India.
Under 5 years... ..	67.58	148.10 per 1,000
From 5 to 10 years	8.80	17.73
„ 10 to 15 years	4.98	11.51

The author quoted Miss Nightingale's true saying, "Children are, as is well known, the very touchstone, the live tests of sanitary conditions, and but too often the dying and dead tests of insanitary." He concluded by saying that it was satisfactory to know that by care and proper training an European child may live, grow, and even thrive, in the plains of Bengal.

POISONING BY COLOURED SOCKS.

AT the monthly meeting of the Bombay Medical and Physical Society, held February 1st, 1873, the particulars of a case of poisoning by coloured socks was read. In this case, Dr. Cates mentioned that he was applied to by an officer in respect of an obstinate eczematous eruption on the legs. On inquiry, Dr. Cates found that the officer in question had lately taken to wearing socks of a bright red colour, which he (the officer) had received from England in 1869. Suspecting the nature of the case, Dr. Cates recommended simple treatment and the disuse of the socks. A cure was soon effected, and the socks in question were sent to Messrs. Kemp and Co., of Bombay, for analysis. The socks were referred by Messrs. Kemp to Mr. Harris, who reported that he readily obtained from the colouring matter of the socks a "distinct crop of octohedral crystals of arsenious acid." Dr. Cates further mentioned that there were no constitutional symptoms present—the affection being entirely confined to the eruption on the legs, and a chain of vesicles following the course of the absorbents on the inside of one thigh. In the discussion which followed, Dr. Mills took part, reading the notes of a case of very similar character which had come under his treatment in February 1870. The dye in this case, however, was believed to be coralline, and therefore presumably non-arsenical.

REGISTRATION OF BIRTHS AND DEATHS.

IT is to be hoped (says the *Pall Mall Gazette*), that the Registration of Births and Deaths Bill, which had to be dropped last year owing to pressure of business, will this session become law. It embodies a reform which has been too long delayed in this portion of the United Kingdom. A compulsory system of registration for births and deaths is already in existence in Scotland and Ireland, and its extension to England, as recommended some time ago by the Sanitary Commission, is certainly required. The measure of which Lord Morley moved the second reading the other night, considerably extends the number of informants in the case of births, and imposes penalties for non-registration, which increase with time. Besides the parents of the child, the persons present at the birth, the owner of the house in which the child was born, the persons having charge of the child, and the relatives living within the subdistrict, and having knowledge of the birth, are included in the bill as informants. The existing system of registration of deaths is a little more satisfactory than that of births, inasmuch as a certificate from the registrar is necessary before there can be a burial. But in many cases there is no statement as to the cause of death; and, in order to prevent such omission, the present bill contains a provision, that any medical practitioner who has attended the deceased person in his last illness shall certify as to the cause of death. It is further provided, that where no medical practitioner has been in attendance, the registrar shall refuse his certificate for burial until he has communicated with the coroner.

The bill underwent some criticism at the hands of a few of the lords, the Duke of Richmond expressing an inability to see the great difficulty which Lord Morley imagined would attend the registration of stillborn children. Some such provision would certainly be of much value in many ways, and ought not to be lightly dismissed as impracticable. But with or without it, the bill is necessary to provide the groundwork for the more complete statistics which are now needed for purposes of sanitary legislation.

THE WESTMINSTER HOSPITAL.

DR. RADCLIFFE has resigned his position as physician to the Westminster Hospital. Dr. Anstie, who has long fulfilled the duties of assistant-physician, succeeds him. Several candidates for the assistant-physicianship are already mentioned, but have not as yet definitely come forward. A new system of nursing has just been inaugurated at the hospital, which promises to work well.

THE RECENT EXAMINATIONS AT THE COLLEGE OF SURGEONS.

THE *Students' Journal* states that the total number of candidates at the recent primary examination amounted to 191. Of these, Guy's Hospital furnished 34; University, 27; St. Bartholomew's, 18; London, 15; King's College, 14; St. Thomas's, 13; St. George's, 10; St. Mary's, 7; Charing Cross, 7; Middlesex, 5; and Westminster, 5. Of these, St. Bartholomew's, St. Mary's, and Westminster were successful in passing all their candidates. Four of the Guy's men failed to pass, and a similar number were "referred" from the London and also the University College Hospitals. King's College, St. Thomas's, St. George's, and Charing Cross Hospitals each contributed two to the "plucked" list, and Middlesex one. It is worthy of remark that the hospitals which furnished the largest proportion of successful students are those that have adopted a system similar to that advocated in our columns on January 16th last; viz., not to allow any student to present himself at the College of Surgeons until he has given evidence of his fitness by passing a test examination at his own hospital. Of the provincial medical schools, Manchester sent the largest number, 8; all of whom were successful. Of the 191 candidates, only 22 failed to pass; whilst, at the corresponding examinations last year, 55 out of 215 were referred.

THE ADULTERATION OF FOOD.

DR. STEVENSON has presented a report to the local authorities of Clerkenwell giving the result of the analysis of forty-seven samples—thirty-four of bread and thirteen of tea—procured from various retailers. Of the tea, four samples were, in his opinion, adulterated, and nine not adulterated. In one case, the adulteration consisted of an admixture of a gritty earthy matter, ingeniously rolled up inside the tea-leaves, so that to the eye the tea had a clean appearance. A second sample of the tea was procured, but the adulteration had disappeared; and Dr. Stevenson, therefore, did not advise a prosecution. The three other adulterated samples were mixed with leaves other than those of the tea-plant; the foreign leaves being broken up, so as in a great measure to prevent their identification. Two of the samples were similar samples procured from the same shop. The teas analysed were common and inferior black teas, at 2s. per pound—such teas as were purchased by the poorer classes. Dr. Stevenson did not in any of these cases advise a prosecution, as, in the first place, he did not feel clear that the adulterations had been executed in this country; and, secondly, the adulterations were not injurious to health, nor were the added substances in large amount. Of the thirty-four samples of bread, eight were adulterated. The adulteration consisted in every case in the admixture of alum—a substance used in giving whiteness and improved texture to loaves made of inferior flour; and the habitual use of alum in bread was deleterious and injurious to health. Of the eight adulterated samples, three were duplicates procured from a baker who had previously sold adulterated bread; and in all four samples the bread was then analysed a second time. In three instances, the second samples were found to be again adulterated, though to a very modified

degree; and in the fourth instance the adulteration used—alum—was present to such a trivial degree, that its presence might possibly have been accidental. In view of these circumstances, Dr. Stevenson did not feel called upon to recommend any prosecution for the adulteration of bread; but he trusted that those bakers who had adulterated might be warned by samples having been procured for analysis, and that they would cease to adulterate so important an article of diet as bread.

EXAMINERS AT THE UNIVERSITY OF LONDON.

AT the meeting of the Senate of the University of London this week, the following examiners were elected in the subjects of medicine and the collateral sciences. Those marked with an asterisk have not filled the office before. Dr. Debus and Dr. Odling, in chemistry; Dr. Hooker and the *Rev. M. J. Berkeley, M.A., in botany; Dr. Bristowe and *Dr. Wilson Fox, F.R.S., in medicine; Mr. Birkett and Mr. Marshall, in surgery; Mr. Viner Ellis and *Mr. G. W. Callender, F.R.S., in anatomy; Dr. Michael Foster and *Dr. W. Rutherford, in physiology, comparative anatomy, and zoology; Dr. Robert Barnes and Dr. Graily Hewitt, in obstetric medicine; Dr. Fraser and *Dr. T. L. Brunton, in materia medica and pharmaceutical chemistry; Dr. Arthur Gamgee and Dr. Henry Maudsley, in forensic medicine.

BATRACHIAN METAMORPHOSIS WITHIN THE OVUM.

M. JULES GARNIER, the explorer of New Caledonia, makes known through the *Revue Scientifique* an observation of M. Davay, *pharmacien* in Guadeloupe. It is to the effect that in the country there is a frog—the *Hylodes martinicensis*—which does not undergo the ordinary tadpole transformation, but is fully formed *in ovo*. On examining an ovum taken from the gelatinous mass in which they lie embedded under moist leaves, there is found a slender embryo with a large head, four styliform limbs, and a tail folded in. On touching the egg, the embryo changes its place. A day later, the embryo has a tail as long as its body, translucent and flat, like a tadpole's tail. The limbs then become developed, and some days later the little frogs escape, being of a deep brown grey colour, and not presenting the least vestige of a tail.

CHLORODYNE.

JUDGMENT was this week given in the Court of Chancery in the case of a bill filed by Dr. Collis Browne to restrain Mr. R. Freeman, a chemist in the Kennington Road, from issuing certain advertisements and publishing certain testimonials in support of his assertion that his, and not Dr. Collis Browne's, is the original and only genuine chlorodyne. It was the third suit between the parties. The plaintiff began to supply the public with chlorodyne in 1855, having invented it, as he stated, in 1846, and used it with success in his practice in the East. The first bill was filed in May, 1862, to restrain the defendant from using the name of chlorodyne as descriptive of a medicine prepared by himself; but, on the defendant putting in an answer, claiming to have discovered his preparation in 1844, and denying that he had ever advertised it, except as Freeman's chlorodyne, the plaintiff dismissed his bill. The second bill was filed in December, 1862, to restrain the defendant from advertising his own preparation as "the original chlorodyne, manufactured by the inventor, Richard Freeman." On the 11th of January, 1864, Vice-Chancellor Wood dismissed this bill on the ground that, as far as the name of chlorodyne went, the plaintiff had, by the acquiescence in the use of it by other persons, lost the right to treat it as his own trade-mark, and that the defendant had not actually represented that his chlorodyne was of the manufacture of the plaintiff; but as his Honour disapproved the course pursued by the defendant, he dismissed the bill without costs. There was no appeal from this decision. In December, 1871, the present or third suit was brought in consequence of some advertisements issued by the defendant, one of which was as follows. "The original chlorodyne and only genuine invented by Richard Freeman, pharmacist, entitled by the decision of Vice-Chancellor Sir W. Page Wood, January 11, 1862, to the sole right to use the word 'original' as a prefix to 'chlorodyne,' which decision was con-

firmed July 12, 1864." The plaintiff also complained of the defendant's representing that genuine chlorodyne is only sold under the protection of Government authority, with a stamp bearing the words "Freeman's Original Chlorodyne," and that without such stamp no chlorodyne is genuine; and that several testimonials to the efficacy of chlorodyne as a remedy for various disorders which were really given in favour of the plaintiff had been appropriated by the defendant and printed on the wrappers of his bottles. Sir Richard Baggallay, Q.C., Mr. Fischer, Q.C., and Mr. B. B. Rogers appeared for the plaintiff; Mr. Southgate, Q.C., and Mr. Stirling for the defendant. The Lord-Chancellor, stopping Mr. Southgate, said the advertising had gone on since 1864, and the plaintiff had lost by his acquiescence any right he might formerly have had to ask the Court whether the defendant's misrepresentation of the decree of Vice-Chancellor Wood did not amount to contempt of court. It appeared to him that the suit was virtually concluded by the decision in the former suit that the plaintiff had not an exclusive right to the use of the word chlorodyne. The defendant's calling his preparation the original did not, as the Vice-Chancellor thought, amount to a representation that his preparation was, in fact, the manufacture of the plaintiff; and the words "only genuine," which were the only new feature in the present suit, merely involved a slander of the plaintiff's property, which might or might not be actionable; but, if actionable, would not be so as a mere trade assertion that one man's article is better than another's. Nor could his lordship see any ground of complaint as regards the testimonials used by the defendant. He should, therefore, dismiss the bill. He might be impressed in the same way as the Vice-Chancellor was with regard to the conduct of the defendant, but he could not approve the course pursued by the plaintiff of filing another bill after the point had been substantially decided against him; so that the bill would be dismissed with costs.

THE LONDON HOSPITAL.

MESSRS. HAY-CURRIE, Hanbury, and Buxton, honorary secretaries of the London Hospital Special Fund, write to the *Times* that the Grocers' Company have voted the sum of £20,000 to build the new wing to contain two hundred beds, now urgently required at the London Hospital. Such a noble act is beyond all thanks. It will confer a lasting honour upon the Grocers' Company, and earn for them the enduring gratitude of thousands whom it will be the means of benefiting. The special fund now being raised for extension and maintenance of the hospital is thus brought up to £75,000 (including a large sum understood to have been subscribed on the Stock Exchange); and if the various friends of the charity will maintain their exertions as stewards, there is reason to believe that the full amount required (which, by the urgent necessity of the case, has been fixed at £100,000) will shortly be obtained.

BRANCH ORGANISATION.

THE Midland Branch has hitherto, we believe, held but one meeting a year, and has but imperfectly fulfilled the purposes of scientific reunion, and frequent friendly and professional debate and meeting, by which the Branch organisations are intended to unite, strengthen, and refresh local professional forces, and to aid to give to practitioners scattered through each locality their own voice in matters medical, their own strength in united debate and action, their own advantages of scientific intercourse and mutual instruction. The President of the present year—Dr. Tindal Robertson of Nottingham—proposes to revive interest in the local meetings by making them quarterly during the present year; and he has asked some London friends, including Sir Henry Thompson, Dr. Russell Reynolds, and Dr. B. W. Richardson, to come down and help to make the *soirées* specially interesting by lectures or demonstrations. The plan resembles somewhat that of star performances, by which clever managers are wont to revive the fortunes of provincial theatres; and, although a temporary success may, and we heartily hope will, reward the efforts of Dr. Robertson in this direction, and the visits of our metropolitan associates will be sufficiently repaid by the pleasure of meeting new circles of friends and

assisting in giving new energy to a Branch, yet the solid success of a Branch must be founded upon other foundations, which, we hope, will be laid. We point again to the example of the Birmingham and Midland Counties Branch as an instance of success depending upon active organisation and frequent meetings in a populous town; and to the district organisation of the South-Eastern Branch, as an example of a well arranged constitution, by which a Branch spreading over rural districts and towns may be at once active, useful, and vigorous. It is in such organisation as this that the fruits of real usefulness and pregnant success will be found. There are singular and instructive differences in this respect to be found in the different Branches; and we cannot but think that the responsibility lies chiefly with the officers, and especially the honorary local secretaries.

THE ARMY MEDICAL SERVICE.

THE forthcoming *Gazette* which we announced, containing eighty promotions, has it last appeared. It runs thus. To be Surgeons-Major—Surgeons Thomas Allen Thornhill, M.B., John Wallace, Melville George Jones, James Inkson, M.D., John Gordon Grant, Daniel Murray, M.D., John Warren, William Tanner, Charles Bartholomew Mathew, Byng Thomas Giraud, M.D., Henry Cole Peppin, William Sly, John Trehane May Symons, M.D., Michael Quinlan, William Gerard Don, M.D., William Cathcart Boyd, John Sarsfield Comyn, Charles Henry Leet, William Hillman, William Jay, Thomas Bennett, James Mackay, M.D., Walter Basnett Ramsbotham, M.D., Donald Macpherson, William Curran, James Davis, John Henry Hunt, Isaac Hoysted, Charles Hervé Giraud, John Atkinson, Francis Henry Preston, Hugh Deane Massey, James Hinton, Robert Spence, Henry Knaggs, Richard William Berkeley, Charles Gray, John Carlaw, M.D., Frederick Pennington, James Thompson, James d'Altera, Hampden Healey Maclean, James Paxton, M.D., Edward Hopkins, Fitzgerald Edward Scanlan, Albert Stanley Knight Prescott, Arthur Croker, Joseph Salkeld Johnston, M.D., Thomas Turville Gardner, Andrew Moffitt, John Colahan, M.D., Richard John William Orton, Charles Rattray, M.D., Joseph Bourke, Thomas Walsh, Peter Frederick Newland, William Langworthy Baker, Henry William Devlin, Hugh Mackay Macbeth, Thomas Michael O'Brien, Horatio Scott, M.B., George Alexander Moorhead, James Henry Jeffcoat, Francis Roberts Hogg, M.D., John Mackenzie, M.D., John Davidge, John Kinahan, M.D., Samuel Archer, James Wilson, M.B., Walter Crisp, Edward Acton Gibbon, Robert Gillespie, M.D., Austin Joseph Ferguson, John Robinson, St. John Killery, Edward O'Connell, Lancelot Andrewes White, William Alexander Gardiner, Mathew Lawrence White, William Graves, Tobias Barnwell. This will do little, we fear, to allay the irritation existing in the department owing to the faults in the new warrant to which we have already referred, and which are discussed further in another part of the JOURNAL. It is stated that Surgeons W. H. Pickford, M.B., and Albert L. Fernandez (Grenadier Guards), John William Trotter, Arthur R. B. Myers, and J. H. C. Whipple, (Coldstream Guards), and George Perry, W. Collins, M.D., and E. W. Cottle (Scots Fusilier Guards), will not be called upon to vacate their regimental appointments in the Brigade of Foot Guards, consequent upon the army medical warrant recently promulgated.

MR. BEALES ON DISLOCATIONS.

WE cannot help thinking that Mr. Beales, M.A., carried his democratic tendencies a little too far in a case which he tried at the County Court, Peterborough, on April 22nd last. It is perfectly well understood that his opinion is that "Pompey is as good as Cæsar", and, on the whole, a little better; but his application of that principle in the justice-seat seems a little humoursome, and savours of eccentricity. A girl named Foster charged her mistress with "wrenching" her shoulder and dislocating it. She admitted that, after the alleged dislocation, she laid the supper-table, did her work next morning, and so forth. Mr. King, surgeon, said he examined the girl's shoulder. The motion

of the joint was not interfered with; she could lift the arm up and touch the back of her head without assistance. So far as he could recollect, the arm was not at all swollen. He was sure the shoulder was not dislocated when he examined the girl. If the shoulder had been dislocated, she could not have raised her arm and used it as she did. If the shoulder had been dislocated by a wrench, as stated by the girl, there would have been a cry of pain, and the arm could not have been used. By the Judge: She raised her arm herself, and touched the back of her head. He was quite convinced there was no dislocation. The girl having stated that she was unable to hold anything in her hand, not even the Testament when being sworn, at the request of Mr. Atter she was examined by Dr. King and Mr. Mason in the presence of the judge and the attorneys engaged in the case. It was then found that there was no reason why she could not use the arm, and both medical gentlemen were of opinion that she could if she chose. A bone-setter at Wisbech, however, gave evidence that, ten days after Dr. King had seen her, she came to him with a dislocated shoulder, and he reduced it; whereupon Mr. Beales, M.A., observed that "he was not disposed to throw over the testimony of Mr. Mason because he did not *happen to be* a qualified practitioner, for he knew there were many men who were not qualified quite as clever as some of those who were qualified."

SCOTLAND.

THE Edinburgh University Amateur Dramatic Club gave a most successful third annual performance, for the benefit of the Royal Infirmary, on April 23rd.

CAPPING.

THE ceremony of "capping" at the Edinburgh and Aberdeen Universities came off on Wednesday of last week. Professor Blackie delivered an interesting address at Edinburgh, and Dr. Harvey at Aberdeen.

REACTION OF LIGHT ON THE RETINA AND OPTIC NERVE.

AT the last meeting of the Royal Society of Edinburgh, Dr. J. G. McKendrick read a paper, by Mr. James Dewar and himself, on some physiological experiments which they had carried out for the purpose of investigating the effect of light on the retina and optic nerve. The researches comprised about five hundred observations, carried out for the most part in the dead of night, in order that the instruments employed might not be disturbed by the vibration caused by passing vehicles. Directed as they were to the visual organs of rabbits, frogs, pigeons, and goldfish, the experiments had gone to show a distinct effect produced by the action of light on the electro-motive condition of the retina and optic nerve. The authors of the paper proposed to pass on, not only to examine certain points not yet clearly ascertained in their present inquiry, but also to examine the electric condition of other sensory nerves, such as the auditory nerve.

IRELAND.

AT a late meeting of the Strabane Board of Guardians the salaries of four of the medical officers were raised by £20 *per annum*.

A SHORT time ago the Guardians of Londonderry Union raised the salaries of the dispensary medical officers, as follows: one by £30, six by £20, and one by £10 *per annum*.

SMALL-POX IN LURGAN.

AT a meeting of the Board of Guardians of the Lurgan Union last week, it was reported that eleven cases of small-pox had been admitted into the Workhouse Hospital during the week, making a total of twenty-four patients at present under treatment for this disease. It was ultimately decided to engage four extra nurses, and to subject the institution to a disinfecting process.

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 McCaull, C. N. Esq. Whittlesea (dead)
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 Trestrail, H. Ernest, L.R.C.P. Ed. Harston
 Wallis, George, Esq. Cambridge
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 Iliff, William, Esq. Derby
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 Knipe, William M. Esq. Melville
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Legge, William, Esq. Surgeon to the Dispensary, Derby
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 Marshall, W. J. Esq. Darley Dale
 Norman, George B. Esq. Ilkestone
 Ogle, William, M.D. Physician to the Infirmary, Derby
 Parke, John L. Esq. Tideswell
 Robertson, Wm. H. M.D. Consulting Physician to the Devonshire Hosp. Buxton
 Robinson, Henry, L.R.C.P. Chesterfield
 Rose, John, M.D. House-Surgeon to the Hospital, Chesterfield
 Sharp, J. A. L.R.C.P. House Surgeon to the Infirmary, Derby
 Shipton, W. P. Esq. Consulting Surgeon to the Devonshire Hospital, Buxton
 Taylor, George, M.D. Physician to the Infirmary, Derby
 Webb, William, M.D. Wirksworth
 Wilson, Wm. J. L.R.C.P.Ed. Clay Cross
 Woolley, T. S. Esq. Heanor
 Wrench, Edward M. Esq. Baslow
 Wright, Frederick W. Esq. Surgeon to the Dispensary, Derby

DEVONSHIRE.

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 Baker, Albert, M.D. Physician to the Dispensary, Dawlish
 Bankart, James, M.B. Surgeon to the Devon and Exeter Hospital, Exeter
 Bernard, R. M. Deputy Inspector General Hospitals, Plymouth
 Blake, C. Paget, M.D. Consulting Physician to the Infirmary, Torquay
 Brooking, C. H. M.D. Brixham
 Brush, John R. M.D. Newton Abbot
 Bryden, Richard, Esq. Uffculme
 Budd, George, M.D. F.R.S. Barnstaple
 Budd, Richard, M.D. Physician to the North Devon Infirmary, Barnstaple
 Budd, Samuel, M.D. Physician to the Devon and Exeter Hospital, Exeter
 Bulteel, C. Esq. Surgeon to the Royal Albert Hospital, Stonehouse
 Cheves, A. B. M.B. Millbrook
 Clay, Robert H. M.D. Physician to the South Devon and East Cornwall Hospital, Plymouth
 Coates, Matthew, Esq. Stoke, Devonport
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 Cumming, A. J. Esq. Surgeon to the Devon and Exeter Hospital, Exeter
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 Elliot, John, jun. Esq. Kingsbridge
 Elliot, William Henry, M.D. Physician to the Devon and Exeter Hospital, Exeter
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 Hicks, James H. Esq. Plymouth
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 Mackenzie, John I. M.B. Medical Officer to the Dispensary, Sidmouth
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 May, Joseph, jun. Esq. Surgeon to the Royal Albert Hospital, Stoke, Devonport
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 Pollard, William, jun. Esq. Surgeon to the Torbay Infirmary, Torquay
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 Whipple, John, Esq. Consulting Surgeon to the South Devon and East Cornwall Hospital, Plymouth
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 Rogers, G. M.D. Long Ashton (resigned)
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 Stockwell, Thomas G. Esq. Surgeon to the Mineral Water Hospital and Royal United Hospital, Bath

Stone, Robert Nathaniel, L.R.C.P. Ed. Bath
 Surridge, James, M.D. Wincanton
 Taylor, Arthur, Esq. Corfe, Taunton (resigned)
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 Terry, John, Esq. Bailbrook, Bath
 Vicary, Chas. Esq. Bath
 Walker, Wm. C. Esq. Shepton Mallett
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 Watson, Thomas Sandon, M.D. Bath
 Waugh, A. Esq. Midsomer Norton
 Weatherley, Fredk. Esq. Portishead
 Wigan, George G. H. M.D. Portishead
 Winterbotham, Washington L. M.B. Surgeon to the Infirmary, Bridgewater
 Woodforde, Francis Henry, M.D. Taunton

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Number of Members..104.

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 Alcock, John, Esq. Surgeon to the North Staffordshire Infirmary, Burslem
 Alcock, Annerley, Esq. Smethwick
 Arlidge, John T. M.D. Physician to the North Staffordshire Infirmary, Newcastle-under-Lyme
 Astley, D. G. Esq. Newcastle-under-Lyme
 Ball, D. Esq. Surgeon-Extraordinary to the North Staffordshire Infirmary, Newcastle-under-Lyme
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 Cotterell, Peter A. M.D. West Bromwich
 Cotterill, A. M.B. House-Surgeon to the North Staffordshire Infirmary, Harnhill
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 Garman, Wm. C. Esq. Wednesbury
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 Jackson, T. V. Esq. Surgeon to the South Staffordshire Hosp. Wolverhampton
 Jackson, W. F. M. Esq. Smethwick
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 Kelty, P. M. L.R.C.P. Ed. Walsall
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 Kite, W. J. Esq. West Bromwich (dead)
 Lomax, H. T. Esq. Surgeon to the General Infirmary, Stafford
 Lowe, George, Esq. Surgeon to the Infirmary, Burton-on-Trent

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 Moore, Richard B. Esq. Wolverhampton
 Moore, R. W. L.R.C.P. Wednesbury
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 Morgan, M. Butler, Esq. Lichfield
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 Newnham, Christopher A. Esq. Surgeon to the South Staffordshire Hospital, Wolverhampton
 Norris, W. L. Esq. Brierly Hill (dead)
 Nunneley, Frederick B. M.D. Burton-on-Trent
 Orton, Chas. L.R.C.P. Medical Officer to the North Staffordshire Infirmary, Newcastle-under-Lyme
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 Morton, John, M.B. Medical Officer to Surrey County Hospital, Guildford
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 Pollock, Robert J. Esq. Wimbledon Park
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 Seaton, Edward C. M.D. Surbiton
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 Shurlock, Mainwaring, Esq. Chertsey
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 Sloman, S. G. jun. L.R.C.P. Farnham
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 Soper, William, Esq. Surgeon to the Jews' Hospital, Clapham Road
 Spitta, Robert J. M.D. Clapham Common
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 Stedman, John B. Esq. Godalming
 Steele, John S. Esq. Reigate
 Steele, Russell, Esq. Reigate
 Stilwell, George, Esq. Epsom
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 Stocks, Frederick, Esq. Wandsworth Rd.
 Stowers, N. Esq. Kennington Park Road
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Sutcliffe, Joseph H. Esq. Ripley
 Sutherland, William, M.D. Croydon
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 Tapson, Joseph Alfred, Esq. High Street, Clapham
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 Taylor, H. S. Esq. Surgeon to the Royal Surrey County Hospital, Guildford
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 Turner, John S. Esq. Anerley Road, Upper Norwood
 Wagstaffe, William W. Esq. Demonstrator of Anatomy, St. Thomas's Hospital, Stangate
 Walters, John, M.B. Reigate
 Ward, F. H. Esq. Surrey County Asylum, Tooting
 Warwick, R. A. M.D. Medical Officer to the Infirmary, Richmond
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 Williams, W. Rhys, M.D. Medical Superintendent, Bethlem Hospital
 Willis, Robert, M.D. Barnes
 Wyman, W. S. M.D. Putney
 Yate, Frederic, Esq. Godalming

SUSSEX.

Number of Members. 100.

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 Allen, Bryan H. M.D. Surgeon to the Dispensary, Hastings
 Ashenden, Charles, Esq. Hastings
 Axford, C. J. Esq. St. Leonard's-on-Sea
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 Bostock, John S. Esq. Horsham
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 Bull, John Henry, Esq. Lindfield
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 Cann, Thomas M. Esq. Newhaven
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 Collet, Henry J. M.D. Consulting Surgeon to the Infirmary, Worthing
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 Couling, Henry, Esq. Surgeon to the Sussex County Hospital, Brighton
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 Dixon, Joseph, Esq. Surgeon to the Hove Dispensary, Brighton
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 Haywood, George, M.D. Brighton
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 Holman, Henry, Esq. East Hoathly
 Holman, Henry M. M.D. Hurstpierpoint
 Holman, Thomas, Esq. East Hoathly
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 Humphry, Frederick A. Esq. Surgeon to the Sussex County Hospital, Brighton
 Johnstone, Athol A. Esq. Surgeon to the Hospital for Children, Brighton
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McCarogher, J. M.D. Consult. Physician to the West Sussex Infirmary, Chichester
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 Mathews, Henry J. D. Esq. Horsham
 Mercer, William, Esq. Wadhurst
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 Moon, Henry, M.D. Physician to the Sussex County Hospital, Brighton
 Moore, George, M.D. Hastings
 Moore, Withers, M.D. Assist. Physician to the Sussex County Hospital, Brighton
 Mudd, Frederick C. Esq. Chichester
 Murray, J. Jardine, Esq. Surgeon to the Eye Infirmary, Brighton
 Nourse, William E. C. Esq. Surgeon to the Hospital for Children, Brighton
 Ormerod, E. L. M.D. Physician to the Sussex County Hosp. Brighton
 Paxton, F. V. M.B. Physician to the West Sussex General Infirmary, Chichester
 Penfold, Henry, Esq. Surgeon to the Eye Infirmary, Brighton
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 Preston, Theodore J. Esq. Resident Medical Officer General Dispensary, East Grinstead
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 Smith, John P. M. Esq. Brighton
 Smith, Thomas, Esq. Crawley
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 Taffie, Rickard P. B. M.D. Surgeon to the Eye Infirmary, Brighton
 Tatham, George, Esq. Brighton
 Taylor, John, Esq. Ticehurst
 Ticehurst, F. Esq. Consulting Surgeon to the East Sussex Infirmary, Hastings
 Trollope, Thomas, M.D. Assistant Physician to the East Sussex Infirmary, St. Leonard's-on-Sea
 Turner, G. B. M.D. Surgeon to the East Sussex Infirmary, St. Leonard's
 Turner, Richard, Esq. Surgeon to the East Sussex County Prison, Lewes
 Tyacke, Nicholas, M.D. Physician to the Infirmary, Chichester
 Underwood, John, M.D. Hastings
 Wallis, Frederick, Esq. Bexhill
 Wallis, William, Esq. Hartfield
 Whateley, E. Esq. Brighton (resigned)
 Williams, S. W. Duckworth, M.D. Medical Superintendent of the Sussex County Asylum, Hayward's Heath
 Wilson, Robert J. F.R.C.P. Ed. St. Leonard's-on-Sea
 Winter, John N. Esq. Brighton
 Winter, T. B. Esq. Brighton (resigned)
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Birt, Thomas, M.D. Leamington
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 Bodington, G. F. M.D. Sutton Coldfield
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 Chavasse, Samuel, Esq. Birmingham
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ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEDICAL MEETING.

THE next meeting is appointed to be held at the Union House, Dartford, on Tuesday, May 13th, at 4.30 P.M.; RICHARD H. HUNTER, Esq., in the Chair.

Dinner will be provided at the Bull Hotel at 6 P.M.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, April 28th, 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETING.

THE annual meeting will be held at the Fountain Hotel, Canterbury, on Thursday, May 15th, 1873, at 3 o'clock; Mr. WILKS, of Ashford, in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

The following papers will be read at the meeting:—1. Dr. Parsons: "Case of Incarcerated Placenta." 2. Mr. Reid: "Induction of Premature Labour." 3. Mr. Rigden: "Is the appointment of Medical Officers of Health to Extensive Districts satisfactory to the Profession as being most conducive to the Public Health of the Inhabitants?"

Gentlemen who intend to be present at the dinner are particularly requested to inform me on or before Tuesday, the 13th instant:

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, April 30th, 1873.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETING.

THE next meeting of the above district will be held at the County Asylum, Hayward's Heath, on Friday, May 16th, at 3 o'clock; Dr. S. D. WILLIAMS in the Chair.

All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.

Dr. Williams will read a short paper, entitled "Remarks on the Diagnosis of General Paralysis of the Insane, illustrated by cases in the Asylum"; which also will be visited under his superintendence.

Dinner will be provided at the Station Hotel.

Notice of intended communications is requested at once by the Secretary.

THOMAS TROLLOPE, M.D. Cantab., *Honorary District Secretary*.

35, Marina, St. Leonard's-on-Sea, April 29th, 1873.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

THE annual meeting of the above Branch will be held at the Town Hall, Royston, on Friday, May 23rd, at 3 P.M.; D. B. BALDING, Esq., President, in the Chair.

The dinner will take place at the Bull Hotel, at 6 P.M. Tickets, 13s. each.

J. B. BRADBURY, M.D., *Honorary Secretary*.

Corpus Buildings, Cambridge, April 19th, 1873.

WEST SOMERSET BRANCH: SPRING MEETING.

THE spring meeting of this Branch was held at the Royal Clarence Hotel, Bridgewater, on Thursday, April 3rd, at 5.15 P.M. Ten members were present. H. W. RANDOLPH, Esq., of Milverton, was voted to the Chair in the absence of the President.

Prevention of Infectious Disorders.—After dinner a discussion took place on the question—of which notice had been sent to each member—"What is the best plan of preventing the spread of infectious and contagious diseases, having special reference to Dr. W. Budd's mode of treatment by camphorated oil and baths?" The strongest testimony was borne to the almost certain efficacy of Dr. Budd's method, when duly carried out, in preventing the spread of scarlet fever; but, excepting in those diseases where a skin-eruption was present, the use of oil and baths was thought to be doubtful. It was objected by some that oiling a patient all over while the skin was throwing off a disease might interfere with the natural processes, and probably induce renal or other internal mischief; but to this it was answered that the use of hot baths would fully counteract any such risk. The addition of camphor to the oil was thought to have some special use in promoting disinfection by its action as an ozoniser; and similarly, iodine hung up over the patient's bed (mentioned to be the practice of some medical men), and the use of scents, as well as the ordinary disinfectants, all probably acted in an analogous manner by their influence in furthering the oxidation of the infecting medium, whatever that might be. Heat was spoken of as the most valuable and convenient of all modes for disinfecting woollen clothes and articles which could not be washed. A temperature of 300 deg. Fahr. should be employed, and that was easily managed by means of gas. Isolation was insisted upon as always to be had recourse to when practicable; and, above all, to breathe pure air and drink pure water were points to be aimed at, as not only conducing to prevent the spread of this class of diseases, but also to prevent their occurrence altogether.

Nitrite of Amyl.—Mr. W. A. HUNT read a paper illustrative of the use of nitrite of amyl to obviate faintness and to relieve asthmatic dyspnoea. A bottle of the liquid was exhibited, and the mode of administering it explained.

Inversion of the Uterus.—Mr. PRANKERD read notes of an interesting case of inversion of the uterus which occurred a week after parturition, and, having resisted ordinary modes of reduction, gradually gave way under the continued employment of an air-pessary.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE sixth general meeting of the session 1872-73 was held at Birmingham on March 13th, 1873. Present: THOMAS EBBAGE, Esq., President, in the Chair, and fifty-four members.

New Members.—Dr. Spence (Burntwood), Dr. Haynes (Leamington), Dr. N. L. Bayles (Stourbridge), and Mr. Wheatcroft (Hednesford) were elected members of the Branch.

Dr. Fleming.—A letter was read from Dr. Fleming, regretting that the state of his health necessitated his declining the office of President of the Branch. It was resolved unanimously—"That the Branch deeply regrets that Dr. Fleming is compelled by ill health to decline the office of President of this Branch, but trusts that he may soon be restored to his public and private duties."

A Resolution of Sympathy with Dr. Keyworth in connection with an inquest at Witton was passed unanimously.

1. *Scarlatina: Parotitis: Extension of Disease to Brain: Death.*—Dr. BALHAZAR FOSTER related a case of scarlatina which proved fatal by extension of inflammation from the left parotid gland to the brain along the internal jugular vein. The patient was under five years of age, and had been admitted into the General Hospital with well marked scarlatinal rash and slight sore-throat. The case was complicated by severe bronchial catarrh, which, however, yielded to treatment; but on the fourth day after admission, parotitis of the left gland began, and was followed by a new crop of the rash. In the course of three days, the left parotid gland was so much enlarged, that the jaws could not be separated. The patient died on the eleventh day after admission, death being preceded by stupor and great exhaustion, but no convulsions. During the last day of life, the enlarged gland was reddish on the surface, but there was no fluctuation. There was no discharge from the ear and no albuminuria during life. The necropsy disclosed a healthy condition of the thoracic and abdominal viscera; the bronchial tubes were hyperæmic; the kidneys healthy to the naked eye and under the microscope. The parotid gland of the left side was found enlarged to four times its natural size; the central part was softened and broken down. The inflammatory mischief could be distinctly traced along the internal jugular vein, through the foramen jugulare to the under surface of the cerebellum. There was great thickening of the walls of the left lateral sinus and clotting in its cavity. The internal and middle ears were healthy and the Eustachian tubes. The tonsils were only superficially ulcerated. Dr. Foster exhibited the parts showing the course of the inflammation, and argued that the parotitis was due rather to the effect of the scarlatinal poison, than to extension of local mischief from the buccal cavity, as in some cases.

2. *Clot of Blood in Brain.*—Mr. WHITCOMBE exhibited an organised clot of blood, weighing three ounces six drachms, of the shape of a kidney, which he found between the layers of the arachnoid membrane on the left hemisphere of the cerebrum of a patient, aged 52 years, who died in the Borough Lunatic Asylum on February 22nd, from phthisis. There were no symptoms of pressure for two months before death nor previously, so far as could be ascertained; and, with the exception of slight delirium for seven days, ending February 2nd, the faculties were clear. The delirium Mr. Whitcombe could not attribute to the presence of the tumour.

3. *Excision of the Elbow.*—Mr. JOHN ST. S. WILDERS exhibited a patient whose elbow-joint had been excised. The man, aged 25, a plate-layer, was knocked down by a train on December 5th, 1872. On being admitted into the Queen's Hospital under Mr. Wilders's care, it was found that the left elbow-joint was totally disorganised; the skin was torn off the back of the upper and forearm for about two-thirds of their circumference from a part about five inches above the elbow-joint to three inches below it; the olecranon process and the condyles of the humerus were knocked off, and about two inches and a half of the shaft was split up and comminuted, and some of the muscles were torn and bleeding. Mr. Wilders sawed off the broken ends of the humerus and ulna, leaving a smooth surface, also the head of the radius, which had escaped injury. The edges of the skin were brought together as far as possible, and the arm was placed on a straight splint. It was kept in this position for a month, being dressed with carbolic oil once a week; at the end of that time it was bent to a right angle, the splint was removed, and the arm worn in a sling; skin-grafting was at the same time employed with great success. The wound is now nearly healed, and the patient will in a short time have an useful arm.

4. *Calculus.*—Mr. WILDERS exhibited a vesical calculus of the size and shape of an almond. The man had had lateral lithotomy performed three years ago, when a large stone was removed. Mr. Wilders operated by the median method. The man passed his urine *per vias naturales* on the day of operation, and on the thirteenth day he was walking about the ward. Mr. Wilders made some remarks in favour of the median operation.

5. *Ulceration of Trachea after Tracheotomy.*—Mr. BENNETT MAY exhibited the trachea of a child, showing an erosive ulcer in its interior, which had terminated fatally by hæmorrhage after tracheotomy. The operation had been done for œdema of the glottis following the imbibition of boiling water. The trachea-tube was removed on the fifth day, and, on reintroducing it a few hours afterwards to relieve the dyspnoea caused by the accumulation of mucus at the wound, a sudden gush of blood delayed the parts and destroyed the child. The ulcer due to the pressure of the tube was not above a line in depth, and appeared to have opened one of the anterior thyroid veins.

6. *Medico-Legal Case.*—Dr. JAMES THOMPSON showed the lungs and heart of a child whose body had been found in a ditch near Leamington. The mother was waiting her trial at the next assizes at Warwick

under a charge of murder. The lungs floated together and separately, and weighed on removal 1,020 grains. The foramen ovale was closed by a delicate valve-like membrane.

7. *Calculi without Symptoms.*—Dr. THOMPSON showed nineteen calculi removed from the bladder of a man during a *post mortem* examination. The subject had shown no symptoms of calculous disease for two years before death. The calculi varied in size from a large bean to a small pea. One was broken in halves by intervesical violence.

8. Mr. VOSE SOLOMON read a paper on some ophthalmic points of general interest to the profession.

At this meeting, according to the laws of the Branch, the officers and Council to be elected at the annual meeting were nominated.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETING.

THE forty-seventh meeting was held at the Pavilion Hotel, Folkestone, on March 13th.

Disorders of the Genito-Urinary Organs.—Mr. TEEVAN read a paper on some common complaints of the genito-urinary organs. He commenced with the subject of irritable bladder, which was very common, and was usually caused by incipient stricture. The largest sized instrument might be passed into the bladder, and there might yet be incipient contraction, as the bulbous urethra was fully twice as capacious as the anterior part of the canal. The *bougie à boule* could alone detect the early stage of stricture, and a cure might generally be effected by the use of large olivary bougies. A specific injection had yet to be discovered for gonorrhœa. He had lately been using the hydrastis Canadensis with great success. In order to cure a gleet, an accurate diagnosis was necessary. If there were contraction, gradual dilatation was indicated; but if there were no contraction, deep injections would effect a cure. Stricture of the urethra was nearly always caused by a long standing inflammation, of which gleet was the earliest sign. It ought to be the surgeon's aim to detect stricture in its incipency, and this could only be done by using the *bougie à boule*. Pathologically speaking, there was no evidence to show that a stricture could ever be cured; and, whatever operation might be performed, a relapse was inevitable, if the bougie were not periodically used. The majority of strictures could be successfully treated by gradual dilatation with French elastic bougies. For the troubles attendant in an enlarged prostate there was no instrument like Mercier's beaked elastic catheter, for it was equally useful for the patient or the surgeon. The diagnosis of stone in the bladder was all-important. If a patient passed a few drops of blood attended with painful micturition, and if both were aggravated by exercise, a stone would nearly always be found. Every case of stone ought to be cut, unless there were clear and distinct indications for lithotripsy. Mr. Teevan concluded his paper with some remarks on spermatorrhœa and impotence.

Paracentesis of the Chest.—Dr. BOWLES related three cases of pleurisy in which paracentesis thoracis had been performed. The first case was complicated with an enormous abscess of the liver, which pushed up the diaphragm enough to give rise to the physical symptoms of pleuritic effusion, even before any pleurisy commenced. This, however, became marked on July 28th, 1872. On August 13th, the impediment to respiration was very great. There was complete dulness over the whole of the lung, except in the subclavian region; bronchial breathing and bronchophony could be heard over the whole back of the lung; and there was patchy, feeble breathing about the side and front. The heart's impulse was felt above as well as below the left nipple. On introducing a trocar, only about an ounce of blood escaped; the wound was closed. Two days later, the patient died. At the necropsy, the pleuræ were found adherent entirely at the back, and in patches at the sides; elsewhere the cavity was full of sero-purulent fluid. The trocar had entered a patch of adhesion of the size of a florin. The heart was pushed upwards by the enormous liver, and to the left by the fluid in the right pleura. The second case was one of neglected pleuritic effusion of right side, with symptoms simulating disease of the ribs or spine. The effusion had probably existed six months. All the usual remedies failed to be useful, and the chest was emptied of twelve ounces of a pale greenish, transparent serum. The patient recovered at once without discomfort. The third case was a very severe one of empyema after pleurisy of the left side. A pulsating tumour appeared below and to the left of the heart, precisely like an aneurism. The history of the case and the introduction of a grooved needle, however, proved its nature. Two and a half pints of thin pus were drawn off by an ordinary trocar. For several days this had to be repeated. Air entered the cavity, false membrane was extracted from the cannula, and many

incidental troubles ensued; but, by the help of food and stimulants, the man made a very rapid recovery, and was now—fourteen years afterwards—strong and hearty. Dr. Bowles pointed out the advantages likely to arise from an early use of the aspirator in these cases.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

A MEETING of the Section took place in Queen's College, Birmingham, on April 15th, Dr. WADE, President, in the Chair.

Urinary Deposits.—Mr. MANBY read a paper on some of the rarer urinary deposits, and showed specimen slides of cystic oxide, dumbbell oxalate of lime, and hippuric acid. He considered that the principal clinical significance of the first-named deposit was, that a vesical calculus might be formed from it, but that, apart from such danger, cystinuria might continue without cause for anxiety. Schaur had found cystine in the livers of patients who had died from typhus; and there was a close resemblance between the chemical composition of cystine and of taurine. Cystinuria had a tendency to run in families. The crystals in the specimen were the characteristic six-sided tablets, but sometimes the crystalline form was that of a prism. He considered that the dumb-bell deposit of oxalate of lime arose from interference with crystallisation. Probably, the presence of ropy mucus, or mucoid flakes, would influence the process. The author showed an excellent specimen of hippuric acid, and stated that its occurrence as a urinary deposit had, as at present known, no clinical significance whatever. It was produced by eating prunes and bilberries, and had been found in very various pathological states.

Apparatus for Minute Injections.—Mr. W. J. FOSTER exhibited and explained the structure of an apparatus for the above purpose, and which he had constructed to act by means of compressed air, the materials being an air-tight bottle, two tubes of caoutchouc, and a hand-compressor.

Sycosis and Microscopical Features.—Dr. CARTER read a paper on the sycosis-fungus, with illustrative specimens, in which the spores, sporidia, mycelium, and stroma of the microsporon mentagrophytis, were well-marked. He exhibited also a specimen of doubtful parasitic character, also taken from a case of sycosis, closely resembling that form of the disease in which the fungus developed in the substance of the hair, causing a local thickening, and subsequent bursting of the shaft, and then exhibiting a brush-like rim around its circumference of that part. Since no very distinct appearance of fungoid elements could be made out, he adopted the general opinion, that the appearances were the result of perverted nutrition of the hair.

Phosphate of Lime as an Urinary Deposit.—Dr. MACKAY read a short paper on this subject. As compared with the stellate and prismatic forms of the triple phosphate, the phosphate is known to be rare. The specimens shown were crystalline rods, and were obtained from the neutral urine of a man aged 26, in his average health, and under observation for two months, without any grave symptoms. Relief was given to some extent by tincture of perchloride of iron, and still more by benzoate of ammonia. A tendency to relapse during mental anxiety was observed.

MIDLAND BRANCH: ORDINARY MEETING.

A MEETING of the Midland Branch of the Association was held in the Board Room of the General Hospital, Nottingham, on Friday, April 18th, at seven o'clock. The Chair was occupied by Dr. ROBERTSON, the President of the Branch. An interesting paper on the Pathology and Treatment of Uterine Flexions was read by Dr. Alfred Meadows, Physician-Accoucheur to St. Mary's Hospital. An interesting discussion followed the reading of the paper; and a cordial vote of thanks to Dr. Meadows was moved by Mr. G. E. Stanger, seconded by Mr. M. H. Higginbottom, and carried.

NORTHERN BRANCH: SPRING MEETING.

THE spring meeting of this Branch was held at the Athenæum, Sunderland, on Thursday, April 24th, 1873; Dr. W. H. DIXON, in the absence of the President, Charles Trotter, Esq., through indisposition, in the Chair.

Vote of Sympathy with the President.—It was moved by the CHAIRMAN, seconded by Mr. W. GOWANS, and carried by acclamation—"The members of the Northern Branch of the British Medical Association, having heard of the recent illness of the President, beg to express their sincere sympathy with him, and their earnest hope that his health may soon be restored."

The CHAIRMAN delivered an address, which was chiefly occupied with a consideration of the Contagious Diseases Act, the Public Health Act, and the out-patient department of hospitals.

Mr. C. S. JEAFFRESON read a paper on a new instrument for measuring the Field of Vision, and exhibited it. The contrivance may also be used to determine the degree of astigmatism, the angular measurement of diplopia, and the sensitiveness of different parts of the retina. The instrument has been entered at the International Exhibition.

Dinner.—After the meeting, the members dined together at the Palatine Hotel.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETING.

THE first meeting of the above district for the present year was held on Friday, March 21st, at the Castle Hotel, Hastings; F. TICEHURST, Esq., in the Chair. Fifteen members and three visitors were present.

The Complications and Sequelæ of Measles.—Dr. BAGSHAW read a paper on measles, its complications and sequelæ, showing that these latter are to be looked for exclusively in affections of the mucous tracts. He pointed out that every morbid poison has a definite manner of affecting the system, attacking definite tissues or organs; and that the morbid poison of measles, in its slightest form—that of rubeola *sine catarrho*—attacked the skin; while in the more ordinary form, the mucous lining of the mouth and air-passages became affected. The normal march of the complaint depended upon the equilibrium being preserved between the two kinds of determination. That which spread itself on the skin ought in general to dominate; if, on the other hand, an undue flux to the mucous membrane prevailed, the result was inflammation of those membranes. In scarlatina, the skin, the tonsils, the lymphatic glandular system, and the kidneys were the proper recipients of the poison. In scarlatina, the redness was superficial and punctiform, and seemed to be seated between the epidermis and the corium. The inflammation occurred in the subcuticular network of lymphatics. In measles, the redness was duller, and was limited to elevated irregular patches; this, with the papular appearance and the ecchymoses or even hæmorrhages which often existed, denoted that the inflammation was in the vascular network of the skin. To show the effects of measles, two tables were drawn up—one of sixty cases taken from brief notes kept in the out-patient department of the Hospital for Sick Children in London; the other of twenty cases in dispensary or private practice. The first table showed the following complications in sixty cases: bronchitis, 19; oæna, 1; tuberculosis of lung, 15; general cachexia and debility, 7; diarrhoea or stomatitis, 7; ophthalmia, 5; tubercle in brain (with paralysis), 1; otorrhoea, 5; suppurating glands in neck, 2; abscesses, 1. Of twenty cases seen in an earlier stage, eight had more than one complication, viz.: laryngitis, 7; broncho-pneumonia, 6; pleuritis (slight), 1; bronchitis, 3; congestion of brain, 1; pharyngitis, 1; diarrhoea, 4. Six had single complications; viz., laryngitis, 2; broncho-pneumonia, 2; bronchitis, 1; and diarrhoea 1. Tuberculosis of the lung was present in 2 cases; tubercular meningitis in 1; otorrhoea in 2; conjunctivitis in 1; cancrum oris in 1; and persistent jaundice in 1. In but one of these cases did an inflammation occur in a serous membrane, and that was slight. Albuminuria was rare in measles, and then seemed to be the result of mere congestion. Bronchitis and pneumonia formed the most frequent and most fatal complications of measles. The latter assumed the lobular form, and ran on to abscesses. Stomatitis and pharyngitis not unfrequently became ulcerative, or false membranes might be formed on the mucous surfaces, but ulcerations did not attack the tonsils. Cancrum oris supervened only in cachectic subjects. Seven out of the twenty recent cases had laryngitis; in some of these there was false membrane. A very severe form of laryngitis had been met with, of which an instance was given. Within twenty-four hours of the first symptom laryngitis appeared. On the fourth day, a copious eruption came out. Broncho-pneumonia developed itself, the eruption receded, and death took place on the seventh day. In this case the rash persisted after death, and all the mucous surfaces were deeply injected. Next to pulmonary affections, intestinal congestions were most common. Fifteen out of sixty cases seen in out-patient practice were suffering from phthisis. In one class of cases, the irritant effect of the poison on the system would seem to result in the production of acute military tuberculosis. In a second class, the irritation of bronchial catarrh communicated itself to the bronchial glands, which underwent caseation; or unhealthy suppuration going on in bronchial abscesses led to caseous formations. Dr. Bagshaw regarded those authors as being in error who class measles and scarlatina together as alike tending to produce tuberculosis, and remarked that Dr. Hyde Salter found

that a large number of patients suffering from spasmodic asthma dated their first attack and liability to this affection to the time of their recovery from measles.

Tumour in a Child.—Dr. TURNER showed a child with a large rapidly growing tumour in the neck.

Tubal Gestation.—Dr. TROLLOPE showed a specimen of tubal gestation, fatal at or about the sixth week by rupture and profuse hæmorrhage. The cyst was about the size of a small pigeon's egg, situated one and a half inches from the uterine extremity of the left Fallopian tube, which was impervious from the cyst up to its entrance into the uterus. The uterus was lined with a fine membrana decidua. The patient was a stout fair woman, aged 36, a multipara, having had twelve pregnancies in thirteen years. She had, as usual in such cases, slight metrorrhagia from the time of supposed conception, and certain abnormal sensations referred to the site of the affected tube, feeling "as if something were forming or had burst in her inside." She survived the symptoms of rupture of the cyst (characterised by sudden violent pain and faintness) about sixteen hours.

Diseased Heart.—Dr. TROLLOPE showed a diseased heart from a youth aged 17. The heart was enormously hypertrophied; it weighed sixteen ounces; the aortic orifice was much contracted; the valves were replaced by thick ossific deposits hanging down into the ventricle. Embolic wedges were found in the spleen, and smaller ones in the kidneys and liver, which was greatly enlarged. A small aneurism was found on the outer side of the left femoral artery, just below the crural arch; this contained ossific material similar to that in the aortic valves. Death had resulted from double pleuro-pneumonia. The lad had never had a regular attack of rheumatic fever. The disease was detected about fourteen months before death, but at that time it had given rise to no serious symptoms; and it was only four months before his admission into the Hastings Infirmary, and six months before his death, that he began to complain of shortness of breath, and rheumatic pains showed themselves in his arms and legs. There was no history of any severe strain or over-exertion.

Dry Cupping in Acute Laryngitis.—Dr. CUNNINGHAM mentioned a case in which a patient apparently *in extremis* from acute laryngitis was saved by dry cupping to the nape of the neck. Very large cups were applied and kept on some time, and free serous discharge ensued.

Phthisis.—Dr. HILL read notes of three cases of phthisis. Two occurred in the persons of father and son, aged 59 and 34 respectively; the third in a young lady still living, but in whom the disease was making rapid progress. The cause of death in the first two cases, and the rapid advancement in the third, seemed solely due to the absolute anorexia which existed.

New Members.—Mr. W. Campbell of Hastings, and Dr. John Johnson of Tunbridge Wells, were nominated as members of the Association and of the Branch.

The Next Meeting will be held in May at Hayward's Heath; Dr. Williams will be invited to take the chair.

Dinner subsequently took place at the Castle, under the presidency of Mr. F. Ticehurst.

REPORTS OF SOCIETIES.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, MARCH 5TH, 1873.

D. LLOYD ROBERTS, M.D., President, in the Chair.

Diseased Heart.—Mr. CULLINGWORTH showed the heart of a young married lady, aged 30, in whom a presystolic murmur had been audible during life. There was no rheumatic history. During the last six weeks there had been general dropsy, increasing dyspnoea, and a systolic murmur over the tricuspid valve. The patient died suddenly eight hours after her premature confinement. The heart weighed nine ounces. The mitral orifice was too small to admit the tip of the finger, and of the button-hole shape, lying at the bottom of a funnel-shaped pouch. The aortic valves were healthy. The left auricle was dilated and much hypertrophied. The right auricle and ventricle were greatly dilated, and the auriculo-ventricular opening admitted three fingers readily.

Renal Abscess opening into Colon.—Mr. STOCKS showed a specimen of an abscess commencing in the upper part of the substance of the left kidney, taking a direction forwards, and opening into the descending colon by two distinct orifices. The symptoms in the patient were simply those of irritable bladder alternating with retention of urine.

The pain was confined to the hypogastrium, perinæum, sacrum, and down the urethra and inside of the thighs. The abscess was not diagnosed before death.

Unusual Dislocation of the Shoulder-joint.—Mr. STOCKS mentioned a dislocation of the shoulder-joint of an unusual character in which, although the humerus was undoubtedly displaced, there was no flattening of the deltoid or undue prominence of the acromion process. The only distortion present was a hollow under the anterior edge of the acromion, causing the coracoid to be just visible to the eye, and a projection or bulging under the posterior edge of the former process, forming an exact reverse of the normal condition of the parts. He conjectured that the long head of the biceps had been dislocated from its natural position, arching over the head of the humerus, and having slipped anteriorly to that bone, prevented its return into the glenoid fossa, while the non-rupture of the subscapularis muscle kept it from slipping behind the neck of the scapula.

Cotton for Dressing Wounds.—Mr. LUND showed a sample of Dr. Von Brun's wound-dressing cotton. It is cotton-wool prepared by a special process, so as to deprive it of all greasy and resinous or gummy matters, and, unlike ordinary cotton-wool, it is very absorbent of water, and quickly becomes moistened throughout the whole mass when dipped into any liquid. It is, therefore found to be very useful as a packing around the edges of wounds to collect the serous or other discharges which might escape from them, or as a styptic to arrest hæmorrhage in the incisions for fistulæ, or for the use of dentists in their various manipulations on the teeth and gums. Mr. Lund also exhibited a form of respirator, naso-oral in form, which was lined with this cotton-wool, by which the air could be filtered. One disease to which he thought this cotton-wool respirator might be applicable, was hay-asthma with much coryza. He had repeatedly observed, where the morbid secretion of mucus from the nostrils was very excessive, that if the external orifices of these passages were lightly plugged with cotton-wool, the discharge very quickly ceased, and much inconvenience was got rid of. The explanation was that, while the Schneiderian membrane was in a state of vascular congestion, the usual foreign constituents of the air passing over it proved intensely irritating, and provoked the formation of mucus in inordinate quantity; but the air strained by the cotton-fibres lost this property, and allowed the capillaries of the part to recover their tone. The peculiarity of the experiment was that, if the cotton-wool only checked the escape of the fluid secretion mechanically without diminishing its formation, the mucus ought to accumulate in the nostrils above the plug of wool, which practically was not found to be the case.

Cephalotripsy.—Dr. LLOYD ROBERTS showed for Dr. Bowman a child with the cephalotribe attached. The child had been removed after perforation in consequence of contracted pelvis.

Typhlitis and Perityphlitis.—Dr. DRESCHFELD read a paper on the above subject, and also mentioned some interesting cases of these diseases.

Syphilitic Gummous Tumour of the Brain.—Mr. S. M. BRADLEY showed the brain of a woman who had died from this disease, and remarked upon the advisability of early treatment in such cases.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

MARCH 5TH, 1873.

P. D. HANDYSIDE, M.D., President, in the Chair.

Cyst in Brain.—Dr. HANDYSIDE showed the fresh brain of a female aged 34, who had died of peritonitis a month after delivery. She had been hemiplegic on the right side since the age of 11. Below the right frontal lobe there existed a thick-walled cyst, which contained an ounce and a half of fluid; it lay in the Sylvian fissure, on the under surface of the island of Reil, involving the three subdivisions of Wagner's lobe, the posterior of which is known as Broca's convolution. The cyst-wall showed under the microscope, on its cerebral surface, bipolar nerve-cells; on its cerebral surface, remains of old blood-clot. The patient had been of a very low type of development, and partially aphasic.

Fracture of the Skull.—Mr. G. R. GILRUTH read a case of fracture of the skull with puncture of the brain. The patient, a child, had fallen seven feet on its head, and died in six days. The fissure was a complicated one of the anterior portion of the base of the skull. The lesser wing of the sphenoid bone was detached.—Mr. JOSEPH BELL remarked on the difficulty, in many cases, of reconciling the classical symptoms called concussion and compression with actual cases, and the want of precision in our nomenclature of brain-injuries. He referred the symptoms in the present case to *contusion* of the brain. He alluded to the occasional extensive injury and even loss of brain-substance, fol-

lowed by good recoveries; and mentioned some cases.—Dr. JOHN CHIENE expressed his feeling of the vagueness of the term concussion, and told of some experiments on rabbits, in which he found that, when killed by a sudden blow on the back of the neck, death resulted, not from dislocation, but from extravasation into the spinal cord and on the brain.—Dr. P. H. WATSON thought the word concussion ought to be banished as a description of a *pathological* condition, but that it was still useful as conveying a brief idea of a certain well known set of *symptoms*.—The CHAIRMAN made some observations on the importance of noting the condition of the cerebral circulation.

Operation for Ankylosis of the Elbow.—Dr. P. H. WATSON read a paper on a new operation for ankylosis of the elbow resulting from fracture. He alluded to the unsatisfactory results often seen after operations for ankylosis; sometimes the joint being flail-like, and the muscles weak; sometimes movement being deficient. He gave his experience of three cases of subperiosteal excision of the elbow-joint, in which the results were comparatively unsatisfactory as to extent of movement. In 1871, he first performed the following operation. 1. He made a linear incision over the ulnar nerve. 2. He carefully raised the ulnar nerve, and turned it in over the external condyle. 3. With a probe-pointed bistoury he cleaned the humerus before and behind close to the capsular ligament. 4. With bone-pliers he cut off the internal condyle obliquely; then separated the external condyle and capitulum, also obliquely, from the humerus. 5. He turned out and cut transversely the truncated extremity of the humerus, and carefully dissected out the external condyle. He had since 1871 repeated the operation four times (five in all). All of these cases were exceedingly successful, except one, which required a second operation in consequence of an attack of osteo-myelitis in the humerus. The merits of the operation were said to be the following. 1. It leaves the triceps and brachialis undisturbed. 2. It only removes the portion of humerus within the capsule. 3. It results in little deformity, and the incision drains the wound in a most excellent manner. The only objection was the difficulty—purely a mechanical one—in getting out the external condyle.—Mr. JOSEPH BELL and Dr. DUNCAN made remarks on the merits of the operation in suitable cases, and on its originality.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, MARCH 12TH, 1873.

THOMAS FITZPATRICK, M.D., in the Chair.

The Semeiology of Intemperance.—Dr. ALFRED H. MCCLINTOCK, in bringing forward a communication, alluded to the symptoms and functional disturbances resulting from intemperance. The proper interpretation of these symptoms, and the differential diagnosis of intemperance from purely idiopathic disease, were as important as they were difficult. In connection with alcoholism, the author suggested that the increased tendency to excess in the use of stimulants observed of late was partly due to the increased mental application of the age of every profession, trade, or calling. It was possible that, in exceptional instances, a taste for alcoholic stimuli might be traced to a course of medical treatment; but in a question of this kind, the statements of the inebriates themselves were worth nothing, respect being had to their notorious untruthfulness, and to their desire for shifting the blame from themselves to the physician, or surgeon. The author disapproved of the opening sentence of the celebrated "Medical Declaration" of about a year ago. Had this sentence been omitted, he would have signed the document. Passing from the subject of the derangements of the nervous centres induced by intemperance, Dr. McClintock considered in detail some of the derangements in the organic system caused by the vice in question. He showed the relative semeiological value of its effects on the breath, stomach, bowels, skin, muscles, nervous system, etc., and in conclusion, referred to several cases of excessive alcoholism which he had met with in practice.—The CHAIRMAN expressed his sense of the value of Dr. McClintock's paper, and said that he had generally observed the vice in elderly unmarried females. All cases were not to be regarded as incurable.—Dr. STEWART had never known a case of recovery in a woman.—Dr. EUSTACE directed attention to the important subject of hereditary transmission of the disease. He had invariably observed a peculiar odour of acetous fermentation from the breath of inebriate patients. In cases where the attacks resembled those of fever, the best treatment was to discontinue the poison at once. A morbid appetite for food, again, often took the place of a craving for drink; and in Sweden advantage had been taken of this fact by the legislature, in the attempt to diminish the amount of intemperance throughout that country.—Dr. H. KENNEDY thought that drinking habits were often dependent

on individual peculiarities of temperament.—Mr. NIXON alluded to the oedematous condition of the face, often noticed in the confirmed debauché.—Dr. AQUILLA SMITH believed the change of habits in the present day would largely account for increased intemperance. Spiritus lavandulæ compositus and eau-de-Cologne were extensively used in England. A smell of peppermint or caraway in the breath in the morning, should excite grave suspicions as to the intemperate habits of an individual. The mendacity and ingenuity of confirmed inebriates was proverbial.—Dr. FINNY alluded to the connection between intemperance and insanity, and other neuroses. In such cases, it was a disease of the mind rather than a vice.—Dr. MCCLINTOCK replied.

CORRESPONDENCE.

GRANGE-OVER-SANDS.

SIR,—Will you allow me, as a resident in the place of fifteen years standing, and very much interested in its progress, to correct some mis-statements in the information which has been supplied to the writer of the article on Grange-over Sands, which appeared in your JOURNAL of April 12th?

The case of Grange-over-Sands is simply that of every place in its transition from a mere village to a small town. Sanitary improvements are at first hotly opposed, then gradually seen to be necessary, and, in the end, adopted. Grange, at present, is in the second of these stages. The leading house-owners and inhabitants have come to the unanimous conclusion that sanitary measures, in the shape of drainage and water-supply, must be entered upon; but they are determined, if the law will allow it, that they themselves, and not the Board of Guardians, will carry out what is necessary to be done. I express no opinion as to whether they are wise and right in that determination. I simply state the facts as they stand. As a proof of the Grange people being in earnest about it, the principal landowner has brought down, at his own expense, Mr. Bailey Denton, the well-known sanitary engineer, who is at this moment, I believe, preparing plans and estimates.

The only instances, during my whole residence in the place, of diseases such as the article speaks of, occurred about seven years ago, when at one house there were four or five cases of fever, of (I believe), a typhoid character. The house in question stands by itself, on the hill side, two hundred yards from any other dwelling, and two hundred feet above the cluster of houses constituting the village; therefore the presumption is, that the fevers arose from domestic rather than from local circumstances.

Putting aside young children, and visitors in advanced stages of disease who ought not to have left their homes, the deaths last year, out of a population of between five and six hundred, amounted, to the best of my remembrance, to four: two of them connected with childbirth, one from the decay of nature, and the fourth from some cause which, not being a medical man, I do not comprehend, but certainly not from any illness such as the circumstances of the place are credited with producing.

I am, etc.,
HENRY R. SMITH,
Incumbent of Grange-over-Sands.

THE ARMY MEDICAL WARRANT.

SIR,—The medical officers of the army owe you many thanks for your admirable *exposé* of the shortcomings of our last warrant, and trust you will continue your advocacy of their claims as a simple act of justice until its most unfair provisions are withdrawn. You may not be aware that the privileges, allowances, and pecuniary emoluments withdrawn in that delectable document have been enjoyed by medical officers of the army for thirteen years, and confirmed by the Royal Warrants which followed upon that of 1858—viz., those of April 1st, 1866, and December 29th, 1870.

The Royal Warrant of October 1st, 1858, commences, "Whereas we have taken into our consideration the recommendations of the Commissioners appointed by our authority to inquire into the regulations affecting the sanitary condition of our military forces and the medical treatment of the sick and wounded of our army." This shows that the regulations issued were and had been carefully considered and based upon the Report of a Commission presided over by Mr. Sidney Herbert, and having upon it men such as Sir Henry Storks, Mr. Stafford, Sir Andrew Smith, Mr. Alexander, Sir Thomas Phillips, Sir Ranald Martin, Sir James Clark, and Dr. Sutherland, who were thoroughly acquainted with the sanitary wants of the army, the remedies for its diseases, and the aspirations of its medical officers. Surely its provisions should never have been annulled. Clause 17, which gave to our relative rank "all precedence and advantages

attaching to the rank with which it corresponds", was our Magna Charta. Until this clause is restored in its entirety, rest assured that military medical officers will never remain satisfied or contented. Exhaustive as is your leader of the 19th ult., you have scarcely fully appreciated the evils which this new warrant has brought upon the members of our profession in the service. The deprivation of a portion of a medical officer's pay and allowances, hitherto looked upon as a portion of his income, is most unjust; and a regulation to this effect has never before been promulgated in a Royal Warrant. Why, it is only the other day that commissaries were granted a permanent increase of pay, in lieu of emolument drawn while in charge of a station, but then discontinued.

The regulation as to relative rank, taken in conjunction with the term "attached to a regiment", and the limitation of its medical charge to a period of *five years*, is a most serious loss. In every other department of the army, officers rank with their regimental brethren *according to date of Army commission*. The term junior is unknown. The effect of these clauses of the warrant will be, that the regimental surgeon-major must always be junior of his rank, and thus be deprived of choice of quarters and the right of selecting to go on the lodging-list, should the number of field-officers' quarters be limited or unsuitable—a loss in such a case of 3s. *per diem*, or £54:15 *per annum*. This term "junior of the rank" also places medical officers junior to all officers of the other civil departments of corresponding relative rank, who, on board ship and elsewhere, would consequently take choice of cabins, etc.

The withdrawal of forage as an appanage of the rank at once deprives a medical officer of the status of a mounted officer and its corresponding social privileges; also of a groom, and in certain cases a stable or stable-allowance—a yearly loss of income varying from £36 to £50.

In the Royal Warrant of 1858, the clause regulating the ages at which retirement must become compulsory commences with the words, "With a view to maintain the efficiency of the service." No service can be efficient where its prizes can be held for an indefinite time by the older officers. A man of energy and talent naturally looks forward to advancement. When all hope of this is shut out, he becomes inefficient and useless, and, as an example, is most pernicious. In the Control Department, the ages for compulsory retirement have been fixed at sixty and fifty; and a general officer has to yield up his appointment after a three or five years' tenure, and no staff or special appointment in the army can be held for longer than five years. There can be, therefore, no hardship in applying similar rules to the administrative ranks of the Medical Department. A surgeon-general, having once served in that capacity, becomes entitled to the highest rate of pension, and should then retire and make room for younger and more active men. He could very easily console himself upon his pension of £685 *per annum*. The want of an adequate rate of retirement after twenty years' service is another most serious blot in this warrant. One pound *per diem*, after twenty years' service in every clime, is certainly not too much to ask for as a right.

Your JOURNAL has great influence upon the members of our profession in civil life. The Horse Guards, as I have reason to know, already boast that, if (as they have been pleased to term it) we strike, they can get civil practitioners for the munificent sum of a *penny a head per week*. Surely your influence, as well as their sense of honour, will prevent this. In the present crisis, it is of vast importance that all the professional bodies should send in petitions to Mr. Cardwell against the clauses and retrogressive paragraphs of this new warrant. Upon your decision depends the *prestige* of our old and valued profession in military life, and the welfare of hundreds of medical officers, who upon a small government pittance have hitherto been trying to make the appearance of gentlemen and a hard struggle for their families. In concluding, permit me to hope that you will urge the necessity of this joint action in our favour upon the medical colleges and schools of the United Kingdom.

I am, etc., INDIGNANT.

OBITUARY.

JOSEPH JORDAN, F.R.C.S.

MR. JOSEPH JORDAN died at Hampstead on March 31st, in the eighty-seventh year of his age. His death recalls many changes which have taken place in the condition of the profession during this century, some of which, and those not the least important, he was instrumental in bringing about. It is not going too far to say that the existence of provincial medical schools is due to the energy and earnestness of Mr. Jordan. Although the first complete school was not established until

1824, Mr. Jordan had as early as 1819 commenced a course of lectures on Anatomy and Surgery, which were the first ever given to students in the provinces. Continuing these lectures from year to year, he succeeded in obtaining the recognition of the London College of Surgeons in 1821. These lectures were delivered in a small room in Manchester; but in 1828, Mr. Jordan, in conjunction with Dr. Freckleton, the late Mr. Wilson, Dr. Radford, and Mr. Boutflower, built a school, which he carried on until 1834, when he sold the premises, and joined, as lecturer on surgery, a school (in fact, the present School of Medicine) which had been established in 1824 by the exertions of Mr. T. Turner and the elder Mr. Ransome. In 1819, Mr. Jordan founded the Manchester Lock Hospital, in which important undertaking he was assisted by the late Dr. Hull and Mr. Brigham. He remained Consulting Surgeon of this institution up to the date of his death. His active connection with this hospital was chiefly remarkable for his constant and even violent objection to the use of mercury as an antisyphilitic agent. In 1835, he was elected Surgeon to the Manchester Infirmary, which institution he zealously served for thirty-three years, retiring with the rank of Consulting-Surgeon in 1868. During this long period he acquired a vast practical experience of surgery, and was wont to say that he believed he had operated more frequently for hernia than any other living surgeon. His cases numbered more than two hundred, but unfortunately no records of the results were kept.

Mr. Jordan, although a thoroughly Lancashire man, provincial in manner and address, was still a perfectly courteous gentleman, of gentle manners, and most winning nature. He was tall and slim in person, and looked every inch the representative surgeon. Without ever being a brilliant or very original surgeon, he was essentially a large minded and large hearted medical man, never prejudiced against a project because it was new, or bigoted against it because it was old. Although he did not leave his own mark deeply upon the surgery of the day, as his predecessor Mr. White had done, he most ably carried out the ideas of more inventive minds; and if all the long succession of students whom he had taught could be canvassed, there would be an universal consensus in saying—

"Gladly wolde he lerne, and gladly teche."

His contributions to literature were not numerous; but one small work written in French, entitled *Sur Pseudarthroses*, was of some importance. It advocated the preservation and junction of the periosteum of contiguous bones in cases of ununited fracture, and presumably of resection. This plan, recommended afresh by M. Ollier of Lyons, has recently attracted much attention here and abroad. Mr. Jordan was never married, and his considerable property is divided among his relations.

RICHARD SMART JACKSON, M.R.C.S.Eng.

MR. JACKSON was born at Bere-Ferrers, Devonshire, in 1808, and entered the medical profession in 1826. He was a pupil of Mr. Delisser, and afterwards of Mr. F. Kiernan, F.R.S. He studied at the Aldersgate School of Medicine, and at St. Bartholomew's Hospital, being a dresser under the late Sir William Lawrence; and afterwards studied in Paris, under Dupuytren. He settled in practice in 1873, at his native place. In 1849, he was presented with a valuable snuff-box, by the Tamar Mining and Silver Lead Smelting Companies, in recognition of his unremitting exertions during the cholera-epidemic of that year. He retired from practice in 1864, when he received from the inhabitants of Bere-Ferrers a handsome timepiece and silver cake-basket, as a mark of esteem. Since his retirement, he has resided at Plymouth and Oxford, at which latter place he died, almost suddenly, of apoplexy, on April 5th, in the 65th year of his age.

SIR WILLIAM RAE, C.B., INSPECTOR-GENERAL OF HOSPITALS AND FLEETS.

SIR WILLIAM RAE died on April 8th, at his residence, Newton Abbot, Devon, at the age of 86. He was the son of Matthew Rae, Esq., of Annandale, Dumfriesshire, and was born in 1786. He entered the Medical Service of the East India Company in 1804. In the following year, he was transferred to H.M.S. *Culloden*, under Sir E. Pellew, then Commander-in-Chief of the East Indian Squadron, and was surgeon to the *Fox* frigate at the destruction of the Dutch ships in the harbour of Cressy, and in several other actions in the Indian waters. On one occasion, when becalmed in the Bay of Bengal, he constructed an apparatus for distilling water for the relief of the ship's company. While serving in the *Leyden* in 1812, he had medical charge of troops, etc., during the prevalence of yellow fever at Carthage, and in the following year at Gibraltar. For his conduct and exertions in this emergency, he received the approbation of the Medical Board and the

Physicianship of the Fleet, besides the thanks of the Commander-in-Chief. His last appointments were as Chief Medical Officer at the Melville Hospital, Chatham, and Royal Naval Hospital, Plymouth, from which place he retired in 1855. For long and meritorious services, he was nominated a Companion of the Bath in 1855, and received the honour of knighthood in 1858. He was an extra-Licentiate of the Royal College of Physicians, and a Fellow of the Royal College of Surgeons of London. He was Justice of the Peace for the counties of Dumfriesshire and Devon.

JOSEPH VAVASOUR LANE, L.R.C.S.I.

MR. JOSEPH VAVASOUR LANE, surgeon to 1st battalion 4th Regiment, died in London, on April 4th, aged 36. He was the eldest son of the Rev. Richard C. Lane, Rector of Lisronagh, County Tipperary, Ireland. He entered the army in October, 1858, and served in both battalions of the regiment; with the first, in India, six years. He was with it in the Abyssinian campaign. He was held in high estimation both by officers and men, and was sincerely lamented by them all. His remains were interred on the 9th April, with full military honours, in the cemetery in St. Mary's Road, Portsmouth.

GEORGE DRYDEN, J.P., M.R.C.S.E., BINGLEY.

MR. DRYDEN was born at Brighton, February 26th, 1802. He commenced the study of his profession by apprenticeship to Mr. Allison of Darlington in 1818, and afterwards became a student at St. George's and at one of the Parisian hospitals, obtaining his diplomas in 1824. He settled in practice at Bingley, Yorkshire, in 1831, where he practised for more than forty years. In 1869, Mr. Dryden was elected a magistrate for the Keighley Division of the West Riding. Up to the last two or three years of his life, Mr. Dryden continued in the full work of a country surgeon, when his health began to fail, and a short but severe attack of bronchitis, with congestion of the lungs, proved fatal on January 21st, 1873.

JOHN HARRISON, F.R.C.S., SURGEON-MAJOR, LATE GRENADIER GUARDS.

MR. HARRISON died on March 21st, at 14, Randolph Gardens, Kilburn, at an advanced age. Mr. Harrison received his commission as Assistant-Surgeon in 1809, and joined the Walcheren Expedition in the same year. He served at Cadiz and in the Peninsula in 1811, 1812, and 1813; in the expedition to Holland in 1814; and in the Netherlands and France from 1814 to 1818. He was present at the assault of Seville, the bombardment of Antwerp, the storming of Bergen-op Zoom, the battles of Quatre Bras and Waterloo, and taking of Peronne. He was gazetted Surgeon-Major in 1837, and retired on half-pay in 1840, after a service of thirty-one years.

JOHN KENWORTHY WALKER, M.D., HUDDERSFIELD.

DR. JOHN KENWORTHY WALKER, third son of Sir William Walker, of Leicester, was born on July 16th, 1786. He was educated at Rugby, and studied at Cambridge, where he took his degree. At the commencement of his medical career he went to reside in Huddersfield, where he practised as a physician up to the time of his retirement from public life. One of his first public efforts was to obtain funds for erecting an infirmary in Huddersfield, which did not then possess one, and he had the satisfaction of seeing a suitable building provided for the relief of the sick poor of the district. He held the office of Physician to the Infirmary, and on leaving Huddersfield was appointed Consulting Physician. The establishment of a Sea-bathing Infirmary, at Southport, was also his project, and he had the pleasure of seeing it realised. The last twenty years of his life were spent at his country residence, in almost complete retirement. He took great interest in antiquarian pursuits, and contributed occasionally to the *Archæological Journal*, and in earlier life to the *Gentleman's Magazine*. He died on March 18th, 1873, after an illness of not quite three weeks.

J. SEBASTIAN WILKINSON, M.R.C.S.

THE late Mr. J. Sebastian Wilkinson received his professional education at St. Thomas's and Guy's Hospitals. He was a pupil of Sir Astley Cooper, and served the office of dresser to the late Mr. Chandler. Later he assisted Mr. E. Grainger as Demonstrator of Anatomy. He became a member of the Royal College of Surgeons in 1820, afterwards entered the Royal Navy, and was attached to the Royal Naval Hospital at Plymouth under Sir Stephen L. Hammick. This appointment he

resigned, and returned to London, opening, in Dean Street, a private class of anatomy, physiology, and surgery, in which he was very successful. Whilst holding these classes, the late Mr. R. D. Grainger, who succeeded his brother at the Webb Street School of Anatomy, offered him the Demonstratorship, which he accepted and held for a short period, and resigned in consequence of being superseded by an agreement of partnership made between Mr. R. Grainger and Mr. Pilcher. The students offered to open a new school, but Mr. Wilkinson declined on the grounds of friendship for the Graingers. Of late he had settled in the city, succeeding to the practice of an old pupil and friend.

FRANKLIN GOULD, M.D.

WITH much regret we have to record the death of Dr. Franklin Gould, son of John Gould, Esq., F.R.S., the distinguished ornithologist. Franklin Gould was born in Hobarton, Tasmania, on May 6th, 1839, under the hospitable roof of the late lamented Sir John Franklin, during a visit of his father and mother to that country. He received his early education at King's College, London, and graduated B.A. at the University of London, in 1858. In 1865, he became a member of the Royal College of Surgeons of London, and in 1866 he graduated as M.D. at the University of Edinburgh, where he received the gold medal for a thesis "On the Thermometer in Disease." In 1869, he became a member of the Royal College of Physicians of London, and in 1870 was appointed Physician to the Chelsea Dispensary.

During the last few years he travelled with Earl Grosvenor, and it was during a voyage from India, between Aden and Suez, on board the ship *Behar*, that he was seized with what in India is termed ardent continued fever. He died on March 19th, and on the following day was consigned to the Red Sea.

During his illness, he was unremittently attended by Dr. John Henry Sylvester, Professor of Medicine, and first physician to the Hospital, Bombay, and by the surgeon of the ship. His death was attributed by Dr. Sylvester to embolism rather than to the intensity of the fever.

Dr. Gould was an affectionate son and brother; an accomplished and conscientious physician, a sincere friend, and a general favourite with all who knew him.

CHARLES PERCY CROFT, M.D. EDIN.

DR. C. P. CROFT received his medical education at University College, London, and distinguished himself, obtaining several gold and other medals; amongst others, the Fellowes gold medal in 1838-9. He was for some time Mr. Liston's house-surgeon. During some years spent in London in practice, he was one of the promoters of the Great Northern Hospital, in the success of which he took a great interest. He was also surgeon to the Victoria Rifles. He afterwards went to Brazil, where he had medical charge of above 4,000 men connected with the city improvements at Rio de Janeiro. During the last four years of his life he practised at Newark-upon-Trent. He died on April 7th.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

BRIXWORTH.—Mr. H. Terry, jun., of Northampton, has been appointed Medical Officer of Health for Brixworth Union.

SHEFFIELD.—Mr. Alfred H. Allen, Lecturer on Chemistry at the Sheffield School of Medicine, has received the appointment of Public Analyst for the Borough of Sheffield, at a salary of £100 *per annum*.

WORTLEY.—Mr. George Browning of Oughtibridge has been appointed by the Rural Sanitary Authority of Wortley Union, Medical Officer of Health for No. 3 District, at a salary of £35.—Mr. Henry Payne of Loxley has been appointed Medical Officer of Health for No. 2 District, of the same Union, at a salary of £77.—Dr. Samuel Drew of Chapeltown has been appointed Medical Officer of Health for No. 1 District, of the same Union, at a salary of £112.

POOR-LAW MEDICAL SERVICE.

MR. G. F. MEADOWS, who was appointed in January 1844 Medical Officer of the Fourth District of the Woodbridge Union, Suffolk, at a salary of £78, has retired with a superannuation allowance of £40 *per annum*.

THE ENSUING ANNUAL MEETING.

WE are happy to be able to state that the Lord Mayor of London has signified his intention to offer an official evening reception at the Mansion House to the members of the British Medical Association on the occasion of the annual meeting in August. The lists of officers of sections have been approved by the Committee of Council, and are now nearly completed. A handsome response has already been made to the circular recently issued to the metropolitan members of the Association inviting subscriptions to the reception fund, and no doubt a good many more of our metropolitan associates will desire to contribute. Those who do so should communicate with the local secretaries, Dr. A. P. Stewart or Dr. Henry, with little delay, in order that the reception committee may know what funds are at their disposal. A very large attendance may be expected on this occasion, including not only our most eminent provincial Associates, but representative men from the Continent. The preliminary arrangements are in a forward state, and a brief programme will shortly be issued.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted members of the College on April 24th.

Allchin, William Henry, M.B.Lond., Westminster Hospital
Carter, Charles Henry, M.D.Lond., 8, Old Cavendish Street
Hall, Francis de Havilland, M.D.Lond., Evelina Hospital
Leach, Harry, Seamen's Hospital, Greenwich
Port, Henry, M.D.Erlangen, 10, Finsbury Place North
Seaton, Edward, M.D.Lond., Nottingham
Williams, John, M.D.Lond., 28, Harley Street

The following gentlemen were admitted licentiates of the College on April 24th.

Adams, John, St. Bartholomew's Hospital
Birch, Edward Arnold, Moss Lane East, Manchester
Campbell, James, Chigwell Row, Essex
Crozier, John Beattie, 73, Southampton Row
Hall, James Thomas, Chorlton-on-Medlock, Manchester
Jordan, Frederick William, 14, Plymouth Grove, Manchester
Lacy, Charles Sethward de Lacy, 63, Coleshill Street
Morgan, John, Chilcompton, Bath
Morley, John Lacy, 4, Duke Street, Adelphi

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on April 22nd.

Baines, Egerton C. A., Lincoln
Bennett, William Edward, Stoke, Devonport
Bomford, Gerald, L.S.A., London
Brumwell, James Parker, L.R.C.P.Edin., Kendal, Westmorland
Cheesewright, John Francis, L.R.C.P.Edin., Sturminster Newton, Dorset
Dickinson, William Wood, L.S.A., Uffculme, Devon
Donkin, Horatio Bryan, Blackheath
Fordaff, Hardy, Bradford
Greensill, Edward Samuel, Great Witley, Yorkshire
Hetley, Henry, Norwood
Hornan, George William, Surbiton, Surrey
Johnson, Tom George, Brigg, Lincolnshire
Lingard, Alfred, Derby
Murphy, George, Carlisle
Perkins, Henry Alleine, M.B.Edin., Faversham, Kent
Pinching, Charles William, L.S.A., Gravesend
Pocock, Frederick Ernest, Bow, Middlesex
Pughe, Rhinalt N., Liverpool
Rayne, Charles Alfred, Kendal, Westmorland
Savory, Arthur Henry, Wendover, Bucks
Shapley, Henry Thomas, L.R.C.P.Edin., Torquay, Devon
Snagg, Richard, L.R.C.P.Edin., St. Vincent, West Indies
Stockwell, George Thomas, Nottingham
Taylor, Robert F. S., Staleybridge
Wood, John Edward, London
Wood, Wm. John Haram, L.R.C.S. and L.R.C.P.Edin., Boston, Lincolnshire

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 24th, 1873.

Clare, John, Haverfordwest
Greet, William Ambrose, 29, Great James Street, W.C.
Haslam, Thomas Henry, Finborough Road, West Brompton
Nunez, Daniel, San José de Costa Rica
Stricker, William, Grove Lane, Cambswell
Turle, Arthur, Mount Taunton, Somerset

The following gentleman also on the same day passed his primary professional examination.

Thomas, Edmund Frederick, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Baines, Arthur, Hanley, Staffordshire
Balkwill, Joseph, Kingsbridge, Devon
Birchall, Thomas Barrow, Preston, Lancashire
Hargrave, Spencer, Manchester
Laverack, William Henry, Westgate, Bradford
Thompson, Thomas, Knaresborough

At the Preliminary Examination in Arts, held at the Hall of the Society, on the 25th and 26th of April, 1873, 64 candidates presented themselves; of whom 19 were rejected, and the following 45 passed, and received certificates of proficiency in general education. In the First Class, in the order of merit.

1. Charles Rayley Owen. 2. A. F. G. Codd, Edward Charles Cripps, and Montague Hosking. 5. Frank Marsh, G. A. Meaden, and W. G. Tennant. 8. John McHale. 9. George Batchelor, Clulow Howard, and Lawrence Humphrey.

In the Second Class, in alphabetical order.

H. F. Bailey, R. T. Bedford, J. A. Browne, R. D. Cameron, H. Crisp, H. W. Edwards, P. H. Emerson, F. E. Fenton, E. M. Ford, C. B. Gabb, M. D'Oyley Gilkes, T. W. Graves, Alfred Hepburn, T. G. C. Hesk, L. Houghton, J. G. Jeffreyes, J. H. Kemm, J. C. Kershaw, F. Knight, M. D. W. Levien, C. B. Lewis, Theodore Linde, T. E. F. MacGeah, L. Maybury, J. D. Miller, J. J. Muncaster, J. H. Muskett, C. J. Plummer, H. E. Price, A. Wm. Stone, Frank Taylor, Thomas Taylor, H. J. Thornton, and F. Percy Wightwick.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALTRINCHAM UNION, Cheshire—Medical Officer for the Knutsford District: £60 per annum, and fees.

ATHY UNION, co. Kildare—Medical Officer to the Fever Hospital: £40 p. ann.
BALLYMENA UNION, co. Antrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ahoghill Dispensary District: £90 per annum, and fees.

BRADFORD (Yorkshire) MEDICAL AID ASSOCIATION OF FRIENDLY SOCIETIES—Surgeon: £200 per annum and midwifery fees, house, rent, etc. Applications to W. B. Cawthra, Esq.

BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury—Resident Surgeon and Apothecary: £80 per annum, with £10 increase to £100, board, lodging, coals, and candles, in furnished apartments.

CARMARTHENSHIRE INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles. Applications to H. Howell, Secretary.

CENTRAL LONDON SICK ASYLUM DISTRICT INFIRMARY, Highgate—Assistant Medical Officer: £100 per annum, board and residence.

CLOGHER UNION, co. Tyrone—Medical Officer to the Workhouse: £50 p. a.
CORK DISTRICT LUNATIC ASYLUM—Resident Medical Superintendent.

EDINBURGH ROYAL LUNATIC ASYLUM—Resident Medical Superintendent.

ELY UNION—Medical Officer for District No. 5 and the Workhouse: £51 per annum, and fees.

GORT UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ardahan Dispensary District: £100 per ann., and fees.

HOLSWORTHY UNION, Devon—Medical Officer for District No. 3.

HULME DISPENSARY, Manchester—House-Surgeon: £120 per annum, apartments and attendance.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.

KIDDERMINSTER INFIRMARY—House-Surgeon: £120 per annum, rooms, coal, gas, and attendance.

LISNASKEA UNION, co. Fermanagh—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Maguiresbridge Dispensary District: £80 per annum, and fees. Applications to Colonel Edward Archdall, Lisnaskea.

LLANDILOFAWR UNION, Carmarthenshire—Medical Officer for District No. 3: £27 per annum.

LOCHMABEN, Dumfriesshire—Parochial Medical Officer and Public Vaccinator: £50 per annum, and fees.

METROPOLITAN ASYLUM DISTRICT—Assistant Medical Officer for the Asylum at Leavesden: £150 per annum, board, and residence.

MORPETH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.

NORTH RIDING INFIRMARY, Middlesborough-on-Tees—House-Surgeon.

ROYAL GENERAL DISPENSARY, Bartholomew Close—Physician: £40 per annum.

ST. GEORGE and ST. JAMES DISPENSARY, King Street, Regent Street—Physician-Accoucheur.

ST. PETER'S HOSPITAL FOR STONE, etc., Berners Street—House-Surgeon: £50 per annum.

SEAMEN'S HOSPITAL, Greenwich—Visiting Physician. Applications to Kemball Cook, Esq., House-Governor and Secretary.

THOMASTOWN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Knocktopher Dispensary District: £95 per annum, and fees. Applications to J. Bradley, Esq., Inisnag, Stoneyford.

WALKER URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum.

WESTMINSTER HOSPITAL—Assistant-Surgeon.—House-Surgeon.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per annum, board, and residence.

WESTERN DISPENSARY, Broadway, Westminster—Physician.

WISBECH UNION, Cambridgeshire—Medical Officers for Districts 7 and 8.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

*MARTIN, John, M.D., L.D.S., of Cambridge House, Portsmouth; Keydell, near Horndean, Hants; and Mentone, Les Alpes Maritimes, at Nice, aged 61 or March 23rd.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Oration and *conversazione*

TUESDAY.—Pathological Society of London, 8 P.M. Report by the Morbid Growth Committee on Dr. Carter's Fibrous Tumour of the Ovary. Dr. Bagshawe: Epithelioma of the Glottis and Base of the Tongue. Dr. D. Powell: Aneurism of Aorta close to Sinus of Valsalva. Dr. Bristowe: Two Cases of Ruptured Chordæ Tendineæ. Dr. Bristowe: Hydatid of the Brain. Dr. W. Legg: Changes in the Liver produced by high Temperature. Dr. Curnow: Renal Calculi. Mr. Wagstaffe: Myxoma of the Genitals. Mr. Wagstaffe: Tumour of the Jaw. Mr. S. Wilkinson: Bifurcation of the Urethra of a Dog; Renal Cyst from a Pig. Mr. Butlin: Recurrent Osteosarcoma unconnected with Bone. Dr. Silver: Aneurism of Aorta involving the Orifice. Dr. Silver: Stricture of Common Bile-Duct. Mr. Kesteven: Disease of Brain, Heart, Liver, Kidneys, and Spleen. Mr. Holmes: A Blood-Cyst from the Leg. Mr. Holmes: Pulsating Cancer of Kidney. Mr. Gay: Syphilitic Condylomata. Mr. Myers: Diseased Hearts from Soldiers. Dr. Dickinson: Intrathoracic Tumours.

WEDNESDAY.—Royal Microscopical Society, 8 P.M. Mr. W. K. Parker, F.R.S., "The Development of the Sturgeon's Facial Arches."—Obstetrical Society of London, 8 P.M. Dr. Meadows, "Case of Gastrotomy for supposed Extra-uterine Pregnancy"; Mr. Lawson Tait, "Note on the Diagnosis of Extra-uterine Pregnancy"; Dr. Wiltshire, "On the Common Skin-diseases of Children"; and a paper by Mr. George Roper.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Tilbury Fox (for Dr. Fritsche), "Two Unusual Cases of Elephantiasis Arabum"; Dr. Thorowgood, "Two Cases of Chronic Dysentery successfully Treated by Ipecacuanha"; Mr. W. Spencer Watson, "Intraorbital Nævus treated by Ligature and Actual Caution"; Mr. W. B. Dalby, "Five Cases of Traumatic Rupture of the Tympanic Membrane."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

We are requested to state that there is no vacancy at Bethnal House Asylum.

THE HASTINGS PRIZE.

THE General Secretary acknowledges the receipt of Essays, in competition for the Hastings Prize Medal, with the following mottoes.

"Nil tam difficile est quod non solertia vincat."

"Qui non proficit, deficit."

"Durum telum necessitas."

LAST WORDS ABOUT THE EPIZOOTY.

THESE last words are in the form of horse-doctors' bills. The *Canada Medical and Surgical Journal* has seen several; but the following, from a St. Louis veterinarian, is the most striking. Sant Lewis Ganewerry the 4d 1873. Mr. — to James HanKox Vetturinary physickian and Surgeant Dr. Too medikle advice twict, 3 dollars; Konsultation over a ded mare sed too hev hed the eppzout, 75 cents; Goin to see two sick hosses in the nite (very cold), 2 dollars; To treatment of a kream kolered hoss two days with medisuns, 4 dollars 50 cents; To making an obstetrikul examinashun of a hosses throat, 1 dollar 50 cents; To settin up all nite in a barn with a sick hoss, 2 dollars 50 cents; To writin a preeskripshun for botts, & also one for spaving, 1 dollar; To holding a postmortim examinashun on a hoss who afterwards recovered, 1 dollar 50 cents; To givin my opinyun one day on the street regardin the kause of the zoot, 4 dollars. Totil, 20 dollars 75 cents.]

NOTICES of Firths, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

AN AUSTRALIAN QUACK appends to his advertisement the following testimonial.

"Dr. Handfield Jones, F.R.C.P., F.R.S., Physician to St. Mary's Hospital, says: 'In atrophy and general debility, phosphodyne is a most admirable remedy; it invigorates the nutritive functions, and increases the vital energy; it not only acts as an absorbent, but retards or repairs the waste of tissue, and restores the nutritive functions to their normal condition.'"

This impudent fabrication has been brought to Dr. Handfield Jones's notice by the editor of the *Australian Medical Journal*, and he requests us to repudiate it in his name. It is unnecessary to state to the profession here that it is wholly fabricated, and that the name of Dr. Handfield Jones has been appended without his knowledge to a statement of which he knows nothing.

HOSPITAL SUNDAY.

A CORRESPONDENT calls our attention to the following suggestion, which has been gravely put forward by another "we", evidently intended as an improvement upon his predecessor, but hardly yet a success. "May we not hope that the distribution of tickets by the Central Committee may be a first step towards something like the Paris system, where a Committee sits every day in order to send all proper applicants to the hospital best suited to receive them? We look for many reforms from the continued operation of Hospital Sunday; and *this would be among the greatest that it would be possible to accomplish!*" Our correspondent adds: "'One of the greatest improvements, therefore, that this writer looks for is, that patients, say from Chelsea or St. George's-in-the-East, must apply at the Mansion House before they can be admitted into St. George's or the London Hospital. The good point in the Paris system is some economy in management, and especially in the purchase of stores; the bad feature is the way in which the patients are sent from one office to another before they come to the physician. The central committee plan is bad enough in Paris. What would it be in London—about four times the size of Paris? These gentlemen must be making a joke of the editor of the paper in which they write. For the benefit of obtuse readers, however, they should adopt Artemus Ward's plan, and add in parenthesis, '(N.B. this is a goak).' Seriously, I think it deserves to be noticed, and that somebody ought to be ashamed of printing such nonsense.'"

PATHOLOGICAL LABORATORIES.

SIR,—In a recent issue of your JOURNAL, you took notice of an American advertisement in which the advertisers offered to undertake investigation for their professional brethren, and you suggested that some of the junior members of the profession in this country might undertake such investigations with profit to themselves, and advantage to those for whom they conducted the experiment.

The subject is one to which we have given much consideration, and we believe that a great want may be supplied to the busy practitioner by the establishment of a laboratory in which he can get analyses of urine performed, or structures microscopically examined for a small cost. For example, it might be of great service to a practitioner to obtain a daily record of the variation in the amount of sugar excreted by a diabetic patient, but he has not time at his disposal to make the necessary investigation for himself. We have long been engaged in making investigations for ourselves, and we would very willingly undertake similar investigations for the profession generally. We are anxious, however, to ask whether the profession generally wishes for, and whether it would encourage, such an undertaking.

We are, etc.,

J. THOMPSON DICKSON, M.A. and M.B.
GEO. CHAS. COLES, M.R.C.S.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, April 26th; The Manchester Guardian, April 30th; The Aberdeen Daily Free Press, April 26th; The Bath Express, March 26th; The Birmingham Daily Post, April 30th; The Birmingham Daily Mail; The Hull Packet; The Daily Bristol Times and Mirror; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Dr. R. Southey, London; Dr. Robert Barnes, London; Dr. D. Ferrier, London; Dr. W. M. Kelly, Taunton; Our Paris Correspondent; Dr. Morell Mackenzie, London; Dr. Liveing, London; The Secretary of the Clinical Society; Dr. Rutherford, London; Dr. Edmund Parker, London; Dr. Greenhow, London; Dr. Gardner, Box; Mr. B. Blower, Liverpool; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Pathological Society; Dr. Althaus, London; Dr. G. C. Coles, London; An Associate; Dr. Harvey, Aberdeen; Mr. Kesteven, London; Dr. J. Hughlings Jackson, London; Dr. G. H. Philipson, Newcastle-upon-Tyne; The Secretary of the Royal Microscopical Society; Dr. F. J. Brown, Rochester; Dr. Thomas Trollope, St. Leonards-on-Sea; Mr. E. Davies, Maesteg; Dr. De Chaumont, Netley; Dr. Batty Tuke, Cupar Fife; Dr. Trollope, Hastings; Mr. Cuffe, Horn-castle; Dr. Aveling, London; Dr. Parsons, Dover; Mr. Dyke, Merthyr Tydfil; Dr. Tindal Robertson, Nottingham; Mr. Haviland, London; Mr. Barton, Dunfermline; Mr. W. J. Cleaver, Liverpool; Mr. Terry, jun., Northampton; Dr. Newman, Stamford; etc.

BOOKS, ETC., RECEIVED.

Guy's Hospital Reports. Third Series. Vol. xviii. London: 1872.
Fourth Annual Report of the Sanitary Commissioner of the North Western Provinces. Allahabad: 1872.
Digest of the English Census of 1871. Compiled from the Official Returns, and Edited by James Lewis. London: 1873.
A Treatise on the Diseases of the Tongue. By W. Fairlie Clarke, M.A., M.B. London: 1873.
The Varieties of General Paralysis. By F. Pollard, M.D. Reprinted from St. Thomas's Hospital Reports. 1875.

INTRODUCTORY ADDRESS

ON

THE OPENING OF THE TWENTY-SIXTH SESSION
OF THE ARMY MEDICAL SCHOOL.*Delivered at Netley, on April 2nd, 1873.*

BY

F. S. B. F. DE CHAUMONT, M.D., F.R.C.S.E., Surgeon-Major,
Assistant-Professor of Hygiene.

GENTLEMEN,—On this the opening of the twenty-sixth session of the Army Medical School, I have been deputed to address to you the few formal words of welcome with which it has been the custom to usher in the work of the course. This I do most heartily in the name of my colleagues and in my own, and beg to express a hope that you may find both pleasure and profit from your sojourn here. This is now the fourth session since the establishment became truly an united service school, and since we first had the pleasure of addressing in this place candidates for the Medical Department of Her Majesty's Navy. For some years previously, we had formed a closer union with our Indian brethren; and, indeed, the very first session when the school was opened at Chatham, we had candidates for the Indian service, although their entry was afterwards for a time suspended during a period of uncertainty as to the future status of the Medical Department of our Eastern Empire. During this time, we have had none but pleasurable results from this happy bringing together of the members of the different services; and it is with the highest satisfaction that we welcome to-day the presence of commissioned officers of the Royal Navy, who are about to take advantage of the opportunity now for the first time afforded them, of going through the school course, and renewing their acquaintance with branches of study which have been less familiar to them during protracted foreign service, and under the pressure of the various functions entailed upon them by the exigencies of public duty. We have long had the pleasure of meeting here officers of both the Indian army and our own, who have come from time to time to rub off a little of the rust that must accumulate even on the most active minds, and we hope that these opportunities will continue to be embraced by all three services as far as they can be afforded. Indeed, we look upon this as a most important function that the school fulfils, as furnishing a place of study to which officers can return and acquire (like Antæus) fresh intellectual vigour by once again touching the ground from which they sprung. Our only regret is that our accommodation hitherto has been so limited—indeed, quite inadequate for the complete fulfilment of what is desired or wanted; and we can only hope that the time may come when the imperative nature of our wants may be appreciated, and our teaching be no longer hampered by deficiency of time and space. Still, however, we endeavour to make the best of what we have; and if at times we have to hurry up somewhat points in our teaching which might well repay more elaborate treatment, we have the reflection that a great part of the instruction is practical and so more valuable, even though it be brief, than mere oral instruction ever can be. This, in fact, has all along been the main feature of the school—to make, as far as possible, every man who studies at it go through every process himself, believing that an ounce of practice is worth a ton of theory. Of course, principles must be taught; but the principles of a practical science like ours are but little remembered, unless their concrete application accompanies the enunciation of the theory. On the whole, I may say, and I think justly, that we lecture our pupils as little as any school in existence, considering the multiplicity of subjects that we must necessarily bring before them. Some of our friends who have already gone through the school may smile at this, and think that after all they had quite enough of it. Well, lectures are essentially dreary things, and after one has passed already through some years of them elsewhere, they may appear a little irksome; but when you come to reflect on the question, you will, I think, find that we have pretty well reduced this part of the work to a minimum. Of theoretical lectures proper, we have only one a day for five days in the week, which gives in a session of sixteen or seventeen weeks only eighty to eighty-five lectures in all, in which to overtake the subjects of Military Surgery and Medicine, Pathology, and Hygiene. In addition to these, my colleague Dr. Macdonald has a short special course for our naval friends, in which to initiate them into the peculiarities of ships and their architecture, a mystery to us landmen. Whatever else there is in the way of lecturing, is really in the shape of such explanations and instructions as are necessary for conducting the practical courses of chemical analysis

and microscopic examination, and clinical and pathological teaching in the wards and *post mortem* theatre. Many of the points brought before your notice will be new to all or most of you, and although some parts of the course may seem trite and well known to a few, yet no one will be the worse for going over a subject a second or even a third time; whilst the more intellectually gifted must exercise a friendly forbearance, and suffer gladly even a weariness of repetition, for their weaker brethren's sake. To all, however, even the most accomplished of students, there are opportunities for enlarging the boundaries of a knowledge which can never be too wide; there are means of making yourselves practically acquainted with various instruments, such as the ophthalmoscope, laryngoscope, sphygmograph, etc., which there is not always time during the studies in the civil schools for all to familiarise themselves with; there are opportunities for operation on the dead subject, which, in your capacities as surgeons of the public service, cannot be too frequently embraced; there are microscopes always at your disposal for any researches you choose to take up, and a chemical laboratory always open, to which we will gladly welcome you at any hour—from morn to dewy eve. We are glad to think that the impetus given here to original study and research has already borne good fruit, and that many of our former pupils are now prosecuting inquiries in different parts of the world—inquiries which have already brought forth important results, and which give even greater promise of future productiveness. A certain stimulus is also given here to emulation, by the influence which the final examinations have in determining the place of a candidate on the general list, and by the record of our most successful competitors we keep here on our walls. Hitherto our Indian friends have had a monopoly of the first honours, the highest place having been invariably adjudged to one of their number when any candidates for that service have been at the school. I trust, however, it will be not long before a generous rivalry will enable one or other of the sister services to wrest the laurel from them. We have this year no candidates for the home army, and therefore the brunt of the battle must fall upon the navy, and our only wish is that the struggle may be a tough one, and that the best man may win. As regards the Herbert Prize, which has been for some years back awarded to the first man on the list of the military candidates, it was the wish of the Senate that it should be open to the naval service as well. It seems, however, that the terms of the original trust are considered by the legal advisers of the War Office to refer only to the military services, and thus, for the present at least, to exclude the naval.*

In looking, gentlemen, at the career you have chosen for yourselves, a number of considerations present themselves, whether we view the profession of medicine as a whole or those particular branches of it to which you have signified your intention to devote yourselves, namely, the different services of the Crown. As regards the former, the selection of the profession itself, that is a point which your positions as already qualified practitioners show has been maturely weighed and decided upon, and which must now, in all but a few instances, determine your future lives. It, therefore, calls for but little remark of any but a general kind, yet I cannot help honestly congratulating you on the choice that you have made. Honourable as other professions may be, and more *honoured* as they certainly *are* in this world, there is none that I myself would have willingly embraced in preference; nay, more, I may state my belief, that there is none in which a man may, if he so wills it, keep his vessel of honour in more, I had almost said in as, unsullied purity. As long as ignorance prevails among the multitude, impostors will thrive and quacks grow fat upon its foolishness; but as long as we honestly work, taking scientific truth for our foundation, they need not vex our souls, and we may suffer fools gladly, seeing that we have at least the wisdom of patience and reverence for the truth.

As regards, however, your future position as officers of the public services, a good deal more may be said, as from this day forth you enter upon a new career and undertake duties which differ considerably, at least in form, from those which you have hitherto discharged. Your choice in this point also is, to a certain extent, a matter for congratulation. It is true that you cannot look forward to the high emoluments of successful civil practice; but it is to be remembered that such are only the prizes of the few, whilst, on the other hand, you will be spared much of the drudgery, anxiety, and uncertainty, not to mention the many annoyances and even humiliations, which too often fall to the lot of our hard-working and deserving brethren in general practice. The comforts of a fixed home can only be partially enjoyed by you, but after all the home is less the place than those who fill it, whilst the opportunities afforded to you of seeing men and countries are the fulfilment of what are merely the wild and unattainable dreams of the toiling worker at home. Indeed, many have been induced to enter the public

* This difficulty has since been removed; and the Herbert Prize is now open to all candidates, naval included, attending the school.

service, particularly that of the navy, attracted by those very advantages of travel and scientific research which it procures. For my own part, however, my congratulations to those about to enter the navy must savour a little of hypocrisy, as I am one of those unfortunate individuals to whom a ship is simply poison, and I doubt if any amount of apprenticeship would have ever enabled me to overcome the inconveniences attending the perpetual search after my centre of gravity. This, however, is but a question of idiosyncrasy; and, fortunately for our country, not general, and, setting such individual inconveniences aside, we may say that the public service, both afloat and ashore, opens up a large field of inquiry both in professional matters and in the collateral sciences. It is to the medical officers of the army and navy that the solution and elucidation of some of the most important questions have been due, and in certain directions the opportunities enjoyed by them are unrivalled, dealing as they do with a body of men under more or less constant observation and control, whose histories, medical and otherwise, are known and can be traced through a considerable period. In this way it is possible to watch the effects of a special line of treatment and its results in a more complete manner than often falls to the lot of a civilian. Thus, to the medical officers of the navy is due the successful treatment of scurvy, which was formerly such a deadly foe to our sailors, and which unfortunately from time to time makes its appearance again wherever those wise principles laid down a century ago are neglected. To the medical officers of the army again we owe some of the severest blows given to the reckless antiphlogistic treatment once so general, and to them is due still more the final defeat of the even more reckless mercurialism which so long shattered the frames of its unfortunate victims.

In later times the responsibility for the health of a large body of men gave an impetus to the study of the laws of health; and the first course of hygiene proper ever delivered in this country was that begun in this school, and the first English work on the subject worthy of the name was the treatise by our distinguished professor, Dr. Parkes. I do not think I am claiming too much credit for the Army Medical School, when I say that the great and growing interest evinced on all sides on sanitary matters, and the foundation of chairs and lectureships on hygiene, have been largely due to the teaching given here, and to the way in which the efforts made to improve the health of both the army and the navy have awakened the attention of the public. It is true that we are still merely at the beginning of the matter; but a thing begun is half ended, and merely to have, we may say, codified the rules of health, which were previously scattered vaguely over medical minds and medical books, is of itself a great work; it furnishes a framework which may not, perhaps, be of itself eternal, but which may at least usefully support the rising edifice till increased knowledge and more exact science shall have filled up the weak places in the structure. The startling facts, first, that the mortality in the army, both at home and abroad, had been reduced by fully one-half in the short space of ten years; and, second, that there die in these islands at least 150,000 persons yearly from preventable diseases, have combined to strike even the Philistine mind that a great national crime was being committed so long as means were not taken to ascertain the causes of those diseases; and that, as Lord Palmerston wisely said, no amount of days of humiliation and prayer would avail unless our filthy alleys and noisome dens were first cleansed, and those causes, as far as we can find them out, swept away. We are now beginning to see the result in the appointment all over the country of sanitary officers, whose special duty it will be to trace out the causes of preventable disease as completely as possible, and call upon the proper authorities to effect their removal. It is quite true that the measures are as yet very crude, and that in many cases the practical working of the system has been rendered useless by the perverseness of the Philistine mind already referred to; but this we may consider as merely one of the phases through which every great movement has to go before its value can be sufficiently brought home to the average intellect. Much of it is due to the great ignorance of the class from which the local authorities are necessarily drawn—an ignorance, however, which is, we trust, becoming daily less, and will in due time so far cease out of the land as to let the imperative necessities of health be known, and even its money value appreciated, if no higher motive can be found to force its principles home.

Seeing, then, that the medical departments of the public services have exercised so powerful an influence on the community at large, it behoves us to consider well our position and its responsibilities. That the influence must be considerable is evident, if we take the mere numbers alone. The British and Indian armies and the Royal Navy do not muster fewer than 2,500 medical officers; and the work done by such a body must be powerful for good or evil, both in the country which they are serving and in every other land in due proportion. The importance of this position has, however, hardly been as yet sufficiently estimated, for various reasons. In the first place, it is only lately that anything like

a true bond of union has been formed between the three services; and we hope that the fact of the candidates for those services having sat on the same benches here, studied the same subjects, and striven with each other in friendly rivalry, may have a great influence in this direction, not to mention the more intimate social relations and friendships formed by living together at the same mess, and uniting in field-sports and other means of relaxation in their leisure hours. Another cause which has operated to diminish the influence that otherwise might have been exercised, has been the regimental system in the army; not that I desire to pronounce any sweeping condemnation of that system, which has many advantages, and has been productive of much good. I spent a number of years myself as assistant-surgeon in one of the most distinguished regiments in the service, and can look back upon the time spent there with happiness and pleasure, and I feel sure that the vast majority of men can speak of their old corps in similar terms. But the danger of the system seemed to me always to be, that the medical officer was liable to identify himself more with the regiment he served in than with the department to which he primarily belonged. This was simply reversing what ought to have been. He ought before all things to feel that he belongs first and foremost to the medical department of the service, and that his connection with the special corps he serves with is temporary and accidental. There was hardly the same source of danger in the navy, from the different arrangements prevailing; a ship's company not being so separately defined a body, except during its actual commission, as a regiment, whilst the fact of the uniform remaining the same throughout was a continual reminder of the unity of the department. But in the army, where the medical officer wore the uniform of his corps, he was, I am afraid, apt to forget that the gay jacket of the Hussar or the elegant costume of the Rifleman was a mere accident of position, and noway an essential quality of his real status. In this way there was a want of unity as a medical body, and on this account we may so far welcome the recently published Royal Warrant, in that it shadows forth the unification of the Army Medical Department, although it may otherwise fall short of what was desired or hoped. Had I been addressing candidates for the British Army Service, I should have taken this opportunity of saying a few words on the changes which the provisions of this Warrant (and the other accompanying documents) are about to usher in. For you, gentlemen, these can, however, have only an indirect interest, and therefore I think it unnecessary to dwell especially upon them. I would simply state my belief that the step taken is one of very great importance, and that it will ultimately lead to changes of vital nature—changes which must naturally follow the increase of influence of the Medical Department, and the slow but inevitable pressure of public opinion.

[To be concluded.]

OBSTETRIC MEMORANDA.

REPEATED ABNORMAL PRESENTATIONS.

DR. MOLONY, in the JOURNAL of April 12th, reports a case, or rather cases, of abnormal presentation of the fœtus in labour, occurring several times in the same patient, and suggests that others should communicate any similar cases with which they may have met in their practice. I attended a woman some years since, in four successive confinements. In the first she was delivered of twins, the head of the first child presenting, and the arm of the second. Turning was easily accomplished, and both children lived some time. The second labour was complicated with placental presentation, attended with hæmorrhage, but not of a very alarming character. Turning was resorted to successfully. In the next labour I found the same state of affairs, and delivered easily, in the same manner. Still more astonished was I, when, about two years afterwards, during my temporary absence from home, my assistant was sent for, and detected again the placental presentation. A messenger being despatched to meet me, I speedily was in attendance, and turned again, without any untoward symptoms. These labours occurred at nearly the full term of gestation, and were not preceded by any of the ordinary signs of placental presentation, and in fact, so easily was the placenta pushed on one side to allow the hand to pass, that I could not but entertain the idea that possibly the placenta might have been detached, and fallen over the os uteri. The woman had several children previously to my attending her, but I do not know that those labours were attended with any unusual circumstances. More recently, I have met with another patient, whose only two confinements were complicated with arm-presentations. In the first, matters had progressed so far that evisceration was necessary; and in the last, pains being very slight, delivery by turning was easily accomplished.

JOHN EWENS, L.R.C.P., Cerne Abbas.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE V.—CHRONIC BRIGHT'S DISEASE, WITH A LARDACEOUS OR WAXY KIDNEY.

General History.—*Virchow's erroneous Theory.*—*Clinical History and Symptoms.*—*Minute Anatomy and Pathology of the Kidney.*—*Its Relation to Continued and Profuse Suppuration.*—*Hypertrophy of the Heart.*—*Diagnosis.*—*Prognosis.*—*Hæmaturia in Chronic Bright's Disease.*

THERE are cases of chronic Bright's disease associated with kidneys which are usually enlarged, anæmic, pale, and wax-like; thus resembling in some respects the cases which I described to you in my last lecture. But the form of disease to which I now invite your attention has for the most part a peculiar and distinctive clinical history; and the anatomical condition of the kidney is in some respects different from that of the ordinary large white kidney.

General History.—The subjects of this form of disease have usually been strumous or otherwise cachectic before the onset of the renal degeneration. In some cases, there has been strumous disease of a joint or of one or more bones, with long continued suppuration; in others, there are the symptoms of phthisis. In a large proportion of cases, there is a history of constitutional syphilis, with resulting cachexia. In some cases cancer, in others dysentery, in others habitual intemperance, in others, again, long continued albuminuria following upon acute Bright's disease, has led to the cachexia out of which this form of renal disease has sprung. One of the earliest symptoms of the disease is a copious flow of urine, at first perhaps not albuminous, but subsequently more or less impregnated with albumen. Another common symptom is profuse and obstinate diarrhoea. Dropsy, more or less general, usually occurs; but it is not so constant or so prominent a symptom as in the class of cases which I described in my last lecture as sequelæ of acute Bright's disease. When at length the patient dies, sometimes from uræmia, but more frequently from exhaustion, the kidneys are found in a state which has been called "lardaceous" or "waxy degeneration". The gland is usually enlarged, sometimes very much so. In one of my own cases, the two kidneys weighed twenty-eight ounces. Dr. Dickinson in one case found their combined weight thirty-three ounces. The surface of the kidney is smooth and pale; the texture of the anæmic and thickened cortex is firm, and has the semi-translucent appearance of white bees-wax; while the cones retain their normal colour, vascularity, and size. The cut surface presents numerous glistening points, due to the altered Malpighian capillaries. In some cases, minute yellow fat-granulations are scattered through the cortex. This is the large smooth lardaceous kidney; and one of its most remarkable and distinctive features is, that in the majority of cases it is associated with an analogous condition of the liver or spleen, or of both. In a certain proportion of cases, a stage of atrophy follows upon that of enlargement; the cortical substance wastes, and coarse granulations appear on the surface. This is the "contracted" or "granular lardaceous kidney". Such a kidney is represented in Figs. 1 and 2 of Dr. Bright's third Plate. It is remarkable that Dr. Bright's plates contain no illustration of the small red granular kidney, whose history I gave you in my third lecture.

Before entering upon a minute description of the kidneys, it will be well to give a brief history of the disease and of the speculative doctrines to which it has given rise. Virchow is the author of two theories regarding this disease. The one theory is, that the blood-vessels are the primary seat of the degenerative changes; and the other is, that the morbid deposit is of the nature of starch or vegetable cellulose; and he therefore calls the disease "amyloid degeneration". I shall presently show you that the first theory is erroneous; and the second is now universally admitted to be so. The term "amyloid" was suggested by a supposed chemical resemblance between the morbid deposit and vegetable cellulose or starch, as shown by the staining with a solution of iodine; but careful analyses by various competent chemists have shown that the material has essentially the same compo-

sition as the protein compounds, and that it is of an albuminous or fibrinous nature.

It is very desirable that the term amyloid, which is based upon an erroneous chemical theory, should be discontinued; and that the term "lardaceous", recommended by a Committee of the Pathological Society (vol. xxii, p. 2), should be adopted. The term lardaceous means no more than that the disease has the appearance of bacon fat (*lardum*, the fat of bacon); as the term "waxy" is based upon its resemblance to wax. These names, thus understood, imply no theory as to the composition of the morbid product, and are, therefore, not misleading, as the term amyloid unquestionably is.

Clinical History and Symptoms.—The clinical history of this disease has been carefully investigated; and we are indebted to Dr. Grainger Stewart for insisting upon the fact that a copious flow of urine, of pale colour and of low specific gravity, is one of the earliest and most constant symptoms of this form of degeneration. The urine at first may contain no albumen; but gradually it becomes albuminous, and often copiously albuminous. When a patient, whose strength has been reduced by a protracted and exhausting disease, begins to pass urine in large amount and of low density, so that his nights are disturbed by frequent calls to empty the bladder and to quench his thirst, we may anticipate that his kidneys are about to undergo the degenerative changes which we are now discussing. In the absence of sugar and albumen, it may for a time be a question whether the disease is diabetes insipidus. The appearance of albumen points at once to renal degeneration. The amount of urine secreted daily usually ranges from 50 to 100 ounces or more. The colour is pale, and the specific gravity varies from 1005 to 1015. The urine may be clear, and deposit no sediment; so that for days and even weeks together no tube-casts are visible; and, in the earlier stages of the disease, tube-casts are never numerous. In most cases, however, a light cloud collects at the bottom of the conical glass; and in this cloud we find some small hyaline casts, some casts finely granular, and occasionally some hyaline casts containing oil either in scattered globules or in cells. In the advanced stage of the disease, when atrophy and contraction of the kidney are in progress, the sediment in the urine may be copious and dense; and it will be found to contain numerous large-sized granular and hyaline casts, exactly similar to those which I described as occurring when the large white kidney has reached the third stage, and is undergoing atrophy and contraction (see *ante*, Figs. 25, 26, and 27). As the disease advances, the patient's weakness increases; his breath is short on exertion; his countenance is pallid or sallow; the feet, ankles, and legs become œdematous. In many cases, the liver and the spleen are seen and felt to be more or less enlarged; and the abdomen is sometimes much distended by fluid. The disease often has a very chronic course, extending over a period of many months or even years. There may sometimes be a temporary amendment; but in the majority of cases the symptoms gradually become worse, until at length the patient sinks, either from the direct effects of the renal disease, or from one or other of the associated maladies. The immediate cause of death may be dropsical effusion within the chest, in the pleura or pericardium, or in both. In other cases, the patient dies exhausted by diarrhoea, with or without vomiting—the result, probably, of blood-deterioration and the elimination of morbid materials through the mucous membrane of the alimentary canal. In some instances, the immediate cause of death is an attack of convulsions or coma. Cerebral symptoms of uræmic origin are, however, less frequent results of this than of other forms of chronic Bright's disease. The retina is rarely if ever affected. Inflammatory complications are of common occurrence. Of these, pneumonia is the most frequent; next to this, inflammation of the serous membranes, especially of the pleura. The pericardium and the peritoneum are more rarely the seat of inflammation.

In many cases, death results, not from the direct consequences of the renal degeneration, but from some associated constitutional disease or cachexia. Thus phthisis, or protracted suppuration, with or without disease of the bones or joints, or some form of constitutional syphilis, may be the immediate cause of death.

In the advanced stages of the disease, there is extreme anæmia and pallor of the skin; the blood contains much less than its due proportion of hæmoglobin and albumen, and in some cases an excess of urea.

Hæmorrhage from one or more mucous membranes, more especially from that of the nose, is an occasional occurrence in the advanced stages of the disease.

The Minute Anatomy and Pathology of the Lardaceous Kidney.—Most recent writers on renal pathology accept Virchow's theoretical interpretation of this disease, and assume that the first pathological change consists in thickening and degeneration of the walls of the minute arteries and Malpighian capillaries. In consequence of this degene-

ration, we are told, albuminous and fibrinous materials transude through the walls of the vessels, and infiltrate the tissues of the kidney; and this is supposed to explain the structural changes in the gland. It has also been suggested that the copious secretion of urine in the early stage of the disease is a result and an indication of paralysis and dilatation of the minute renal arteries, consequent on degeneration of their walls. I find this theory inconsistent with anatomical facts, and therefore I reject it entirely. For a number of years I have most carefully studied the condition of the renal blood-vessels in all forms and stages of Bright's disease. My discovery of hypertrophy of the muscular walls of the arteries was published in the year 1850 (*Med.-Chir. Trans.*, vol. xxxiii), some years before the publication of Virchow's theory of amyloid degeneration. I soon learnt to distinguish muscular hypertrophy from lardaceous and fatty degeneration of the arterial walls; and I have carefully noted the microscopic appearances in a large number of diseased kidneys. The result is that, while I have not met with a single case in which thickening of the renal blood-vessels in any form was unassociated with extensive changes in the secreting tissue of the kidney, I have examined many kidneys in an advanced stage of lardaceous disease with only incipient degeneration of the blood-vessels. For example, I have before referred to one case in which the two kidneys weighed twenty-eight ounces. The patient at the time of his death was twenty-one years of age. Since the age of three, he had suffered from disease of the hip, with purulent discharge from several openings about the joint. For ten or eleven years there had been more or less dropsy, and for several months the dropsy had been general. The clinical history, the character of the urine, and the appearance of the kidneys, were those of a typical case of lardaceous degeneration of the kidney; yet the Malpighian capillaries and the arteries in these greatly enlarged, pale, and wax-like kidney, after the long duration of the symptoms, were only moderately thickened. The gland had increased to nearly three times its normal weight, while the vascular changes were in an incipient stage. The increased size of the gland was not such as could be explained by a mere infiltration of fibrinous material; but the enlargement was the result mainly of an actual hypertrophy of the glandular tissue, precisely similar to that which I described in my last lecture as occurring in cases of the large white kidney. Most of the tubes were enlarged, and their epithelium was opaque from "cloudy swelling". In some, the cells were in a state of fatty degeneration; and some tubes contained fibrinous coagula precisely similar to the large hyaline casts which had appeared in the urine during life. In some cases, more especially when the disease has gone on into the stage of atrophy and contraction, the gland-cells have undergone more general and extensive degeneration. Numerous small yellow spots visible by the naked eye, when present, indicate the situation of tubes whose contents have undergone fatty degeneration (see *ante*, Fig. 18); while other tubes were filled with unorganised fibrine, which may sometimes be squeezed out of them in the form of large hyaline casts. The basement-membrane, both in the cortex and in the cones, sometimes appears thickened and hyaline; and occasionally the tubular structure is rendered indistinct by an unorganised intertubular effusion. The Malpighian capillaries are thickened, opaque, glistening, and wax-like. (Fig. 30.) Some of the afferent arteries appear



Fig. 30.—Malpighian Capillaries, with Opaque Glistening Wax-like Walls. The Capsule somewhat thickened.— $\times 200$.

quite normal, others thickened by muscular hypertrophy; but the greater number appear thick, more or less homogeneous, and wax-like; their muscular structure being concealed apparently by an interstitial fibrinous infiltration. (See Fig. 31.) The straight arteries in the

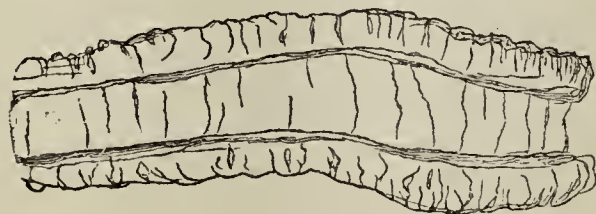


Fig. 31.—Lardaceous Infiltration of its Walls.— $\times 200$.

Cones sometimes present the same appearance of wax-like degeneration. If we now add to the specimen a drop or two of diluted liquor potassæ (one part of solution of potash in ten of water), the walls of the waxy vessels are rendered transparent; so that the red blood-corpuscles become visible through the thickened Malpighian capillaries, and the muscular fibres of the minute arteries are rendered quite distinct. The weak alkali has a solvent action upon the infiltrated fibrinous material, and thus to some extent brings into view the normal structure of the arterial walls. The canals of the afferent arteries may sometimes be seen irregularly dilated. In some of the arterial canals, a collection of oil-globules shows that the circulation has ceased some time before death. (Fig. 32.) Oil-globules may often be seen in the canals and in the



Fig. 32.—An Artery, with Lardaceous Infiltration of its Walls and collections of Oil-globules in the Canal, which is somewhat irregularly dilated.— $\times 200$.

walls of the Malpighian capillaries—less frequently within the intertubular capillaries. I have never seen thickening of the walls of the intertubular capillaries. Thickening of the basement-membrane often gives an appearance of intertubular thickening. When fatty granulations are visible to the naked eye, their microscopic appearances are identical with those which I have before described in the granular fat kidney.

In my last lecture, I told you that the Malpighian capillaries and the walls of the minute arteries in some large white kidneys are thickened, homogeneous, and wax-like. The vessels in these cases have undergone precisely the same change as those in the lardaceous kidney. In fact, the large white kidney, which is found associated with chronic albuminuria following upon acute Bright's disease, and the lardaceous kidney, which occurs in connexion with chronic cachexia, have many points of contact and relationship; and the two forms of disease merge into each other by imperceptible gradations. Chronic albuminuria is generally admitted to be one of the causes of lardaceous degeneration of the kidney.

All writers on the lardaceous kidney agree in stating that the primary cause of the renal degeneration is a morbid condition of the blood. In this opinion I concur; and I believe that some morbid material in the blood, acting upon the secreting tissues of the kidney, is the cause of the copious secretion of urine in the earlier stages of the disease, and of the glandular hypertrophy which gradually supervenes during the progress of the malady. It is probable that the unknown morbid material in the blood has a diuretic influence upon the kidney, analogous to that which grape-sugar is known to have in cases of saccharine diabetes. We do not attempt to explain the diabetic urinary flux by the anatomical condition of the kidney; neither can we thus explain the copious secretion of urine which precedes lardaceous degeneration. I say *precedes* the degeneration; for my observations have convinced me that, while in the earlier stages of the disease the arterial walls are quite normal, at a later period they may become hypertrophied; and later still, either with or without previous hypertrophy, they become infiltrated with fibrinous material, and assume the homogeneous waxy appearance. The Malpighian capillaries in every case of albuminuria have a more or less abnormal appearance. I told you in my second lecture that, after death from acute Bright's disease, the walls of the Malpighian capillaries are opaque and granular. In all cases of chronic albuminuria, the same capillaries are thickened; and, when the transudation of albumen has been copious and long continued, the capillary walls always assume an opaque, glistening, wax-like appearance. The state of the Malpighian capillaries in the large white kidney is not distinguishable from that of the same vessels in the lardaceous kidney, either by microscopic examination or by any chemical test with which I am acquainted. The test which is usually applied is a weak solution of iodine. The thickened arteries and Malpighian capillaries take the reddish-brown stain much more deeply than the other tissues; and the stained vessels consequently stand out in strong contrast with the pale, waxy, glandular structure. This iodine test, applied to the large white smooth kidney, often stains the vessels as

deeply as when applied to the lardaceous kidney, and thus affords additional evidence of the close relationship between the two forms of disease. I cannot but think that too much importance has been attached to the iodine test, while too little attention has been given to the minute structural changes in the kidney and their physiological interpretation.

Dr. Dickinson attributes so much influence to *suppuration* as causative of lardaceous degeneration, that he proposes to call the disease "depurative", using the word in a sense different from that in which it is commonly understood. Analyses of the morbid material, especially in the liver, have led him to the conclusion that it consists of partially dealkalised fibrine. He supposes that copious suppuration, by lessening the albumen and alkalies in the blood, causes a deposit of dealkalised fibrine in various tissues and organs. It seems not improbable that the diminished alkaliescence of the waxy liver may be explained by the comparatively small proportion of alkaline blood which it contains. The liver-cells are infiltrated with, and in part replaced by, fibrinous material; while the vessels are compressed and anæmic. There is no apparent difference between the fibrinous exudation within the tubes of a lardaceous kidney and that which is found in the tubes of a large white kidney, the result of acute Bright's disease passing into a chronic form. Our knowledge of animal chemistry is as yet too elementary to enable us to give a chemical explanation of pathological changes so complex as those which we are now discussing; and, although the lardaceous disease is very frequently associated with suppuration, yet this is far from being constant. The renal degeneration occurs in only a small proportion of cases in which there has been profuse and protracted suppuration; and, on the other hand, the lardaceous form of renal degeneration not unfrequently occurs unassociated with a history of purulent discharges. Dr. Grainger Stewart states that in only six out of eighteen cases which he had himself carefully investigated, was there a history of suppuration. Obviously there is not that constant and close relationship between suppuration and lardaceous degeneration which justifies the application of the ambiguous term "depurative" to this form of renal disease. It is probable that the deterioration of blood which results from long continued profuse suppuration is due rather to the drain of albumen than to the loss of alkaline salts; and so it is intelligible that chronic suppuration and chronic albuminuria may bring about a similar condition of cachexia and malnutrition.

Hypertrophy of the Heart, unassociated with disease of the valves or of the large arteries, rarely occurs, except in the cases which have passed on into the stage of atrophy. The explanation which I gave in my last lecture of the comparative infrequency of hypertrophy of the left ventricle in cases of large white kidney, is applicable here also. There is more of hydræmia than of uræmia associated with the lardaceous kidney; and the minute arteries offer little or no resistance to the passage of this watery blood. In addition, we have to take into consideration the fact that the walls of the minute arteries in various tissues and organs usually undergo degenerative changes, whereby their contractile power is impaired. The degeneration of the blood-vessels is of common occurrence in the mucous membrane of the intestines, and the change is rendered conspicuous by the iodine test. The absence of abnormal contraction in the terminal arteries explains the absence of the cardiac hypertrophy which ordinarily results from long continued and excessive arterial resistance.

Diagnosis.—You will probably have inferred, from what I have said of the close relationship between the "large white kidney" and the "lardaceous kidney", that it is often difficult to distinguish one from the other, and that the distinction has but little practical value. Even when you have the diseased organ before you, you may sometimes be in doubt whether to call it simply a "large white kidney", or to designate it "lardaceous". Obviously, then, it must sometimes be impossible to make the distinction during the lifetime of the patient. When there has been a copious secretion of urine, which for a time was free from albumen, but later has become copiously albuminous; when a copious secretion of pale albuminous urine, of low specific gravity, is associated with more or less general dropsy; when these symptoms have come on gradually and insidiously in a subject who has been suffering from an exhausting disease, such as phthisis, disease of the bones or joints, or cachexia resulting from cancer or constitutional syphilis, we may expect to find lardaceous degeneration. The probability of this will be much increased, if the liver or spleen, or both these organs, be found enlarged and indurated. A lardaceous kidney may sometimes attain a sufficient size to be palpable in the lumbar region. The tube-casts, when present, are essentially the same in the two forms of disease; and in particular the large hyaline and granular casts (Figs. 26 and 27), which appear in the advanced stages of both classes of cases, announce that atrophic changes are in progress; while the

amount of sediment having these microscopic characters indicates the rate at which the destructive changes are proceeding.

Prognosis.—Although the history of this form of disease not unfrequently extends over a period of several years, as in the somewhat exceptional case to which I just now referred, yet the prognosis is, as a rule, very unfavourable—for the obvious reason, that not only is the renal disease often associated with serious structural change in other organs, but, resulting as it does from a grave constitutional cachexia, its causes are continually operating, and, as a rule, they are but little amenable to treatment. There may be occasional pauses in the progress of the disease, and even periods of temporary amendment; but the usual course of the malady is one of steady progress towards a fatal termination. The end is often hastened by an exhausting diarrhoea, by a copious dropsical or inflammatory effusion into the chest or abdomen, or by inflammation and sloughing of the dropsical legs.

Hæmaturia in Chronic Bright's Disease.—In conclusion, I wish to direct your attention to a possible source of fallacy resulting from the occasional appearance of blood-tinged urine in the advanced stage of this and of other forms of chronic Bright's disease. Dark-coloured, smoky, more or less blood-coloured urine, is of frequent occurrence in cases of acute Bright's disease; it is rare in the advanced stages of any of the three forms of chronic disease which I have described, but it does occasionally happen; and the appearance of hæmaturia might possibly mislead you in your estimate of the stage and gravity of the renal disease.

During the progress of the various forms of chronic Bright's disease, the walls of the Malpighian capillaries become thickened, and therefore probably less liable to be ruptured. In many cases, too, the muscular walls of the minute arteries are more or less hypertrophied; and the effect of this is to lessen the pressure upon the Malpighian capillaries and the risk of their rupture. This appears to be the explanation of the undoubted fact that the pale urine of low specific gravity which is secreted by kidneys in an advanced stage of degeneration, is rarely tinged with blood. This rule, however, is not without exceptions. In the advanced stage of all forms of chronic Bright's disease, the blood becomes much deteriorated—partly, as we have seen, by the loss of its normal constituents; partly by the retention of urinary excreta. In some tissues, too, the minute arteries and capillaries may undergo degenerative changes which increase their liability to rupture. There is consequently a tendency to hæmorrhage from various mucous surfaces—from the nose, the lungs, the stomach and intestines, from the uterus, and sometimes from the mucous membrane of the bladder and the pelvis of the kidney. Hæmorrhage from the bladder, or from the pelvis of the kidney, may give the urine the dark colour and the blood-tinged appearance which it often has in cases of acute Bright's disease, when blood escapes from the substance of the kidney. You may come to a right judgment in these cases by a careful consideration of the past history, together with a close inspection of the urine. You will probably find that there are no blood-casts of the tubes, as there usually are when the substance of the kidney is the source of the bleeding. You may find some of those forms of tube-cast which point to the existence of chronic rather than recent acute disease: for instance, oily casts or large granular and large hyaline casts (Figs. 25, 26, and 27). You may also find that the urine, when, after standing for a time, it has deposited the blood, presents the pale colour which is indicative of chronic disease in an advanced stage. Many years ago, my friend Mr. James Salter sent me the notes of a case of *purpura* in which there had been profuse hæmaturia. The kidneys had been the seat of chronic Bright's disease; they were enlarged, anæmic, and had some cysts on their surface. The mucous membrane of the calyces, infundibula, and pelvis, was intensely congested, and chocolate-coloured with ecchymosis. There was a striking contrast and a sharp line of demarcation between the pale mamillæ and the dark ecchymosed calyces. It is probable that the absence of hæmorrhage into the substance of the kidney was due to the fact that the walls of the minute arteries and those of the Malpighian capillaries had become thickened during the progress of the chronic degeneration of the kidney which had long preceded the appearance of the purpura. This case affords a good illustration of the fact that hæmaturia, the result of blood-deterioration, may have its source in the pelvis, and not in the substance of the kidney. A microscopic examination of this patient's urine had discovered no tube-casts. None of the blood had been moulded within the uriniferous tubes, because none had escaped from the Malpighian capillaries.

LORD HENRY SEYMOUR'S BEQUEST.—At the Rolls Chambers, on the 1st instant, a further sum of £83, to be paid to eighty-three London charities, making altogether £665 to each, or more than £56,000 out of the estate, was ordered.

ABSTRACT OF A CLINICAL LECTURE

ON

THE TREATMENT OF PSOAS AND OTHER LARGE ABSCESES.

*Delivered at St. Thomas's Hospital, London.*By JOHN SIMON, Esq., F.R.S.,
Surgeon to the Hospital.

IN reference to several cases of large chronic abscesses under his care Mr. Simon remarked, that the only real difference between psoas and most other abscesses due to diseased bone was, that its cause was deep within the body. If the diseased bone could be removed, the abscess would heal; but the bodies of the vertebræ were out of reach: the surgeon could only mitigate the symptoms, and leave the rest to nature. If the disease were only caries, a cure might result, with more or less angular curvature of the spine; but if necrosis were present there was no chance of a cure, the dead bone was not absorbed, its presence kept up a constant purulent discharge, and this led to anæmia, to albuminoid disease of the liver and kidneys, and finally to death from hectic and exhaustion.

In all these cases of chronic suppuration, the amount of constitutional and visceral damage is closely proportioned to the amount of the discharge: the amount of the discharge is proportionate to the extent of the abscess-cavity, and this depends, to a great extent, on the time it is suffered to extend. The great point in the treatment of these cases is, as far as possible, to prevent the formation of a large pus-secreting cavity. If, therefore, there be any suspicion of the existence of deep suppuration, keep a sharp look out, and open the abscess as soon as you can detect fluctuation, unless the proximity of large vessels, or of other important structures, affords strong reasons for delay.

In situations where the progress of the disease can be watched, as, for example, in abscess of the knee-joint, the difference in the result, according to whether you let out the matter early or not, is very great. If the pus be soon evacuated, there is a fair chance of saving the limb, and even of regaining some motion in the joint; but if the incision be postponed, the joint soon becomes utterly disorganised, burrowing sinuses form, and the neighbouring soft parts become deteriorated by infiltration.

There is, however, this serious difficulty in opening a psoas abscess. Perhaps it forms a large bulging tumour in the groin, yet the patient is fairly well; you cut into it, he at once becomes feverish, and in a fortnight is *in extremis*; then an ignorant person may reproach you with killing the patient. But, however well and strong the patient may appear, it is certain that this febrile condition will supervene sooner or later. It is inevitable. The longer it is postponed the worse it will be, since the cavity of the abscess will be larger. Be careful, then, always to explain to the friends of the patient, that the operation is a serious one, but that the consequence will be more serious the longer it is delayed. The severity of the consequent fever may, however, be greatly mitigated by treatment. Ten days ago, I opened a large dorsal abscess in a little girl, now under my care. I made a free incision, a very large quantity of thick pus escaped, and air was not excluded, yet the child has hitherto had no fever, and appears quite comfortable. All this time the cavity of the abscess is shrinking; and if the fever should now appear, it would be far less severe than it would have been had it occurred immediately after the operation. I owe this satisfactory state of things to the local application of cold; directly the pus was evacuated, an ice-bag was applied, and has been continued since. I have succeeded equally well in a large number of similar cases, and I can confidently recommend ice as an incomparable antiphlogistic.

Of course, if necrosed bone be present, the abscess will not entirely close; a mere sinus will, however, be left, which will not drain the patient to any considerable extent.

As I have said, I do not take extreme precautions to exclude air. At present I am inclined to reserve my judgment as to the value of the carbolic acid treatment, or at least as to the theory on which it is based; it is not yet proved that bacteria are the cause of unhealthy inflammation. Certainly air, as air, does not cause inflammation; and emptying an abscess by aspiration does not prevent the inflammatory process in its cavity. Recent experiments do, however, show that bacteria pass very readily in water, and attached to moist things; and common experience teaches us that infection is much more likely to be carried by sponges and surgical instruments than by mere air. From my own experience, I do not think that air, if only ordinarily pure and dry, is such a poison to surgical wounds as some assert; but, whatever your theory may be,

always carefully disinfect all surgical instruments, etc., with boiling water.

Finally, I must qualify my advice with a caution: remember that fluctuation is not always due to pus. Open early all acute or chronic abscesses, but never cut into collections of blood or synovia. A bruise, in ill-conditioned subjects, may be followed by extensive extravasation of blood, causing a fluctuating tumour, which, if deep in the limb, might easily be mistaken for an abscess. If these extravasations be let alone, and treated with cold applications, they disappear, though they may take a long time about it; but an incision into one is generally followed by grave constitutional symptoms. If well-marked signs of inflammation appear, you must treat the swelling as an abscess; otherwise never open one.

When you are dealing with chronic suppuration, always look out for the chronic cause. The tendency of inflammation is to subside, unless there be a stimulus of some sort present. A man was admitted here some time ago, with a deep wound in the gluteal region, caused by falling on a spike; the wound did not heal, and after some weeks, on careful examination, a piece of his trouser was detected at the bottom. So, again, there is a boy with disease of the knee-joint, in my ward, whose leg has been saved entirely by attention to position. By extension of the limb, and pushing back the femur, we have greatly reduced the inflammation; and whereas the child was before rapidly becoming worse, he is now as rapidly mending. Always treat such displacements in young subjects early and carefully; mere dislocation of the parts will keep up irritation and suppuration, without the presence of any dead bone.

ON THYROTOMY.

By T. HOLMES, M.A., F.R.C.S.,

Surgeon to St. George's Hospital; Professor of Surgery in the Royal College of Surgeons of England, etc.

I HAVE read with much interest Dr. Morell Mackenzie's paper on Thyrotomy. My personal experience of this operation has been at present limited to the single case which I have reported, and on which Dr. Mackenzie makes some observations. There is, I think, much that is just in those observations. But, as I have very recently had the opportunity of seeing the patient (now a young woman), I can rectify some errors in Dr. Mackenzie's view of the case, which were, in great part, caused by its being necessarily reported in a rather imperfect stage, as I had temporarily lost sight of her in her childhood. Let me, in the first place, notice the remark that Dr. Mackenzie makes on my account of the bleeding during the operation. I thought it desirable to state that the parts over the larynx were vascular, and that the division of the cartilage was followed by very free bleeding, in order that any surgeon who might undertake the operation from my description might be prepared for bleeding, which, if he were not so prepared, might be dangerous. I had no intention of saying that, under the circumstances and with the excellent assistance which I had (from my friend Mr. Pick), there was anything alarming in the hæmorrhage during this operation. A tube being placed in the lower part of the wound, and the bleeding being kept under for a few minutes by the pressure of a sponge, no further trouble was experienced. Again, although the patient was not able at first to dispense with the tube, she has now been without it for several months, and I have lately performed an operation for closing the fistula left after its removal. There is no recurrence of the disease whatever, and, but for the loss of voice, she is perfectly well.

But now I come to the essential point, on which I am constrained to accept Dr. Mackenzie's criticism—viz., that it would have been better not to perform this operation at all. When the patient was first under my care, she was only a child aged 9; and, although exceedingly patient and tractable, willing to give all possible assistance in laryngoscopy to an extent very unusual with children; yet the parts about the fauces were so small, and when touched by the laryngeal mirror poured forth such abundant secretion, that none of those who examined her (among whom was Professor Czermak) could bring the larynx into view. The symptoms, however, left me in little doubt that there was a growth in the immediate neighbourhood of the vocal cords; and I hoped, by removing this growth, to be able to dispense with the tracheal tube, and restore the child at once to the power of speech. In this I was disappointed; and the result abundantly proves, as Dr. Mackenzie says, that it would have been better for her if I had abstained. Laryngoscopic examination is now easy, and shows that the true vocal cord on the side operated upon is somewhat distorted, so that the glottis cannot close. If the child had been left to wear the tube, without further interference, after the operation undertaken to relieve the spasmodic dyspnoea, until laryngoscopic examination had become possible,

the removal of the tumour would probably have been easily effected from the mouth, and with much less danger both to life and to voice. I may add that I took all possible care to avoid any interference with the tissue of the true vocal cord in the operation. In fact, the tumour was attached, not to the true, but to the false vocal cord. The distortion of the cord is, I suspect, the result of the cicatrization which followed on the removal of the tumour. If it is objected that the same cicatrization might have followed after removal by the laryngeal *écraseur*, I would reply that I think this is less likely, from the very circumstance that the base of the tumour would probably have been less easy to reach. In my zeal to extirpate the disease, after having removed the chief mass, I cut away another portion which still projected. If I ever repeat the operation, I would not do this. The stalks of these polypi, like those of uterine polypi, may doubtless be safely left to wither away, after the portion which produces symptoms has been removed. With this precaution, possibly the mere removal of the polypus from the larynx may not involve more danger to the voice in the one method than in the other. But surely the division of the whole larynx, from top to bottom, cannot be effected without risk to the integrity of its mechanism. If there is no risk that some unlucky deviation of the knife may injure the cords mechanically, is there no risk that their structure or muscular mechanism may be injured by the resulting inflammation and cicatrization? I can hardly bring myself to believe this.

As to the danger to life, I will not interfere in the controversy between Dr. Mackenzie and Mr. Durham on this head, as judged by the results of practice hitherto. But, I think, no one can witness the operation without admitting that it is a very serious surgical proceeding, and that it ought to be reserved for cases of proved necessity. If I offended against this rule in the case under consideration, I can only plead want of experience. In another case I would follow Dr. Mackenzie's advice—viz., to leave the tube in until a full view of the larynx can be obtained, and I would only perform thyrotomy after the failure of a properly conducted attempt at removal by the mouth. The use of a tracheal cannula for a few years does not interpose any serious obstacle to the closure of the wound after its removal, and would not prevent the complete restoration of the voice, while any injury done to the vocal cord must render this latter result hopeless.

I am surprised to hear from Dr. Mackenzie that the view obtained of the larynx on division of the thyroid cartilage is not ample, and that the opening resulting from the wound is smaller than that of the glottis. I have made no experiments on this head; but anyone could easily satisfy himself of the accuracy of this assertion, by a few observations on the dead subject. In my case (having carefully extended my incision fairly into the thyro-hyoid membrane), I obtained a most ample view of the interior of the larynx by a far larger opening, as it seemed to us at the time, than the glottis. Perhaps this may differ at different periods of life, and in different conditions of the cartilages.

ON THE ANATOMICAL INVESTIGATION OF EPILEPSY AND EPILEPTIFORM CONVULSIONS.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P.,

Physician to the Hospital for the Epileptic and Paralysed, and to the London Hospital; etc.

IN his valuable paper in the JOURNAL of April 26th, p. 457, Dr. Ferrier has drawn attention to some investigations* I have made concerning the bearing of cases of convulsion on the localisation of movements in the cerebral hemispheres. It is very satisfactory to me to find that the results he has obtained from the new method of investigation—the artificial rousing up of the functions of particular parts of the encephalon in lower animals by direct faradisation—agree with the general conclusions I have come to from observing cases of paralysis, convulsion, chorea, etc., in man. The importance of his novel facts, and those of Fritsch and Hitzig to which he refers, for anatomy and physiology, is obviously exceedingly great. But for what is called the *pathology* of convulsions in man, they have a remarkable value.

What is above called pathology, would, however, be more conveniently named anatomy or physiology. Such convulsions, as I shall mention later in this article, are really experiments on parts of the human brain analogous to those Ferrier has made on the brains of dogs, cats, and rabbits—they are experiments made by disease. Indeed, very much of our clinical work is a study of quasi-anatomical and physiological experiments. For example, a large part of our investigations into cases of hemiplegia, convulsion, chorea, etc., is so. I think

it is important to bear in mind that much of our clinical study of disease is *not* pathology; from not doing so, our notions on the "causes" of epilepsy, chorea, etc., are confused. Thus the word "cause" is used by medical men in different senses. It is used for the seat of a lesion, as when it is said that "hemiplegia is caused by disease of the corpus striatum;" for the functional nature of the lesion, as when it is said that "epilepsy is caused by increased excitability of the medulla oblongata;" and for the pathological process when it is asserted that "loss of speech is caused by local softening." But, strictly, the *three* lines of inquiry should be pursued; the causation is to be studied triply in *each* case of nervous disease. It is an Anatomical inquiry to seek the Organ or part damaged (the seat of disease, the Localisation as it is more technically called). It is a Physiological inquiry to search into the defective working of the nervous tissue of the organ damaged—the Functional affection. It is a Pathological inquiry to trace the processes by which the Nutrition of nervous tissue is altered. (Strictly, I suppose, we should speak of pathological anatomy, pathological physiology, and pathological nutrition?) Reversing the order, and putting these three things in the most abstract form, there are abnormalities in the absorption, in the expenditure, and in the distribution of force.

In the study of epilepsy and of epileptiform seizures, it is of very great importance to keep these several lines of investigation distinct; often it is not possible. The importance of doing so is that we shall more easily trace the fundamental resemblances of different symptoms in spite of their superficial differences. For example, a convulsion affecting one side, hemiplegia and hemichorea are alike in that the same muscles are affected, and, therefore, inferentially alike in that the same internal region is damaged; again a convulsion, a sudden stench in the nose are alike in that both depend on the same functional alteration in nerve-tissue, they are alike as disorders of function; thirdly, epistaxis, hæmorrhage in the retina and cerebral hæmorrhage are alike in that they are the accidental results of the same pathological process in arteries—results of the same abnormality of nutrition. A further advantage of thus differentiating our investigation is that we shall learn more exactly *where* our knowledge is deficient.

In this paper I shall speak of the first line of inquiry,—Anatomical, and almost solely with the intention of showing the bearings of Ferrier's researches on the methodical study of the *seat of the lesion* in epilepsies. In future articles I shall consider the Physiology of Epilepsies and their Pathology. As in this article the illustrations I give are from cases of *convulsions*, I can defer the definition I have to give of the term epilepsy as I use it.

It is to be hoped that Dr. Ferrier will make careful comparisons of the effects of the local discharges he artificially induces in animals and those artificial or, at any rate, abnormal discharges induced by local disease in human beings. Of course the inference is not to be drawn that the phenomena in the two cases are alike. The differences in the external conformation of animals imply differences in the normal functions of their nervous centres.* These differences will assert themselves, even under excessive and unnatural excitation, whether it be by faradisation or by disease as surely as they assert themselves during healthy activity. But, although this is what one would expect *à priori*, Dr. Ferrier's experiments have the great value of *demonstrating* special differences in different animals. He concludes that "striking differences corresponding with the habits of the animal are to be found in the differentiation of the centres." "Thus," he continues, "the centres for the tail in dogs, the paw in cats, and the lips and mouth in rabbits, are highly differentiated and pronounced." In fact we have in Dr. Ferrier's researches a starting point for a "Comparative Physiology" of the Convulsions. For, so far as comparative anatomists have ascertained homological cerebral structures, so far, it is to be hoped, will he be able to develop the homological functions.

Before we pass to speak of convulsion in man, it is necessary to state certain principles as to the constitution of nervous centres.

The nervous centres represent movements, not muscles; chords, not notes. This is evident from the effects of destroying lesions of the corpus striatum. From a *small lesion* of this body there does not result paralysis of a *small part* of the arm, nor of any such group of muscles as flexors, or extensors; there results *partial paralysis of the whole arm*, the most special parts of it suffering most. There is loss of a certain *number of movements* of the limb. Let us take a more striking example: in cases of *very grave* lesion of the corpus striatum (that is, of a centre far above the supposed deep origins of the ocular motor-nerves), there is, besides palsy of the face, arm, and leg, an ocular palsy. Now this palsy is not of the sixth nerve, nor of the third nerve, nor of

* "On the Anatomical and Physiological Localisation of Movements in the Brain," *Lancet*, Jan. 18, Feb. 1, and Feb. 15, 1873; also "Study of Convulsions," *St. Andrew's Reports*, vol. iii, 1870.

* I would here refer the reader to an article I contributed to this JOURNAL in October, 1869, p. 371, in which I have considered certain symptoms the result of disease or experimental injury of the brain in dogs, etc., in relation to corresponding symptoms in man.

the fourth, nor of any one muscle, nor of any random grouping of muscles. It is a *loss* of a highly special and widely associated movement; the patient has lost power *to look* to that side on which his body is paralysed; there is what is commonly called lateral deviation of the eyes. Similarly, in convulsion there is a *development* of movements. In a convulsion beginning in the hand, the spasm creeps up the whole limb, developing first the movements of the most special parts of it, but not picking out such groups of muscles as flexors or extensors. Among other movements, there is at a certain stage a *development* of that of the eyes for "looking" to one side. In this case the two eyes are *turned* to the side of the body convulsed. We must, however, draw attention to a very important qualification with which the expression "development of movements" is to be used.

Both in Dr. Ferrier's experiments and in cases of convulsion from disease in man, the results of the discharges (since they are sudden, excessive, and very local) are only exhibitions of the movements represented in the parts discharged in the rough. A great number of different movements are developed at once.* And it must not be forgotten that not only are the discharges unnatural in being excessive, sudden, and temporary, but also in that they are very local. We are reminded of the effects of putting one muscle into strong action by Faradising it; the result is a mere caricature of a normal movement. Duchenne insists that a muscle is never singly in action in health, except perhaps in the case of the facial muscles.

But in spite of these drawbacks, the study of discharging lesions, whether induced by Faradisation or by disease, is of great value. My own opinion is that *there is no other way* of finding out what movements parts of the convolutions near to the corpus striatum represent. The reason for thinking so is that the other process of experimentation—that by *destruction* of small parts of the cerebral hemisphere—produces no obvious symptoms—no obvious loss of movements, or no special loss at any rate. But it would be a great error to infer that the part *destroyed* did not represent special movements. The bearing of Ferrier's researches is very direct on this matter. For if we discharge that part, destruction of which produces no *loss* of movement, there will be a presentation of a mass of movements. See, then, the clearing of the paradox. Disease of the convolutions sometimes does, and sometimes does not, produce symptoms. The word disease is used vaguely; so far as it involves destruction there are no symptoms, but there are symptoms from discharge. The speculation I have put forward (*St. Andrew's Reports*, vol. iii) to explain these paradoxical results is as follows.

To begin with a "motor" centre. The study of cases of hemiplegia shows the constitution of the corpus striatum to be such, that *each* part of it represents movements of the *whole* of the parts which that organ governs. So to speak, the corpus striatum is a mass of corpora striata, each one of which represents faintly, and each in some slightly different manner, the whole of the parts which the corpus striatum in full represents in greater degree. Now, to pass to the hemisphere. The convolutions in the region of the corpus striatum *are* the corpus striatum "raised to a higher power". Each part of the brain in this region re-represents the whole of the movements which have been represented in the corpus striatum; so then, if *any* one part of the brain in this region be *destroyed*, there is no obvious loss of movements, because the movements it represented are still represented in each neighbouring part, although in different degrees and orders. But for this very reason, if *any* one part be strongly *discharged*, vast numbers of movements are developed.†

I now mention illustrative cases. Although I can only take enough space to give a mere outline of the cases, I think they show plainly that some of the "experiments of disease" on man are, notwithstanding the *special* differences I have insisted on, *fundamentally* like the experiments of physiologists on animals; that a large and definite part of the study of nervous diseases, of convulsion in particular, must be put on an anatomical and physiological basis; and that Ferrier's researches will be a most valuable help in thus methodising our work—in making it less empirical and more scientific.

* In chorea, which I believe to depend on repeated small discharges of convolutions near to the corpus striatum, there is a succession of independent and quasi-purposive movements of great speciality.

† I have stated some of the facts on which this speculation is founded, and the speculation itself in a brief manner, in the *Medical Times and Gazette*, Dec. 14th and 21st, 1867. In a note, August 16th, 1868, *op. cit.*, the bearing on this principle of localisation of the facts supplied by cases of convulsions beginning unilaterally, is more particularly considered. (At that time, I supposed that such convulsions depended on discharges of the corpus striatum itself.)

The study of numerous different kinds of disease of the brain leads me to the conclusion that not only are the gross movements of the whole body represented or re-represented in the convolutions, but also the so-called "vital processes". A slow pulse and a lowered temperature are among the results of a large cerebral hæmorrhage. In epilepsies, we have pallor of the face and alterations of the secretions, as well as convulsions. In this article, I do not, however, speak of "vital" symptoms. They are best studied in some cases of cerebral tumour.

The first illustration is an outline of a case I have already published (*Medical Times and Gazette*, November 30th, 1872). A man had convulsions, each of which *began* in his *left* thumb. He died: we found no other disease in his brain than a tubercle, the size of a hazel nut, in the hinder part of the third *right* frontal convolution. It will be particularly interesting to me to know what effects Dr. Ferrier will obtain by faradising the homologous part of a monkey's brain, for he tells me that these animals will shortly be subjected to experiment. Theoretically, I should not expect an identical convulsion, but an homologous one. I will, before giving the second illustration, remark on this point, and, at the same time, state some facts which show that the study of cases of convulsion bears on what is conveniently, if not correctly, called the physiology of the mind. One constantly hears, however, that the convolutions are not for *movements*, but for "ideas", "memory", etc. Yet those who use psychological phraseology to describe symptoms of disease—"loss of memory for words", "chorea the result of disorder of volition", etc.—have as much as other people to seek the anatomical and physiological substrata of mental phenomena.*

Among the fits which *begin unilaterally*, the commonest are those in which the spasm starts in the index finger and thumb. This is significant. It is an illustration of what I believe to be the law of the effects of lesions of the brain. In evolution (development, education, etc.), the progress is from the general to the special. In the opposite process of dissolution the more special parts suffer first. I generally use the term "voluntary" instead of "special"; it is a convenient counterpart to the term automatic. In physiological language, a voluntary part—the hand, for example—is one which has the greater number of *different* movements at a greater number of different intervals—shortly, the most varied uses; an automatic part—the chest, for example—is one which has the greater number of similar movements at the greater number of equal intervals—shortly, more similar uses. In brain-diseases parts suffer the more as they are voluntary, and the less as they are automatic. Now, the thumb and index finger are the most voluntary or specialised parts of the body; hence the suggestiveness of the case I mention. The thumb in man has a distinct flexor longus pollicis. In the *Anthropomorpha*, Huxley (*The Anatomy of Vertebrate Animals*) says: "The *flexor pollicis* is more or less closely connected with the *flexor communis perforans*, or with that part of the muscle which goes to the index digit." On the intellectual importance of this muscle Duchenne insists strongly. "En somme, ces faits cliniques démontrent que le long fléchisseur du pouce est l'un des muscles qui sont essentiellement destinés, chez l'homme, aux usages manuels les plus délicats; à tenir et à conduire la plume, le crayon, le pinceau, l'aiguille, etc.; qu'il aide, en un mot, à l'exécution des travaux manuels qui sont à la hauteur de son intelligence supérieure" (*Physiology of Movements*, p. 251). And in his work on *Electrisation*, he says that when the small muscles of the thenar eminence are atrophied, the hand loses its distinctive human character and approaches that of the monkey. The thumb in the monkey is less specialised than in man. If, then, we discover in a monkey the homologue of the part discharged in my patient, we shall expect from *its* discharge a fit of a less special kind; for example, not a fit beginning in its pollex, but more likely one beginning in the whole of its five comparatively little differentiated digits at once, if not in the whole arm.

I have yet to publish the case of a woman who had fits beginning in her left great toe (where fits beginning in the foot nearly always start); there was a small tumour in her right hemisphere. My colleague Dr. Gowers made a careful examination of the brain for me: he found that the tumour involved the lower part of the ascending frontal convolution. Although there were other lesions in this woman's brain—local indurations—there is a strong probability, amounting almost to certainty, that the fits depended on discharge of that part in which lay the tumour. Here, again, I await Dr. Ferrier's further researches in comparative physiology of the convolutions.

In the *Medical Mirror* of September 1869, I published the case of a

* Of what "substance" can the organ of mind be composed, unless of nervous processes representing movements and impressions; and how can the convolutions differ from the inferior centres, except as parts representing *more* intricate coordinations of impressions and movements than they do? Are we to believe that the hemisphere is built on a plan *fundamentally* different from that of the motor tract? What can the anatomical substratum of the "idea" of a ball, possibly be, except a process representing certain impressions of surface and particular muscular adjustments? Why, then, is there anything remarkable in the fact that discharge of a part of the "organ of mind" produces spasm of the arm and deviation of the two eyes? What can occur physiologically in recollection, but a faint revivification of such processes which, in the past, have become part of the organism itself? What is delirium, except the *disorderly* revival of sensori-motor processes organised in the past? What is a mistake in a word, but a wrong movement, a chorea? Surely the conclusion is irresistible, that "mental" symptoms from disease of the hemisphere are *fundamentally* like hemiplegia, chorea, and convulsions, however *special* different. They must all be due to lack, or to disorderly development, of sensori-motor processes.

man who had fits affecting the *right* arm. In this case there was a tumour in the hinder part of the first (uppermost) frontal convolution of the left hemisphere. (There was also a tumour in each lateral lobe of the cerebellum, to which I traced no symptoms.) I did not see this man in a fit; his arm was paralysed after the first seizure.

Lately I was allowed by Mr. Soutter to see a patient of his who had literally innumerable fits limited to the right arm. Mr. Soutter witnessed many; I saw several. The spasm passed down the arm except in the later fits, then it passed up. Shortly before the patient's death she had, Mr. Soutter tells me, universal convulsion. Here I correctly predicted disease of the hinder part of the first (uppermost) frontal convolution—not from physiological knowledge, but because of what I found in the other case just mentioned. Once more I ask, What would be the homologous series of convulsions from the artificial excitation of the homologous parts in a series of animals lower and lower in the scale?*

SYMPTOMS OF IRRITANT POISONING FROM PORK BRAWN.

By EDWARD MACKEY, M.B.,

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CASES similar to the following deserve record, because they have a medico-legal interest, and may be required for reference and precedent.

On January 4th last, at Hampton-in-Arden, sixteen persons, including men, women, and children, aged from five to seventy-eight years, were suddenly attacked with violent vomiting and purging, accompanied in most cases with general and severe muscular cramps, soreness of eyes, and sense of burning and constriction in the throat. Mr. Adkins of Meriden (who favours me with these details), and Mr. G. W. Tait of Knowle, were with the sufferers for the greater part of the day and night. Some seemed to be in serious danger; but, under appropriate treatment, all were convalescent next day. It was found that all had eaten some "pork brawn", and had begun to suffer two or three hours afterwards. All who had eaten any suffered more or less. The brawn had been bought from one provision-dealer in the village, a respectable man who could give no reason for its bad effects. He had eaten a little of it (perhaps two ounces), and had thought it particularly good. Of eighteen pounds made, six had been sold; the rest he himself gave into the custody of the police. Dr. Wade was consulted, and at his suggestion a portion of the brawn was sent to me for analysis. When received, it was mouldy and partly decomposed. Of its original appearance and taste no complaint had been made by any customer, though Mr. Tait informs me it had to him an unpleasant smell, and "nearly all trace of difference between gelatinous and muscular tissue was gone". There was no suspicion of intentional poisoning by the vendor, neither had any copper vessel been used in the cooking; but two rumours had been spread—(1) that the pig had had mercurial ointment applied for foot-and-mouth disease; (2) that, as the furnace stood near a partly open window, some one might have, in malice, thrown in poison. Poisons whose effects would accord with the symptoms are oxalic acid, salts of copper, zinc, antimony, arsenic, or mercury. The reaction was not strongly acid, and the substance had not unusual taste or colour: oxalic acid and sulphate of copper were therefore excluded. Three portions of two ounces each were tested by the process of Reinsch, with negative results. For greater certainty, similar portions of ordinary brawn bought in Birmingham were mixed with fractions of a grain of white arsenic,

* The significance of the fact, that the hand is the part in which convulsions, beginning unilaterally, most often start; that the arm suffers first, or most, or both, in the greater number of motor affections from brain-disease (hemiplegia, chorea, paralysis agitans), will be better realised after reading Herbert Spencer's remarks on lacteal organs, in chap. VIII, vol. i, p. 359, of his *Psychology* (second edition), from which I give these extracts.

He points out and shows the significance of the "striking instances which the animal kingdom presents of unusual sagacity co-existing with unusual development of organs, which, by the help of complex muscular arrangements, give complex tactual impressions." After remarking, that it will perhaps be difficult to understand why touch, the simplest and earliest sense, should in its higher forms be more than any other sense associated with the advance of intelligence, he says: "The explanation lies in the fact that tactual impressions are those into which all other impressions have to be translated before their meanings can be known." Of the human hand:—"All that we need here notice is, the extent to which, in the human race, a perfect tactual apparatus subserves the highest processes of the intellect. I do not mean merely that the tangible attributes of things have been rendered completely cognisable by the complex and versatile adjustments of the human hands, and that the accompanying manipulative powers have made possible those populous societies in which alone a wide intelligence can be evolved. I mean that the *most far-reaching cognitions, and inferences the most remote from perception*, have their roots in the definitely combined impressions which the human hands can receive." [No italics in original.]

The study of cases of disease of the nervous system appears to me to supply continual illustrations of the correctness of many of Spencer's deductions.

tartrated antimony, and corrosive sublimate respectively, and readily gave evidence of these poisons with the same test. Marsh's hydrogen test was then used, with results equally negative as to the suspected brawn, and equally positive as to the brawn which was purposely mixed with antimony and arsenic. Sulphuretted hydrogen, passed for some hours through an acid solution, did not produce any precipitate—an additional evidence of the absence of copper as well as of the other poisons. Sulphate and chloride of zinc were tested for separately, and neither found. Under the microscope, portions of the muscular tissue appeared normal, and without trace of parasite. There was, therefore, no tangible poison in the suspected brawn. Did the symptoms arise from formation or decomposition of fatty acids during boiling?

The mode of its preparation was as follows. A pig, said to be quite sound, was killed on Wednesday; the ears, snout, feet, and some of the flesh and viscera, were put on Thursday morning into an iron furnace partly covered with a wooden lid, and were boiled with salt and spices till night; the fire was then let out, the meat left to grow cold, and then boiled again all Friday. On Friday evening it was "turned out" to cool, and cut up for sale on Saturday morning.

Why did this particular quantity cause bad effects when the man had prepared, apparently, similar brawn safely twenty times before? Inquiry into *differences* in preparation gave the following answers.

1. *As to Time*.—He had never before boiled any so long as this: he could not say exactly his usual time, but it was generally till the flesh came off the bones. He had never before let any grow cold all night and be re-boiled next day.

2. *As to Vessel*.—He had never before used his iron furnace for this purpose, but always an iron pot boiled over his kitchen fire. The furnace had been commonly used for boiling clothes: this time it had been also used for "rendering" lard for about an hour before the brawn had been put in; it had not been cleansed from the lard; had never prepared lard before in the same vessel as the brawn. Soda had not been used when the clothes were boiled, and the lard prepared just before the brawn was sold and used without any complaint.

These answers contain, I believe, whatever explanation can be given of the unfortunate results. I regret that the state of the material when received by me, a fortnight after the occurrence, vitiated any results obtainable from alcoholic extracts, as prepared by Buchner and Schumann in their researches on the sausage-poison (*vide Christison On Poisons*, p. 640). I certified to the absence of mineral poison and to the probability of formation of acrid fatty acids—a suggestion previously made by Dr. Wade.

It may be observed, in conclusion, that the dealer will never attempt brawn-making again, "for he suffered so much in his mind". His customers were considerate towards him, and no legal proceedings arose. Somewhat similar cases might not always end with as little mischief.*

THE INVALID CRANE OR BED-HOIST: A NEW APPARATUS.†

By EDWARD ATKINSON, F.L.S.,

Senior Surgeon to the Leeds Public Dispensary.

IT not unfrequently happens in private practice that paralytics and other helpless persons who are long confined to bed, and whose bulk makes it a difficult matter to change their position, consult their medical attendant as to whether some means be not available for saving the labour of lifting, etc. Nor is it to the patient alone a matter of concern; for what surgeon is not familiar with instances where overstrained spinal or uterine ligaments, entailing life-long sufferings, are traced to a devoted attendance upon some heavy invalid parent or friend—perhaps daily, for months or years? Two or three such cases having lately occurred under my own observation, I became anxious to meet the difficulty, and projected several designs, but was never satisfied with any of them until I secured an ally in a relative of one of my patients, himself an engineer. The result of the apparatus which we have had constructed is so completely satisfactory that I am induced—having my friend's full permission for so doing—to communicate the accompanying description and drawings of it for the benefit of the public, and more especially of any surgeon who may be in need of such appliance. I may premise that the total cost did not exceed £10, of which sum the pair of patent pulleys alone cost half.

The invalid crane, as I propose to call it, is a modification of the Goliath travelling crane used in timber-yards and elsewhere, and con-

* Since the above has been in type we have the report of a fatal case, apparently of meat-poisoning, at Arbroath. A careful and rigid inquiry is to be desired.

† Read before the Leeds and West Riding Medico-Chirurgical Society.

sists of three principal parts—viz. (1) a double tram, (2) a travelling pulley on each tram, and (3) a strongly webbed hammock.

The trams are placed about two feet ten inches apart, and are six feet six inches long. Each consists of a stout bar of wrought iron, with a squared section of two inches vertical and half an inch transverse diameter. The bars are bent at right angles, on the flat at each end, where they are firmly secured by nut-screws into the joints, leaving a space of three inches between the horizontal tram and the ceiling.

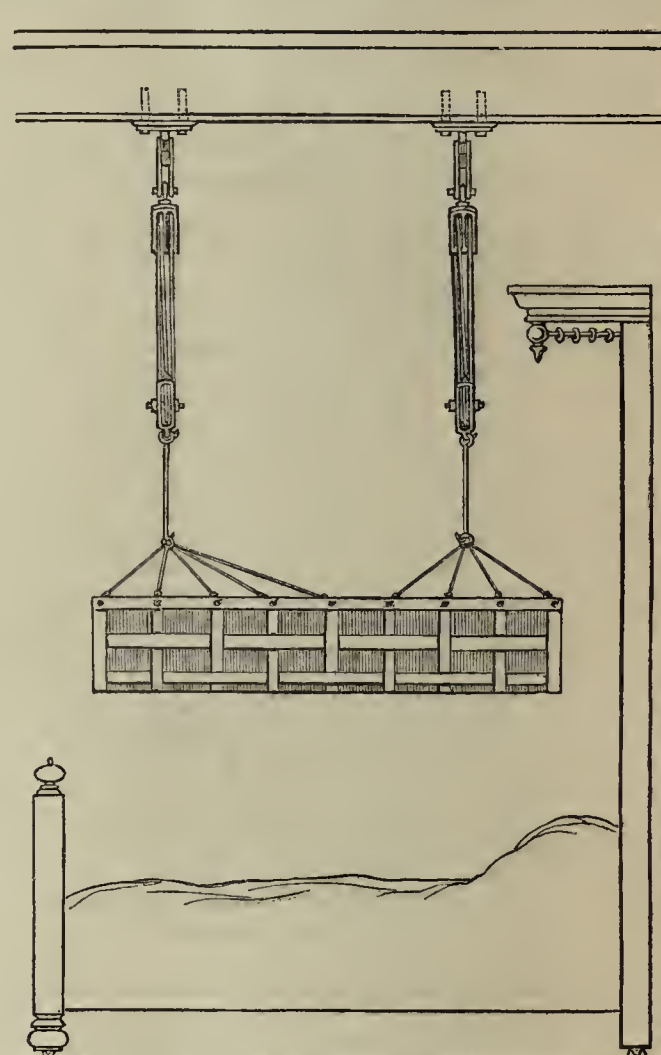
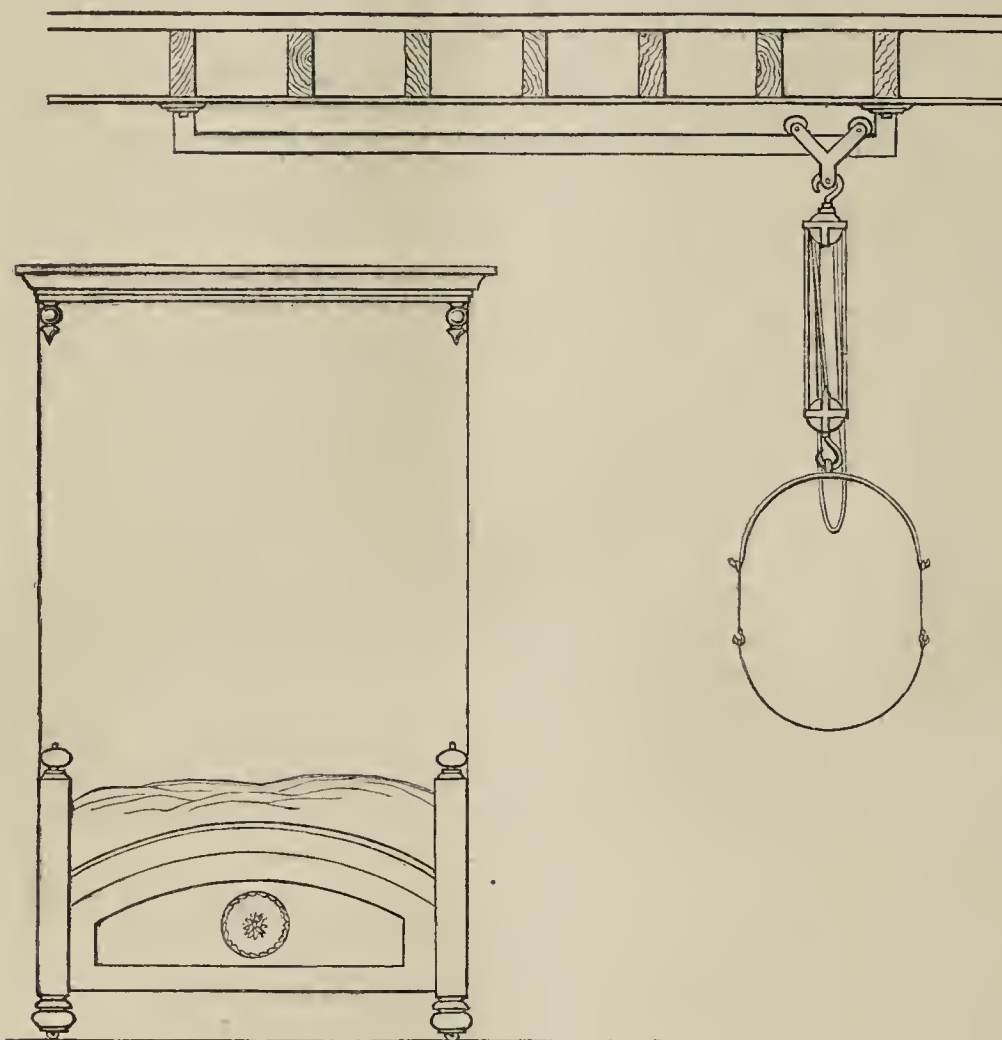
Depending from the bar is a Y-shaped hanger, consisting of flat iron straps which clasp the bar, with small solid rollers fixed between the same to run on the bar. Upon this hanger is hooked one of "Weston's patent pulleys", which are fitted with endless chains instead of ropes, and which possess this advantage, that the chain locks itself at every pull, and thus saves any strain upon the person pulling.

The hammock, which should be somewhat longer than the height of the patient, is made of double ticking or of stout sailcloth, and strength-

ened by bands of broad webbing, placed six or eight inches apart, and sewn to the ticking throughout. The sides of the hammock are pierced with nine iron eyes, through which pass the hooks of the "crowsfoot" or leash of cords, which are gathered on each side into an iron ring.

As the patient lies in bed the hammock remains spread under him, with a small blanket (and, if necessary, a waterproof sheet also) between. When he is to be taken out of bed the "crowsfeet" are hooked on; and the rings of the opposite sides are connected by an iron bow, similar in construction to a large bucket-handle, with a loop or ring in the centre. These bows are attached to the hooks of the pulleys, and the apparatus is complete.

It is astonishing with what ease and comparatively slight exertion a person weighing eighteen or twenty stone is raised in this manner, run along the tram, and lowered into a chair or couch, without the least jolting or discomposure. I have found it convenient to have two hammocks, so as to afford a change occasionally.



CASES SUCCESSFULLY TREATED BY BROMO- IODINE WATER OF WOODHALL SPA, HORNCASTLE.

By ROBERT CUFFE, M.R.C.S., Woodhall Spa Villa.

CASE I. Chronic Rheumatism.—Notes of this case were supplied by Dr. F. Weber. Mrs. T., aged 50, of full habit, had had six children. Eleven years ago, she became paralytic, in consequence of a fall. She gave birth four months after the accident to a healthy child. She was unable to walk until two years ago. Seven years ago, the catamenia ceased. For the last two years she had been subject to severe rheumatism, suffering with profuse perspirations, and symptoms of abdominal hyperæmia with hæmorrhoids. The left knee and ankle were chiefly affected. In February 1872, the left knee became swollen, hot, and painful; then the right; and for many weeks she was unable to walk. In May last, the left wrist became affected in like manner. When she came to the Spa in July 1872, the left wrist was swollen, and she was unable from pain to use it. The left knee was stiff and swollen, but there was no increase of temperature. Crepitation was perceptible on motion. The heart's action was irregular, but without bruit of any kind. The urine deposited lithic acid and lithate of am-

monia. A Spa water-compress was applied to the wrist, and support and general bath treatment were employed. She left at the end of the month; the wrist was quite restored; she was able to walk comfortably, and was otherwise well.

CASE II. Rheumatism.—The Rev. W. D., aged 71, a martyr to indigestion all his life, had had great mental application for twenty years. He had travelled in pursuit of health, and visited all the foreign watering places. Ten years ago, he had an attack of gout; his mother was gouty. For the past four months he had had neuralgia, and had been unable to dress himself or rise from his chair without assistance. He had been attended by the most eminent physicians here and in Paris; at the latter place, the actual cautery was applied to his shoulder with little or no relief. On his arrival at Woodhall Spa on August 9th, 1870, he walked with the greatest difficulty from muscular pain in both legs. The right wrist was painful, but there was little swelling. He had pain in the right shoulder. The tongue was clean and his appetite very good. The urine was of specific gravity 1018, and deposited lithic acid and lithate of ammonia. He was ordered to have baths at 95 deg., and to drink the Spa water sparingly. On the 15th, he discontinued drinking the water, as it apparently disagreed. The pains were but little relieved. The treatment was continued. On the 23rd, the right wrist was painful, but there was little swelling. He was much improved on the whole. On August 28th, all the pains had disappeared, and he could take long walks without fatigue. On September

17th, he felt so well that he returned to London. On the 24th, fearing a relapse, he paid a second visit to Woodhall, and took the baths again. On October 6th, he left in good health, without pains of any kind; and on the 28th, he reported himself quite free from any traces of rheumatism.

CASE III. Acute Gout with Effusion into the Joints.—This case was treated by Dr. Tom Robinson of the London Hospital, to whom I am indebted for the following notes. The patient was M. C., aged 37, a greengrocer. His family history told a tale of rheumatism and gout on both sides. At the age of fourteen he had rheumatic fever, since which any change of weather brought back pains in his joints and muscles. On January 3rd, 1872, he came under treatment. A month previously, pain settled in the right knee, which laid him up; then pain and swelling in the right shoulder followed; afterwards the left knee was affected. During this period he was not under treatment. When he came under treatment, the right wrist, knee, and dorsum of the right foot were red, very painful, and pitted distinctly on pressure. There was extensive effusion into the knee-joint. He was short and stout, and had worn-down teeth. His urine contained uric acid, oxalates, and urates, and was of specific gravity 1022. He passed sleepless nights; had no perspiration. Pulse 98. Temperature 99.2 deg. Bromo-iodine water was applied to the joints with compress, and four ounces ordered to be taken three times a day; the diet to be fluid. On January 5th, he had slept well. The effusion into the knee had nearly disappeared; the redness was gone, and he was free of pain. On January 8th, he could walk with a little limp. The urine was clear; it still contained uric acid and oxalates. He had solid food, and continued the bromide water. The external application was discontinued. On January 12th, he had returned to business quite himself. He continued taking the bromo-iodine Spa water every morning.

CASE IV. Syphilis with Rheumatism.—A. B., of middle age, was sent to me by his medical attendant. He had been married many years, and had several children, all healthy. Seven years ago, he had gonorrhœa, which lasted six weeks, and was followed by rheumatism of the right knee and ankle. This lasted four months, and he never completely recovered. Two years afterwards, he was much out of health, and had swelling of the ankles and feet. He tried Buxton with but little advantage. In 1869, he had a chancre, which rapidly took on a phagedænic character with great destruction of tissue; the ulcerative condition lasted about nine months. He was admitted at Woodhall in 1870. There were red papulæ over his face and body, and a larger copper-coloured patch five inches in diameter on the nape of the neck, and a similar patch on the right breast. He was unable to masticate food, the muscles of mastication being rigid, and was compelled to live upon fluids. The second phalangeal joint of the middle right finger was red, hot, and swollen; and he had paroxysms of pain all over his body. He was unable to rise without assistance from the recumbent position, from intense lumbar pain. The right knee was swollen, stiff, and painful, also the right shoulder. He could get no sleep. Cicatrices were observed on the penis. The urine was retained with difficulty; it deposited lithic acid. His treatment consisted of soup, beef-tea, small amounts of stimulants, the application of compresses with tepid Spa water to the nape of the neck, breast, loins, and fingers, the use of daily baths, and he drank ten ounces of water daily. On the third day, he slept well; his appetite was improved, and he was able to move more easily. He continued liquid food. The urine was of specific gravity 115; it contained no albumen, and was less acid. Two ounces of brandy were given after food. On the fifth day, the crust of the neck and chest came off, leaving the skin red and ulcerated. He was able to raise himself more easily, took solids for the first time, and walked better. On the eighteenth day, his appetite was good. The neck and breast were nearly healed. The knee and finger were less swollen. He was ordered three ounces of whiskey daily. He occasionally took a night sedative. On the twenty-first day, symptoms of iodism were appearing. The skin of the neck and breast was healed, except one small spot near the axilla, where healing was prevented by the movement of the arm. He took long walks. One month after residence, he dressed himself at the baths for the first time. There was now but little discoloration of the skin; his appetite was excessive; he was slightly lame; the swelling of the finger was reduced; and the papulæ on the face had disappeared. He left after seven weeks of residence in good health. His medical man reports: "I must say that I was much struck with the great benefit which he derived from being at Woodhall."

CASE V. Secondary Syphilis.—This case was treated by Dr. Skaife, to whom I am indebted for the following particulars. M. D., aged 34, had syphilis about fourteen years ago, since which he had had good health until 1865, when, from overwork and loss of rest, great nervous depression with debility came on, followed by ulceration of the fauces,

flying neuralgic pains generally, but more especially pain in the left hip and thigh. In 1866, he had in addition a severe attack of jaundice, great debility, with loss of appetite. These pains, particularly at night, continued more or less until 1869, when, in consultation with Dr. Dobell, he was ordered the Woodhall water. Iodide of potassium was tried on several occasions, but could not be borne, even in the smallest quantity; it produced swelling of the eyelids with intense pain, catarrhal symptoms, dryness of the fauces, and pain in the frontal sinuses. Iron checked the secretions, and mercury could not be borne in any form, through irritability of the mucous membrane of the bowels. On July 29th, 1869, he was ordered two ounces of Woodhall water three times a-day, one hour after meals. On August 5th, he took twelve ounces of Spa water daily. The nocturnal pains were greatly relieved. He slept better. His digestion was improved. His stools were more natural. The water invariably produced a soothing effect after a short time. On September 1st, he had had no return of pain, and slept well. His digestion was vastly improved. He had increased considerably in weight, and his general health was in every respect better. He was able to resume his professional duties. Dr. Skaife says it is remarkable that no preparation of iodine, however small, could be borne, and yet the iodine water, persevered with for a considerable time, was easily digested, although his patient had taken a far greater quantity of the mineral in its natural state than he ever had of any compound. On March 9th, 1872, Dr. Skaife reported that his patient "had had no return of the specific pains since he took the bromo-iodine water."

CASE VI. Phthisis.—G. T., five feet ten inches in height, well-developed, who had been discharged from the army, acted as bath-attendant at Woodhall Spa from May 2nd, 1864, to July 31st, 1870. This was a very laborious undertaking, and obliged him frequently to descend the well at various depths, sometimes between 200 and 300 feet, to adjust the machinery, and remain there an hour or two. The following notes, obligingly supplied to me by Surgeon Trotter on October 11th, 1869, will furnish the history of this case. Private G. T., aged 27, seven years in the service, was admitted into hospital at Windsor on August 7th, 1862. On August 11th, he complained of cough; he had slight expectoration tinged with blood; some mucoprecipitant râles were heard below the right clavicle; there was prolonged expiration. On September 2nd, there was only slight cough in the morning; his appetite was indifferent. On September 14th, he had passed an extremely restless night, feeling as if he would be choked; towards morning he began to expectorate dark blood-stained clotted masses. He was very nervous; his pulse was quick; there were dulness and some crepitation below the right clavicle; expiration was prolonged. On the 15th, there was no return of expectoration, and he felt better. On the 29th, he spat a little more blood; dulness and crackling were heard below the right clavicle after cough. On the 30th, the expectoration was less flocculent; there was no return of blood. On October 10th, he continued much the same; dulness was more marked below the right clavicle. There were whispering pectoriloquy, intense vocal resonance, and gurgling on cough. On the left side the breathing was almost puerile, and free from any crepitation. Pulse only 92. It was decided to invalid him. On November 25th, his general health appeared, if anything, rather better. On December 1st, he was invalided. His treatment consisted of iodine paint below the clavicles, cod-liver oil, steel, gallic and sulphuric acids. Parrish's compound of phosphates was tried, but was abandoned, as it caused continued sickness. Anodynes were given at night at intervals. During his residence at Woodhall, he took sole charge of the bath establishment. He gradually improved in health and strength, and left in July, 1870, to take charge of the Folkestone Baths, in good health, able to do an ordinary day's work. On his leaving, below the right clavicle there was dulness on percussion, with considerable falling in, and but little air. The left side was normal. He had occasionally a little cough, but of no moment. The arrest of lung-disease, and restoration to health, must be attributed to his prolonged residence at the Spa, constantly inhaling the air highly charged with iodine, occasionally taking baths and drinking the water. He wrote on April 22nd, 1872, that he had needed no medical attention since he left Woodhall, and that he was quite well and able to give from 8,000 to 10,000 baths a year.

CASE VII. Uterine Fibroid Tumour.—Miss G., aged 60, of full habit and good general health, had had a large uterine fibroid tumour for many years. For a considerable period she had sciatica on the right side. During twelve months, she had been under treatment with no relief. She was admitted in July, 1868, very lame from pain in the hip, unable to walk without the assistance of an attendant. The treatment consisted of daily baths, a compress of Spa water over the pubes, a douche *per vaginam*, and ten ounces of Woodhall water daily. After some weeks of residence she left but slightly lame, and was able to walk without assistance. The local treatment and drinking of the Spa water

continued. Her medical attendant informed me in February, 1869, that "the tumour was reduced one-half."

CASE VIII. *Fibroid Tumour of the Uterus, with Displacement.*—The particulars of this case are communicated by Dr. Sieveking. "Mrs. M. came to me at the commencement of 1866, suffering from anteversion of the uterus, caused by a large fibroid tumour springing from the anterior surface of the body of the uterus. There was much leucorrhoea, coccygodynia, and menorrhagia. She improved somewhat under bromide of potassium, an abdominal belt, rest, and occasional tonics and anodynes. Two visits to Kreuznach caused some amendment of general health, but no diminution of the tumour. In 1870, she went to Woodhall, where she spent, at two intervals, seven weeks. The treatment at Woodhall caused a considerable reduction of the tumour, and a corresponding improvement in the position of the uterus. In the summer of 1871, no tumour could be felt, and the uterine functions were duly performed. The improvement continued; and towards the end of 1871 all trace of tumour had disappeared, and the patient was well."

CASES IX and X. *Lupus Erythematosus.*—Mr. Nunn, in a paper read before the Clinical Society on October 18th, 1871 (*vide* BRITISH MEDICAL JOURNAL, vol. ii, 1871, p. 484), stated that two cases of this variety of lupus, known as superficial, were treated by him with the bromo-iodine water. The family history afforded no clue to the nature of the disease. Both cases had been treated for years before coming under him, with mercury, iodine, arsenic, etc. "The first patient, a male, aged 34, had (October 1870) suffered during thirty-two years, the second during twenty-one years, with lupus erythematosus of the cheek. The bromo-iodine water of the Woodhall Spa, in doses of a wineglassful three times a day, was given. This case was to all appearance cured at the end of six months. The second case was still continuing the treatment with advantage, having only commenced it in May last." On February 28th, Mr. Nunn reported that the first case continued well. The second was progressing satisfactorily the last time he presented himself (April 1st, 1872).

CASE XI. *Chronic Eczema.*—J. B., aged 70, had been delicate up to thirty years of age. He had gout at forty, and one attack subsequently. In 1866, he had some eczema on the legs for several months. He was of decided gouty diathesis, and by inheritance. He came to the Spa on October 12th, 1871. There were chalky deposits on the first and second phalangeal joints of both hands. The skin was thin and delicate. There was an extensive patch of chronic eczema on the back of the left hand, of several weeks' duration. The left forearm had several small patches of the same character. Pulse 86, full and regular. The urine was of specific gravity 1020, and deposited uric acid and urates. He was ordered to have a spa-compress applied to the back of the hand, and to have baths, etc. On the 20th, the crust had come off. The surface was red and ulcerated. On October 26th, he left the Spa, the hand healing fast. On April 10th, 1872, he writes: "My hand healed beautifully, and no return since of the eruption."

THERAPEUTIC MEMORANDA.

ATROPISED CASTOR-OIL AS AN APPLICATION IN SOME CORNEAL AFFECTIONS.

In the treatment of irritable ulcer of the cornea, and of abrasions of the epithelium, it is generally desirable to use some application of a viscid nature, which may fill up the inequality of surface and reduce the irritation caused by the movements of the eyelid to a minimum. For this purpose no remedy is so fit as castor-oil; and if to the oil be added the sulphate of atropia in the proportion of from one to four grains to the ounce (to which extent at least it is soluble), a convenient agent is obtained, which combines the beneficial effect of atropia with the mechanical advantages of the oil.

In these especial instances, castor-oil is to be preferred as a vehicle before either gelatine or glycerine, since it is not, like glycerine, painful when applied to the surface of the eye, nor, like both, readily washed away by the tears.

D. C. LLOYD OWEN,
Surgeon to the Eye Hospital, Birmingham.

SUBCUTANEOUS INJECTION OF ATROPIA.

FOR some months past I have been in the habit of daily injecting morphia subcutaneously for a lady suffering from cancer, in whom morphia administered by the mouth had always produced most distressing vomiting. The dose had been gradually increased up to two-thirds of a grain; and this after some time began to produce vomiting. I

then noticed in the *London Medical Record*, of March 19th, an account of Dr. Lente's experiments with a mixture of morphia and atropia in solution. I tried it in this case, with the result that there has been no more sickness nor any bad effects excepting a slight dryness of the throat occasionally, while the pain is as much relieved as by the morphia alone.

I have now used the mixture every night, with one exception, for nearly six weeks. It now contains one-twenty-fourth of a grain of sulphate of atropia, and two-thirds of a grain of acetate of morphia.

ARTHUR R. GRAHAM, M.A., M.B. Cantab.

CHRONIC CYSTITIS WITH PUTRESCENT URINE TREATED WITH CARBOLIC ACID INJECTIONS INTO THE BLADDER.

A FEW notes of a case of chronic cystitis which I have recently treated with carbolic acid injections may be interesting, especially as the result was a most marked relief to the sufferings of the patient.

J. M., aged 71, had suffered with prostatic disease for ten years. During the last two winters the catarrhus vesicæ had been extremely severe. Opium was of no service, and rest could only be procured by large doses of chloral. The urine contained large quantities of pus, was strongly ammoniacal, horribly offensive, and caused such burning in the urethra that he had to walk about in the night for hours tightly grasping the penis to relieve his sufferings. He said in his own words—"What with the pipe being so hot, and the stench of the water, I shall go mad if you don't do something to relieve me." He had been at different hospitals, and I believe all ordinary remedies had been tried without avail. Thinking it probable that carbolic acid might modify the action of the mucous membrane of the bladder and prevent the ammoniacal decomposition, which was evidently the principal cause of the pain, I determined to inject the bladder with it.

On February 6th, 1873, a pint of warm water containing half-a-drachm of carbolic acid (1 in 233) was thrown into the bladder through a double catheter. After remaining a few minutes, it was allowed to run off again. No pain was experienced at the time. Two hours after, he had great abdominal pain, with urgent desire to micturate, and the water forced itself through the urethra in such quantities that he avowed he must have passed two or three gallons in the night. When I saw him next morning he still complained of the abdominal pain which was evidently caused by distention of the bladder. I introduced a catheter and drew off a pint and a half of clear amber-coloured urine, free from smell of any kind, with complete relief to the pain. Excessive diuresis continued for a few days. The burning pain and putrid urine have been entirely absent now for three months. I have seen the patient to-day, and he says he has had one or two indications of a return of the old symptoms, and he is afraid he may soon require a repetition of the operation.

W. HENRY DAY, L.R.C.P., M.R.C.S.

CLINICAL MEMORANDA.

A SOURCE OF MERCURIAL POISONING.

THE following case may prove of interest to the readers of the JOURNAL. On February 10th, 1873, Fred. B., aged 42, a poorly nourished man, who described himself as a tanner and wool-cutter, applied for relief from the following symptoms. For some years past he had noticed a gradually increasing loss of strength in his upper extremities, together with great muscular tremor. On several occasions during that period he had been forced to leave his occupation for awhile, resuming it when he found his symptoms relieved, and this result generally occurred after he had withdrawn himself for a few days from his work; latterly, however—that is, within the last six months—he found the symptoms so aggravated in extent that he had been unable to do any work for that period. Upon examination, I found the palsy confined to the muscles of the head and upper extremities—the latter being chiefly affected; the muscles of the forearms (especially the pronators) were also considerably wasted. When he attempted to check the agitation voluntarily, it was greatly increased, as occurred in one of the cases of shaking palsy detailed by Dr. Handfield Jones (JOURNAL, March 1st, 1873). Upon minutely cross-questioning him upon the details of his trade, I learnt that he was occupied in making and mixing a solution of mercuric nitrate, in which the wool was steeped upon its removal from the skins, and preparatory to its undergoing the process of felting. He had been accustomed, whilst at work, to stand for several hours daily over this saline solution. Upon looking at the gums, I found them spongy and retracted from the teeth, and the latter much decayed;

there was, however, no ptialism or fœtor of the breath. I gave him a draught containing five grains of iodide of potassium in a bitter tonic three times daily. I have seen him subsequently three times, and he expresses himself as considerably improved in strength, although the muscular tremor is still present.

The above case seems to me to be a distinct instance of mercurial poisoning in a man who, in the first instance, described himself as a tanner. Is it possible that the symptoms of Case III, in Dr. Handfield Jones's clinical lecture above referred to, arose from a similar source, although they are there ascribed by the author to paralysis agitans?

W. AINSLIE HOLLIS, M.D.,

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REVIEWS AND NOTICES.

WORKS ON PRACTICAL PHYSIOLOGY.*

[Concluded from page 491 of last number.]

IN Dr. Sanderson's part on Circulation, Respiration, and Heat, we find, for a *practical* work, a singularly unhappy mixture of chemical and non-chemical subjects. Dr. Bennett's arrangement, in which all the chemistry is thrown together, is infinitely better than this for the student. We are at a loss to know where Dr. Sanderson would have the "beginner" begin. Does he mean him to begin at the beginning of the book and go straight through it? In the absence of any information to the contrary, we suppose that he does. If so, we cannot but feel for the "beginner". Near the end of the book (Chap. XXXV), he will find Dr. Brunton telling him about the properties of albumen, and giving a synopsis of the chief albuminous bodies, and then proceeding to the chemistry of the tissues; while in the first part of the work after the histology (Chap. XV), he is introduced by Dr. Sanderson to all the complications of the chemistry of *blood*, with its *gas-analysis* and all its other difficulties. Not only is the "beginner" introduced first of all to the most difficult subject in physiological chemistry, but, by the same strange caprice, he is introduced to experiments on the circulation, with all the complicated details about nerves of the heart and vessels, before he has gone through fundamental matters about nerve and muscle, as given by Dr. Foster. We feel bound to say that we are unacquainted with any practical work on any subject where the absence of methodical arrangement, and of a carefully drawn up course of instruction, is so strongly marked. It does not appear to have occurred to the editor that, however piecemeal may be the getting up of such a book as this, it must nevertheless form a harmonious whole. Nor does he appear to have been duly impressed with the fact that, for "beginners", one must start with simple things which they can readily comprehend, and proceed from these to things that are difficult. Considering the number and the excellence of the illustrations, and the time which the preparation of such a book must have cost the writers, we are disappointed with the result of their labours. The physiology of the circulation is known to be Dr. Sanderson's great subject; he has, we believe, been working at it for a number of years. Remembering his work on the *Sphygmograph*, we turned to his chapter on the Vascular System in the work before us, with some curiosity to see what progress the author had made in his knowledge of the subject and in his method of expounding it. It is in much the same old style, reminding us painfully of systematic lectures, in which practical details were described, but not shown. Dr. Foster has the student before him; he says "do this" and "see that". One can scarcely fail to apprehend at once what he wants to be done. Dr. Sanderson's style is very different. It is difficult to know whether or not he thinks that the reader whom he addresses is in a laboratory or not in a laboratory. In Dr. Sanderson's chapter on the Vascular System there is no intelligible plan of study. We search in vain for any guide either for the teacher or for the student, to enable him to economise time and money in teaching and in learning physiology. Were we to set to work with Dr. Sanderson's book, we should first of all use a rabbit in order to measure the blood-pressure. We should probably take another rabbit, in order to use Fick's spring kymograph. Then we should go off to the sphygmograph, and apply it to the human arm; then we should study an arterial schema; then the circulation in the frog's web and such places. Then we should study artificial circulation; then vaso-motor nerves, for this purpose coming back to microscopes and frogs' webs. Then we must return

to the blood-pressure apparatus again, and another rabbit; and study the effect of excitation and section of the spinal cord upon the blood-pressure. Then we must come back to frogs' webs and microscopes again, and observe the effects of reflex stimulation of vaso-motor nerves; then to blood-pressure apparatus again, and study reflex excitation of the medulla oblongata in mammalia. We then go to excitation of the nerves of the external ear of the rabbit; then to the vaso-motor functions of the cervical sympathetic nerve of the rabbit; then to splanchnic nerves and the blood-pressure apparatus again; then to movements of the heart; and, after having gone through a long series of experiments, we finally come back to the blood-pressure apparatus once more, and another rabbit, of course, in order to study the influence of the vagus nerve upon the heart; then to frogs, and a dissection of mesenteric nerves, and the effect of their excitement on the heart; then back to rabbits, to study the effect of the blood-pressure on the frequency of the heart. In another rabbit, we study the functions of the accelerator nerves of the heart. Then we are expected (at any rate, we suppose so) to prove "that the inferior cervical ganglion is the channel by which the direct influence of the spinal cord on the heart is exercised". Of course we are to dissect this ganglion out in the living animal. The "beginner" will, however, be comforted by the thought that, "before entering on the experimental inquiry relating to the accelerator nerves, it is absolutely necessary to make several dissections." We only hope that the announcement will tempt him to try to see the branches of this ganglion in the human subject in his ordinary dissecting-room work. We doubt if the "beginner" will be able to get over this stile. Not to do so would, however, be a pity, because he is to wind up with blood-pressure apparatus and yet another rabbit in order to study the influence of the depressor nerve upon the blood-pressure. Where are we? How many rabbits have we sacrificed? and how much time has it taken us to get through this? We could not have complained so much had Dr. Sanderson given anywhere a short epitome of what he would have the student do, and of the various points which might be observed in a single experiment on the same animal; letting him turn, if he liked, to his dictionary, in order to get at the significance of these points. We gladly give Dr. Sanderson credit for much labour in preparing this chapter; but he must pardon our discharging our duty to students by telling them that he has not written a *practical* book for them at all. From one who has studied the circulation so much, and who has confined himself to the writing of so small a portion of this book, we should have expected a lucid and concise treatment of the topics included in this portion. We feel obliged to say, however, that amidst a number of points obscurely treated, the pulse impresses us the most. We hope Dr. Sanderson will treat the subject more clearly on the next opportunity which may present itself, because we fail to comprehend the phenomena of the pulse as they are described and explained by him. Moreover, his treatment of the blood-pressure cannot be regarded as a matter for congratulation. When he tells us, in the first blood-pressure experiment, to previously adjust the pressure in the manometer so that it is "a little less than the probable arterial pressure of the animal to be used" (p. 212), we wish he had told us at once what the probable pressure is in the various animals he afterwards recommends. Moreover, what is the strength of the solution of bicarbonate of soda which we are to use in this experiment? (pp. 210-211). In his treatment of Respiration and Animal Heat, Dr. Sanderson is more successful. In the latter subject, he evidently writes for the "beginner"; but here we feel sure that the beginner would not have grumbled had he included some important experiments on animal heat which he has entirely omitted.

Dr. Brunton on Digestion and Secretion is a much better guide to us. He obviously is impressed with the idea that all things have not an equal importance. Accordingly, he uses a system of signs for enabling the teacher and the student to perceive what they should most attend to. Dr. Brunton writes both for the "beginner" and for the advanced student. Dr. Brunton is *clear* and *definite*, and we cannot but wish that he had written the whole of the chemistry. He has evidently prepared his part very carefully.

Considering how excessively minute is the treatment of the vascular system, we cannot but wonder that the editor has not got some one to write the experimental physiology of *voice*, *vision*, *audition*, *gustation*; and, if beginners are to dissect out the inferior cervical ganglion on the living animal and the mesenteric nerves of the frog, might they not with as much, and indeed rather more reason, perform a number of experiments on the velocity of nerve-force, etc.?

In closing our notice of this book, we trust that its authors will not suppose that we have the faintest wish to hold back the credit which is due to them. Their book will be of much service to teachers and those who may desire to prosecute some research in histology and physiology—excepting, of course, the physiological subjects we have just mentioned. By prudent forethought and properly concerted action, we

* *Text-Book of Physiology: General, Special, and Practical.* By John Hughes Bennett, M.D., F.R.S.E. Edinburgh: James Thin. 1872.
Hand-book for the Physiological Laboratory. By E. Klein, M.D., J. Burdon Sanderson, M.D., F.R.S., Michael Foster, M.D., F.R.S., and T. Lauder Brunton, M.D., D.Sc. London: Churchill. 1873.

doubt not that they could have produced a book that would have satisfied the ordinary student as well as his elders. We cannot hesitate to say, however, that they have failed to do this. Nevertheless, we cordially thank them for their success in the directions indicated by us.

As an afterthought, it occurred to us that perhaps the editor never intended this book for the ordinary student, but only for the few who have time, means, and inclination to enter a physiological laboratory for earnest prosecution of some subject in physiology. But the view we have taken of the real intention of the book must be correct; for, as we have shown at the commencement of this notice, the editor states in his preface, that many subjects are omitted "either because they do not admit of experimental demonstration, or because the experiments required *are of too difficult or complicated a character to be either shown to a class or performed by a beginner.*"

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CELENTA ÆGYPTA.

WE have had occasion more than once to refer to the advantages of ground lentil-flour as an article of diet, and to the nutritive value which chemical and clinical observation attach to it. The value of any article of diet depends as much on its digestibility as on its chemical constitution; and nothing is more fallacious than the tables which are constantly paraded in which cheese stands highest on the list and fights with salmon for the palm of superiority. Lentil-meal is digestible as well as nutritive; and whether as Celenta Ægypta, or as "Revalenta", or Ervalenta, deserves attention. In the form in which Messrs. Hill prepare it, it is palatable and digestible, and has the advantage over similar compounds in the market in being more moderate in price.

LESLIE'S PLIABLE PLASTERS.

MESRRS. MACKEY AND Co., Bouverie Street, have forwarded to us specimens of pliable plasters of excellent composition and careful manufacture. It is one of the troubles of using ordinary "sticking-plaster" and "court-plaster", that they are often brittle, and peel and crack off, so that, when they have been put aside, they are found to be not fit for use when wanted. Leslie's pliable plasters are specially prepared in a very careful manner, and are, we think, among the best of the kind that we have yet seen.

OPHTHALMIC OINTMENTS.

FROM Messrs. Newbery and Co., Newgate Street, we have an ophthalmic novelty which we can warmly recommend. The use of the little flexible tin tubes commonly found in commerce for the preservation and employment of paints, has lately been introduced in France, and in England they have for some time been used and recommended by Mr. Ernest Hart. Their particular advantage is that they are cleanly, neat, portable, and preserve their contents from the injurious action of the atmosphere, and no intermediary brush is necessary for their application. Under the name of *Pommade de Cremer*, Messrs. Newbery are introducing the very useful yellow precipitate ointment (hydrated binocide of mercury), which, since Pagenstecher introduced it into practice, has been a deserved favourite amongst ophthalmic surgeons in the treatment of the various forms of blepharitis, conjunctivitis, and keratitis. This is an ointment especially valuable in practice, but particularly liable to deterioration by exposure to the air. It is therefore a very good example of the advantages of this form of applying ophthalmic ointments; but there is no reason why the plan should not be generalised, and why ophthalmic ointments generally should not be sold and used in these handy little tubes.

From the same firm we have specimens of the tincture of guarana. Guarana is coming more and more into daily use, and this will be found the most convenient form in which it can be prescribed.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 10TH, 1873.

MEDICAL ACT (1858) AMENDMENT BILL.

THE feeling as to the pressing necessity for fresh legislative enactments to remedy the gross and grave anomalies which exist amongst the numerous universities, colleges, and corporations—nineteen in number, each granting at least one, and the great majority two and even more distinct diplomas, at prices ranging from half-a-guinea to more than a hundred times that sum—is rapidly becoming stronger. It is not merely the price of the diploma that varies; for the requirements as regards attainments are also different. Candidates rejected by one board have not unfrequently succeeded with another; and yet any single qualification, the lowest as well as the highest, entitles the possessor, as the Medical Act of 1858 at present stands, to be placed on the *Medical Register*, and thus to become a legally qualified practitioner. Whether the qualification be single, double, or treble, is entirely voluntary.

During the fifteen years of its existence, many of the members of the General Medical Council have more or less aimed at rectifying this objectionable state of things; and, as regards England, they have almost succeeded in uniting all the universities and corporations for the formation of a Conjoint Board of Examination. The success of the English conjoint scheme, unless extended to Scotland, would, however, in all probability, increase the already too great rush of the members who now fly to Scotland for their qualifications, although intending to practise in England. Unfortunately, the broad easy path to a diploma will ever tempt a large number of candidates.

To be effectual, therefore, the conjoint scheme must be enforced in each division of the kingdom; but this the Council has proved itself unable to effect—the cause of failure lying with the corporations, whose interests would be affected by the extension of the scheme, and who have therefore declined to adopt it.

The Medical Bill of the Association will modify the constitution of the General Medical Council by the introduction of direct representatives of the profession, so as to balance the undue and prejudicial preponderance of the representatives of the corporations, and will effect for each division of the kingdom what the English medical authorities seek to realise for their own. All will fare alike; unworthy competition in the granting of degrees and licences will be destroyed; the State will be secured against ignorant practitioners; and the profession will truly attain the honourable position in public estimation at which its members ought justly to aim.

The introduction of direct representatives into the General Medical Council is a vital part of the Bill of the Association. It is an object in regard to which the Association has never faltered; and the Reform Committee would be false to the

trust reposed in it by the Association—false to the profession generally, which powerfully supported the demand by petition and by the exertion of personal influence in the parliamentary session of 1870—in abandoning or even shelving it. The profession as a body will not deem any Medical Bill satisfactory or acceptable which does not provide for direct representation; and all the independent members of the legislature with whom the Committee have communicated, look on the demand as very moderate, and one that ought to be conceded.

One only of the medical journals has suggested that indirect representation—each person having a vote in the election of the representative of the university or college whose diploma he might hold—would be better than voting for a representative directly as a member of the profession, ignoring the obvious fact that a person so elected would still have as his special duty to watch over the welfare of the university or college he represented. In this way, the English, as more numerous, would overwhelm the Scotch licentiates in the election of the representatives of the College of Physicians of Edinburgh. Again, numerous practitioners hold a diploma from two, and not unfrequently three, distinct corporations; should such have a vote for each, or only for one? Further, in the universities, should all the graduates vote as now in the case of Durham and Cambridge, thereby virtually placing the election of the representative in the General Medical Council in the power of non-medical electors, or should such voting be confined to the medical graduates only? An argument urged against direct representation is the number of the constituency. In Ireland and Scotland, the constituency, however, would not be nearly so numerous as that of the present representative of Cambridge; and even in England, the constituency of the direct representatives would not be larger than the roll of the Royal College of Surgeons. The "Medical Act (1858) Amendment Bill" lays down the mode of election of the direct representatives, and the method is simple and easy to carry out.

Let, then, every member of the Association exert his influence in support of the labours of the Medical Reform Committee; and by personal representations to members of Parliament, and petitions to the House of Commons, support the "Medical Act (1858) Amendment Bill", as the best present settlement of the difficult question of medical reform.

THE ARMY MEDICAL WARRANT.

ALTHOUGH popular discontent with the new warrant tends to increase day by day, a gleam of sunshine at last appears on the horizon. Mr. Cardwell has expressed his possible intention of reconsidering some of the more objectionable points; and there seems good reason to hope that this was something more than a mere official reply. It may be that some of the details may work more smoothly as time goes on; for every change involves the necessary discomfort of altered plans and partially effected arrangements, or, in a word, all the well known disagreeables of an interregnum. But no amount of use can soften down the really grave inherent defects of this very injudicious attempt at reconstruction, nor remove the uncertainty and instability which vested interests under its operation must henceforward assume. In undertaking, however, any examination of the question on an extended scale, we must be careful to do so not only with a full recognition of its importance, but with all due temperance, and with as nice a balancing of the scales of justice as may be. And, whilst allowing that this now famous document contains some kernel of good, we are bound to admit that its main provisions are both obstructive and retrogressive; that no consideration has been shown for individual feeling

or *esprit de corps*; and that, whilst the position of the department must inevitably be seriously affected, a check will be given to that growing zeal and efficiency which has already begun to leave its mark on the scientific progress of our profession. Above all, it is requisite that very accurate notions should be diffused concerning the really injurious sections; and, as a contribution towards this desirable end, we shall now endeavour to embody some of the general tone of feeling among our military brethren in a few brief propositions.

1. The frequent removal of medical officers from their regiments is very objectionable; for, the longer the period they are connected with individual corps, not only does their interest in them increase, but their efficiency is largely promoted by familiarity with the constitution and character of the soldiers, whereby disease may be more easily checked, and malingering detected.

2. We understand that it is in contemplation to work the general hospitals by means of a special and separate staff; so that, after the regimental surgeon-major has sent in a particular case, it passes quite from under his hands and treatment. Now it is difficult to conceive a more supremely ridiculous and unsatisfactory position than that which the medical head of a regiment will thus be forced to assume; for, although directly responsible for the health of the men under his charge, he will be deprived of all direct opportunity of following up their cases, or even of giving his colonel or adjutant any first-hand information regarding the actual condition and progress of disease.

3. No term of retirement being now fixed for the senior medical officers, the promotion of the juniors must inevitably stagnate; and, even should the proposed advancement to higher rank after fifteen years' service be conceded, it has been well pointed out that this will merely result in the Army Department being almost entirely composed of surgeons-major.

4. It is undoubtedly a very substantial grievance that, by removal of their assistants, surgeons-major in charge of regiments are now once more reduced to perform those trivial and trifling duties from which they had been relieved by promotion years before. Such functions, although not actually laborious, are irksome, involving as they do early morning work, the inspection and certification of prisoners, attendance on women and children, with occasional summons to professional duty in the middle of the night. Sanitary inspection and a host of minor drudgeries will now fall exclusively to the lot of the surgeon-major; and it must be remembered that he will also be absolutely tied down, and unable to obtain leave, save by assistance borrowed as a favour from a possibly unfriendly principal medical officer.

5. The horse-allowance difficulty is one of the most patent and glaring; for not only does it partially remove a formerly certain source of revenue, but the hard and fast rule as to when a horse may or may not be absolutely required for duty will be henceforth so difficult to fix, that we can conjure up visions of endless disputes with the Control Department on the subject. It is not pleasant to enjoy a horse for months in fancied security, and at the expiration of this period to receive an urgent summons to disgorge the sums already drawn and expended on forage, and which had been issued under some misapprehension of the necessity in question. That this possibility is really extremely probable, every one with any experience of the service will admit; and it will, no doubt, be found that medical officers will henceforward be exceedingly chary in attempting under any circumstances to keep a horse at all.

6. And now we come to the great question of compensation. We have seen that the junior medical officers, without one word of warning or explanation, have suddenly been removed from their regiments, and cast adrift, in a most miserable state of uncertainty as to their future destination. All rosters being thus overturned, no conception can be formed of next moves; and to married men and those who had calculated on some considerable term of home-service, this must be no less unsatisfactory than the abrupt severance of social and regimental ties. It is said that dissatisfaction now runs so high as to render many resignations imminent among the junior ranks; but this would seem a

most rash step to take, before it can be foreseen what judicious and respectful representation may effect in altering the aspect of affairs. From the stress which Mr. Cardwell laid on the depôt central appointments, as tending to allay discontent, we may perhaps assume that some, if not all, of these may be given to those aggrieved surgeons who have lost their regiments; and no doubt the effect of this would be conciliatory in the extreme. But, excellent as it would be as an instalment, even such a concession would not meet the whole evils of the case, nor recompense those men who will be seriously out of pocket by the present rearrangement. For instance, it is well known that a frequent custom existed for considerable sums of money to be paid for medical exchanges, and that from £200 to £600 has not uncommonly been given for desirable appointments. Although not recognised, this was, at all events, tolerated by the authorities; and it does not seem to differ in any very essential respect from the over-regulation prices recently much under discussion in military circles, and for which compensation is readily granted by purchase commissioners. Let us hope, then, that in the present case the treatment of sufferers may be no less liberal and judicious; and that some attention will also be paid to the just complaints of those who, by sudden transference to the staff, will lose the benefit of considerable sums recently expended in uniform, horses, and other necessary expenses, as well as the inconvenience and actual pecuniary loss to others who have been induced by a calculated period of service at some special station to invest largely in furniture and house-rent.

Such points as these are well worthy of the attention of the authorities, and will no doubt receive consideration, along with the future regulations concerning mess and band subscriptions, uniform, and numberless other details which affect the comfort and prosperity of medical officers more than the uninitiated can well understand. We must trust that such deliberations may be conducted in an impartial and friendly spirit; and that their outcome may be full of promise for the rearrangement of difficulties, and the restoring of content and confidence to the somewhat wavering ranks of the Army Medical Department.

PRESENTATION DAY at the University of London occurs on Wednesday. The ceremony of conferring degrees will take place at 2 P.M.

THE distribution of prizes to the students of the medical department of King's College will take place on June 6th, when H.R.H. the Duke of Edinburgh will preside.

A KING'S COLLEGE HOSPITAL "Old Students' Dinner" will take place at Willis's Rooms on June 6th. The chair will be taken by John Wood, Esq., F.R.S.

THE annual ball in aid of the funds of University College Hospital, to which Her Royal Highness the Princess of Wales has graciously given her patronage, will be held at Willis's Rooms on Thursday, June 5th.

SMALL-POX AND VACCINATION.

AT a meeting of the Metropolitan Asylums Board, on Saturday, Mr. Shaw Stewart, in presenting the annual report of the Stockwell Small-pox Hospital, dwelt strongly upon the fact that the number of fatal cases in reference to that disease was only three per cent. where the patients had been protected by vaccination, whereas in the unvaccinated cases the deaths had been forty-six per cent.

THE WINDSOR INFIRMARY.

THE convalescent wards, which have been added to the Windsor Royal Infirmary, by the munificence of one of the committee, Mr. John Herbert, of Bray, were opened this week by the Princess Christian. In replying to an address presented on the occasion, Her Royal Highness spoke very approvingly of the establishment at hospitals in general of separate and cheerful departments for those patients who are recovering health.

CHOLERA IN AUSTRO-HUNGARY.

THE reports from Silesia on April 17th show that cholera had entirely ceased in that province of the Austrian empire. From its outbreak on November 28th, 1872, to the above named day, 702 cases had occurred in thirty localities with a population of 35,110 inhabitants; 374 had died, and 328 recovered. In Hungary, cholera has reappeared in several districts. In Pesth, which had been free since January 20th, it broke out again on March 26th. From March 26th to April 15th there were 74 new cases, of which 15 recovered and 39 died. In Galicia, during the first half of April, 201 new cases occurred; making, with 42 remaining under treatment, 243, of which 89 recovered and 88 died.

THE ADULTERATION OF FOOD ACT IN ISLINGTON.

AT the meeting of the Islington vestry on the 2nd instant, Mr. Layton, the vestry clerk, informed the vestry that the magistrate of Clerkenwell police-court had dismissed the summonses in the two cases for the adulteration of milk, under the third section of the Act, that a guilty knowledge had not been proved. Mr. West, the chairman of the sanitary committee, said the result of the decision of magistrate was that the act relating to the adulteration of food became a dead letter after all the expense they had gone to in carrying it out. It was the unanimous opinion of the sanitary committee that the question should not be allowed to rest where it was, but that the opinion of the Court of Queen's Bench should be taken on it, and a resolution was moved accordingly. Mr. Price seconded the motion. It was often said that vestries were unwilling to put in force such an Act as that, but such was not the case. The motion was then carried unanimously.

GOOD SERVICE.

THE Good Service Pension of £100 a year, vacated by the death of Sir William Rae, C.B., Inspector-General, has been awarded to Inspector-General John Rees, R.N. The following is a brief outline of his services. He served in an Arctic expedition; in the war on the River Plate, and in the Crimean war. In the latter war he was surgeon of the flag-ship of the commander-in-chief, and acting deputy inspector-general of his fleet. He was in the action of the combined fleets with the batteries of Sebastopol; was surgeon of the *Britannia* during the almost unparalleled outbreak of cholera; organised the naval hospital at Therapia; landed with the naval brigade, and rendered important services to the wounded of the battle of the Alma. He was deputy inspector-general of Bermuda Hospital during the epidemic of yellow fever. He has served in the navy twenty-five years, all that time abroad; and we believe there is scarcely another medical officer on the list who has served so long abroad and afloat. He went through the greatest war of modern times that this country has been engaged in, and in the very responsible position of surgeon of the flag-ship of the commander-in-chief, and deputy inspector-general of his fleet. The medical service of the fleet was conducted with complete success during his command, and yet Dr. Rees still remains the only one undecorated of all the medical officers that held anything like so high a position in the Crimean war.

PARLIAMENTARY EXPERTS.

THE operation of the Adulteration Act (1872) has resulted thus far in the making of a great many appointments, for the most part at very paltry salaries, of persons of whom it is now publicly stated that a considerable proportion are notoriously incompetent, and have been appointed on the understanding that they are nominated by the "local authorities" to comply with the formal requirements of the Act, but that their duties and salary are alike nominal, and that they are not expected to do anything. With these expectations the public analysts have in many places complied with marvellous docility and admirable success. It is not the first time that the boards of guardians have employed a similar strategy, and the Local Government Board has shown the same patient acquiescence in the practical defeat of sanitary Acts by their local administrators. Dr. Hassall, however, is of opinion that, when the public analysts appointed by the guardians have been to school to learn their

work, something more may be expected from them. He writes, in answer to the question, What are our food analysts about? that he can certify that many of them are engaged in the endeavour—vain and futile in some cases—to obtain a smattering of the knowledge requisite to enable them to even attempt to fulfil their duties; others, again, are endeavouring to find persons who, knowing something of analytical proceedings, are willing to act as their unacknowledged deputies, and to make the requisite analysis for them, upon which their official reports can be founded. If this be the case—and we are assured that there is a very extensive series of instances which justify the statement—it is evident that the Local Government Board has interpreted very leniently its power of vetoing such appointments, and adopted a very liberal reading of the section which requires that public analysts shall possess a competent chemical and medical knowledge; they have read it as implying that they shall know some one who does. London chemists have done quite a brisk business during the last month or two, in giving rapid elementary courses of chemical instruction to gentlemen recommended and appointed as chemical experts by boards of guardians under the Adulteration Acts.

NEW HOSPITAL FOR INCURABLES AT OXFORD.

HIS Royal Highness Prince Leopold on Tuesday laid the foundation-stone of a new national hospital for incurables, at Cowley St. John, near Oxford. The Prince, accompanied by the Lord Bishop of Oxford, the Duke of Buckingham, Dr. Acland (Regius Professor of Medicine), and several other gentlemen, arrived shortly after three o'clock. The Bishop having opened the ceremony with prayer, the children of the parish schools, who were dressed in cassocks and surplices, were ranged upon the platform, and sang several hymns. Other prayers followed, after which His Royal Highness, with a brief solemn declaration, fixed the stone in its place. The psalms were then read, after which the Bishop pronounced the Benediction. His lordship afterwards thanked the Prince for his presence there in so great a cause, sentiments which were reiterated by the Duke of Buckingham and Dr. Acland. His Royal Highness having returned a suitable reply, the proceedings closed with the singing of the National Anthem.

THE DEATH-RATE AT SEA.

THE Social Science Association discussed, on Monday, the Legal Securities to Life at Sea, as introduced by Commander W. Dawson, R.N., who claimed for the lives of seamen similar legal protection to that accorded to landmen—viz., a medical certificate of death, a coroner's inquest, and the common law, according to circumstances. He said: The Parliamentary Return relative to the deaths of seamen in the British Merchant Service during the year 1871, originates in the desire of the Government to fulfil its functions as administrator to the seamen's property, his unpaid wages, and effects. This property origin vitiates its mortality value. It professes to give the causes of death for the three years 1869, 1870, and 1871; but it *excludes the death of masters and of every seaman who dies within the United Kingdom after discharge*. Now, all foreign-going ships discharge their crews within a few days of their arrival, and dying seamen are sent at once to hospital or to their friends. No estimate is given of the number of dying men so landed, and I have no means of judging what proportion of mortality should be added from this cause. Nevertheless, taking the mean of the mortality which took place actually on the high seas and abroad, during the three years ending with 1871, the results are sufficiently suggestive to show the need of legal securities to life at sea similar to those on land. Taking the mean number of lives referred to in the Return as 196,500, the deaths being 4,564, are in the proportion of 23.22 per thousand. Now, the Registrar-General's mortality tables for England, show that between the ages of 15 and 65 years the ratio is 10.7 per thousand for bricklayers and out-door labourers, and 12.8 for miners. But the Registrar-General includes every death of miners and out-door labourers in England; whilst the Board of Trade Return only includes those of seamen actually on shipboard or in foreign hospitals, and ex-

cludes masters and seamen dying within the United Kingdom; yet the mortality afloat is more than double that of out-door labourers ashore, and nearly double that of miners. Seamen of the Royal Navy are employed continuously, and in cases of serious illness are retained in the service for several months; and should their death occur in the interim at a naval hospital at home or abroad, it is duly registered in the naval mortality returns. The mortality returns for the Queen's service contain, therefore, many cases which are excluded from those for the mercantile marine. Moreover, men-of-war's-men are subjected to risks of life from exercising with ponderous guns, from practice with powder and shot, and from wounds in warfare (five men were killed in action last year, and five men in gunnery exercises), which are unknown to the merchant seaman. Hence, any comparison between the two returns, as to legitimate causes of death, are greatly in favour of the mercantile marine. Yet, even so, this one-sided comparison shows that the death-rate in the merchant service is nearly three times that of the Royal Navy. Whereas the Board of Trade returns show a death-rate of 23.2 per thousand for the three years 1869-71, the last one of the Admiralty, that for 1872, shows only 8.5 per thousand. The mortality returns of the Royal Navy, though admirably drawn up in other respects, omit to give the ages; but there seems no reason to suppose that the ratio of age differs materially from that given in the return for the merchant service, omitting, as the latter does, the deaths of masters. Of the mortality in the mercantile marine afloat and abroad at known ages, upwards of two-thirds occur under 30 years old, and only 24.25 in every thousand deaths took place over 50 years of age (1869-71). Things have changed since Benjamin Franklin wrote, that "sickness among king's ships is more common and more mortal than in merchant vessels". Even in our own day the death-rate of the Royal Navy has exceeded the present one of the mercantile marine; but whilst the average annual ratio of mortality in the Queen's service for the first four annual returns (1856-9) was 19.3 per thousand, the average for the last four years (1868-72), deducting the 478 men lost in the *Captain*, whose loss more than doubled the mortality of that year, was only 8.9 per thousand. A steady saving of life, year by year, is evidenced by the annual lowering of the death-rate in the Royal Navy. This arises chiefly from the increased attention directed to the preventable causes of disease and death, in consequence of the publicity given since 1856. The Admiralty thus recognise the scriptural dogma, "at the hand of every man's brother will I require the life of man"; and the ratio of mortality in the two sea services has, in consequence, been reversed. Might not like results follow like measures in the mercantile marine?

MEDICAL CLUBS.

A MEDICAL Club has been started in Paris, under the best auspices, and apparently with the best prospects of success. Had the London Medical Club been started with equally good judgment, we have no doubt that it would have thriven better than it has done. It is greatly to be regretted that something is not done to put it into a more vigorous condition. Possibly the occasion of the ensuing annual meeting of the Association in London might be judiciously utilised for the purpose.

DR. FERRIER'S RESEARCHES ON THE FUNCTIONS OF THE BRAIN.

DR. HUGHLINGS JACKSON'S paper, which we publish to-day, is an individual expression significative of the very great interest which is felt, alike by physiologists and pathologists, in the new researches of Dr. Ferrier, of which a preliminary note was published in our last number. They are of a character, if they be confirmed, to call for a general revision of our classification of the physiological relations of the brain and central nervous symptoms, and form the foundation of a new nervous physiology and pathology. The mode of experimenting is novel and well conceived; the details of the experiments and the data on which the conclusions were founded will be published in the forthcoming volume of *Reports of the West Riding Asylum*, edited by Dr. Crichton

Browne, at which asylum facilities were afforded by Dr. Browne for the performance of the experiments. The same volume will also contain Professor Turner's address on the topographical anatomy of the brain, lately delivered at an evening meeting at the asylum. The Royal Society has made a grant to Dr. Ferrier for further pursuing his experimental observations on the functions of the brain in monkeys.

KILL OR CURE.

M. DUPUY describes and figures, in Brown-Séguard's *Archives*, an instrument for injecting carbonic acid gas in forcible jets into the pharynx to arrest headache. Sometimes it increases it, and then a hypodermic injection of morphia gradually relieves the exacerbation of pain; but in others it relieves, and, if it do not kill any patients, it may cure them, according to the inferences drawn from some experiments by which Dr. Brown-Séguard has arrested epilepsy in animals by injecting carbonic acid gas into the trachea.

NURSING AT THE WESTMINSTER HOSPITAL.

WE are glad to hear that the nursing arrangements at this hospital—the imperfections of which we had occasion to notice some time since—have lately occupied the attention of the authorities, and are now being made more in accordance with the requirements of modern nursing than has hitherto been the case. With the view of securing a proper system of nursing, a committee was appointed to examine the arrangements at the various London and several other hospitals. The report of this committee, after discussing the relative merits of the "Free Service System", under the general superintendence of a matron; "The Sisterhood, or Nursing Association System"; and that carried out by a lady superintendent in connection with a training establishment—recommends the adoption of the last. This system, which has now been in operation for some years at the Middlesex Hospital and the Royal Liverpool Infirmary, is unsectarian, and has been hitherto found most successful at these institutions. We understand that the authorities of the Westminster Hospital have determined to carry out, in a modified form at first, the recommendations of the committee, and have already secured the services of a lady superintendent. A marked improvement is, we understand, observable already in the nursing.

REMUNERATION OF HOSPITAL STAFFS.

THE authorities of the Brompton Hospital for Consumption have, we understand, resolved to offer a honorarium annually to the assistant-physicians, in consideration of their services in the out-patient department of the hospital. The coffers of this charity have recently been filled to overflowing by a vast legacy of £100,000; and the receipt of this sum has, no doubt, led to the promotion of the present movement, of recognising substantially the services of members of the staff. The authorities propose that the assistant-physicians only should be included in the resolution, and no doubt their claims demand most attention; but we cannot help expressing the hope that the governing body will also recognise their obligations to the senior members of the staff, and extend their generosity a little further than they propose to the assistant officers.

SANDERSON ON SECONDARY INFLAMMATIONS.

ON Tuesday next a paper will be read at the Royal Medical and Chirurgical Society by Dr. Burdon Sanderson, containing some results of his recent observations as to the pathological processes which the author has designated "secondary inflammations", under which term he includes (as those who may have read the article on the Process of Inflammation in Holmes' *System of Surgery* are aware) all those lesions which are induced by traumatic inflammations in the organs and tissues of animals at a greater or less distance from the primary focus. The induction of such lesions, whether chronic or acute, he attributes to infection—*i.e.*, to the entrance into the blood of a poisonous or infective agent. Chronic secondary lesions consist, as regards the internal organs, of infiltrated or diffused indurations, which in their anatomical

distribution follow closely the arrangement of the lymphatic system in each organ. The material (*i.e.*, tissue) of such indurations retains the anatomical characters of the natural tissue from which it springs, until, by the overcrowding of its cellular elements, it either undergoes that slow process of atrophy which is called caseation, or becomes the seat of an entirely different process, marked by the formation of fibrous tissue. In either case, it presents characters which are associated in the minds of pathologists with the word tuberculosis. The more acute—*i.e.*, more rapidly produced secondary inflammations, which are the immediate subject of the present paper, originate texturally, just as the chronic ones do. The difference lies in the fact, that in acute infection the textural overgrowths become themselves the seat of acute inflammation, and thereby soften into abscesses. These abscesses present, as a rule, anatomical characters which indicate their mode of origin—*i.e.*, they are suppurative cavities hollowed out in pre-existing indurations. These stand, to the pathological conception of pyæmia, in a relation somewhat similar to that in which the chronic induration stands to tuberculosis. With reference to the infective fever which accompanies the formation of secondary abscesses, the author holds—1. That the fever is not the consequence of the secondary suppurations, but that these are determined by the presence of pyrogenic material in the blood, which pyrogenic material is also the cause of the fever; 2. That the pyrogenic material is due to septic changes, which take their start in the original focus of inflammation, and are indicated by the presence of microzymes, first in the original focus of production in the blood, and in the secondary foci; 3. That the fever thus produced is identical with one of the forms of surgical or traumatic fever, but is entirely different from other forms, so that no inference can at present be drawn from the investigations hitherto made as to the nature of "surgical fever" in general.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of the Society was held on Wednesday, April 30th. The chair was taken at half-past eight o'clock by the President, Dr. Burrows. Mr. John Gregory Forbes was elected a vice-president in the place of Mr. Henry Sterry, deceased; and Mr. William Fuller was elected treasurer, to fill the vacancy caused by the death of Mr. R. S. Eyles. The following gentlemen were elected directors, to replace the six senior who retired by rotation—*viz.*, Mr. Harston, Mr. Crookes, Dr. Crosby, Dr. Birkett, Dr. Monro, and Mr. Spencer Wells. The Secretary read a statement, from which it appeared the receipts of the Society for the year 1872 amounted to £3,460, out of which a sum of £340 had to be funded, according to the laws. The grants amounted to £2,601 10s., and the expenses of the Society to £219 8s., leaving a balance in favour of the Society of about £299. At the end of the year there were receiving grants from the funds 55 widows and 34 children, showing a decrease of 9 children on the numbers of the previous year. Through the deaths of recipients and other causes, annual grants to the value of £336 had lapsed, and fresh grants, amounting to £349 *per annum*, had been made to 8 widows and 3 children, increasing the liabilities of the Society by £13 *per annum*. Legacies to the value of £785 were announced. The number of members continued much the same—*viz.*, 9 honorary, 165 life members, and 231 annual subscribers. During the past year, the Society had lost the valuable services of Mr. R. B. Upton, honorary member and solicitor; and those of Mr. Hammerton, vice-president; Mr. Eyles, treasurer; and Mr. Martin Ware, formerly president. A vote of thanks was unanimously passed to the editors of the medical journals for their advocacy of the Society, and kindness in inserting notices of the general meetings and courts of directors. The proceedings were terminated by votes of thanks to the Court of Directors, and to the President, Dr. Burrows, for taking the chair at the meeting.

SCOTLAND.

ANDERSON INSTITUTION, GLASGOW.

DR. LINDSAY, the newly elected Lecturer on Medical Jurisprudence, delivered his opening address on Tuesday, when the medical classes were formally opened for the summer session.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

At a meeting of the Faculty of Physicians and Surgeons of Glasgow, held on the 5th instant, Dr. John Gibson Fleming was re-elected Representative of the Faculty in the General Medical Council.

THE UNIVERSITY OF EDINBURGH.

THE distinguished naturalist, Professor Carus of Leipsic, who has been appointed to undertake the duties of Professor Wyville Thomson during his absence with the *Challenger*, was formally introduced to the students of the class of natural history on the 2nd instant, and delivered an introductory lecture.

MORISONIAN LECTURES ON INSANITY AND MENTAL DISEASES.

IN consequence of the death of Dr. Skae, the lectures will be delivered this year by Dr. Clouston, in the hall of the Royal College of Physicians. The lectures will commence on Tuesday, June 3rd, at 4 P.M., and be continued at the same hour on the succeeding Fridays and Tuesdays till Friday, June 20th. Gentlemen wishing to attend these lectures will have tickets sent to them on leaving their cards at Physicians' Hall.

PHYSIOLOGICAL OBSERVATIONS ON THE ACTION OF LIGHT.

AT the ordinary meeting of the Edinburgh Royal Society on Monday, Professor Dewar read a paper on further physiological experiments on the action of light, made by Dr. McKendrick and himself. He detailed the effects of light when the various parts of the eye were used for the purpose of determining electro-motive values, and also the effects of varied alkaloids on the sensibility of the retina. He showed that the moment light impinged on the retina the electro-motive force rose, and that there was also an increase of electro-motive force the moment light was withdrawn. They also traced the action of light not only into the optic nerve, but into the brain. The paper concluded with the measurement of the effects of different luminous intensities on the eye; and the authors showed that the experimental results agreed very closely with Fechner's psycho-physical law.

BARRACKS FOR MARRIED SOLDIERS IN EDINBURGH.

SOME months ago, the military authorities began to erect barracks for married soldiers with their families on the face of the bank which slopes southward from the Castle of Edinburgh. A knowledge of the fact caused much local satisfaction, for the mixing up of married and unmarried soldiers in the barracks within the Castle had long been a public scandal. Unfortunately, when the buildings approached completion, they were seen to be wholly unworthy of the picturesque site which they occupied, and not only so, but embraced within their walls none of the usual mechanical appliances for the comfort or health of the dwellers. Remonstrances made on the subject proving of no avail, a meeting was a week ago held in a public hall, presided over by the Lord Provost, and some strong resolutions were passed—one to the effect that the buildings ought to be removed, as they "do not make provision for ordinary domestic comfort and decency". To bring the matter distinctly before the government, a deputation, with the Lord Provost at its head, waited on Mr. Cardwell at the War Office on Monday, April 28th. The Lord Provost dwelt chiefly on the serious damage done to the amenity of the city by planting a plain barn-like structure, three storeys high and a hundred yards in length, on a conspicuous picturesque eminence. He earnestly pleaded that the buildings should either be removed or receive such changes in exterior effect as would bring them into harmony with the surrounding locality. Dr. William Chambers pointed out the interior structural defects. The buildings altogether,

he said, embraced fifty-four separate dwellings, floor above floor. Each dwelling consisted of but a single apartment, with a cupboard. No water was laid on in pipes; there were no soil-pipes from the different floors; no water-closets. There might be accommodation of different sorts outside; but these would not meet modern requirements, nor would they suffice to fulfil the obligations of the statute. When he (Dr. Chambers) was Lord Provost in 1867, he obtained an Act of Parliament, containing very stringent clauses as to health and cleanliness. Referring to the statute, he pointed to a clause rendering it imperative to give a water-closet and soil-pipes to every separate dwelling in the city, no matter what was the size of the dwelling, even if it consisted of a single small apartment. Were these barracks, therefore, to be occupied as they now stood, the magistrates would have to shut them up as unfit for human beings—a step which would be very unpleasant as taken against the government, which should at least set an example as to what was desirable for securing health and decency. Even if the military authorities possessed the power of overriding the civil law, they should hesitate to exercise it: besides, it should not be forgotten that a soldier was an expensive article, and that anything likely to injure his health ought to be carefully avoided. In any point of view, the buildings were most objectionable. The public officer of health in Edinburgh had pronounced them to be fully twenty years behind the age; that was speaking very cautiously. In his (Dr. Chambers) opinion they were two hundred years behind the times, and would be sure to be laughed at. Mr. Cardwell listened to all that was said with his usual courtesy, and stated that the matter would be remitted to an official inspector, who would meet the Lord Provost and the other gentlemen on the spot, and see what could be done. The deputation, which was accompanied by Mr. D. M'Laren and Mr. J. Miller, members for the city, then withdrew.

IRELAND.

THE DUBLIN COLLEGE OF SURGEONS.

AT the annual election, on June 2nd, the Vice-presidency will be filled by Dr. R. W. Smith of the Dublin University; and for seats on the Council, Drs. Mapother and Jacob are candidates.

DELIGATION OF THE ARTERIA INNOMINATA.

MR. E. S. O'GRADY, of Mercer's Hospital, lately ligatured the arteria innominata artery for an aneurism of the subclavian in a patient nearly sixty years of age. The common carotid artery was also tied, but death took place the following day, with apoplectic symptoms. No examination after death was permitted.

SANITARY LECTURES.

THE ninth of the course of scientific lectures on Public Health was given on April 19th, by the Rev. Samuel Haughton, M.D., F.R.S., on the subject of "The Contagion Theory of Epidemics." He said that the subject he had selected was too large to be discussed fully in the time allotted him, and he would therefore confine himself to illustrations of the contagion theory, as furnished by the epidemics of which they had experience, and mention some facts which, in his opinion, established the fact that epidemic diseases were propagated from one individual to another. By the word "epidemic" was generally understood a disease which was introduced into another country from that in which it had its origin, while by "endemic" was meant a disease native to the place where it existed. Cholera was an endemic at the Delta of the Ganges, where it regularly appeared every autumn; and, when it travelled from India and appeared in other countries, it became an epidemic. If we studied the laws by which the propagation of these diseases seem to be governed, we could, he observed, make out their course with as much certainty as we could calculate the orbit of a planet. None of them were found to travel faster than the lines of human traffic. Cholera never travelled from Europe to America quicker than a vessel could steam across. By means of maps the lecturer explained

the route by which cholera was wont to travel from the Ganges to Western Europe. It was brought by pilgrims and merchants to Teheran in Persia, thence to Astrakan, followed the line of traffic to Astrabad, and on in a north-westerly direction to Moscow; and then visited the towns and cities of Europe, till it reached the western extremities. This was a slow route, generally taking five years to reach this country. But of late, the Russians had constructed a railway between the Caucasian and the Ural Mountains, and this furnished a rapid and direct mode of transit between the Caspian and Black Seas; so that in future, cholera would have a direct road to the West by Southern Europe, and the time for reaching us would probably be about three years. He remarked that two conditions were necessary before being attacked with this disease—first, contact with the epidemic; and secondly, a state of susceptibility of taking it. When a person in a city becomes infected with a contagious disease, the contagion is found to spread in gradually widening circles, showing, however, a decided inclination towards pestilential districts, and if the laws of epidemics were studied, people could very generally tell the course they would take. Dr. Haughton concluded by urging that sanitary measures should be now adopted, and other preparations made in view of the possible visitation of cholera during the ensuing summer.

THE CARMICHAEL PRIZES.

ON the 5th instant, a meeting was held in the Royal College of Surgeons for the purpose of hearing the report of the adjudicators on the merits of the five essays sent in by candidates competing for the above prizes. These prizes were presented by the late Mr. Carmichael, and are two in number, one of £200, and the other of £100, for the best essay on the following subjects: 1. The state of the medical profession in its different departments of physic, surgery, and pharmacy, in Great Britain and Ireland, at the time of the writing of these essays; 2. The state of the hospitals and schools of medicine, surgery, and pharmacy. 3. The state and mode of examination, or of testing the qualifications of candidates of the different licensing colleges or corporations in medicine, surgery, and pharmacy. Dr. J. Ashe, of Letterkenny Lunatic Asylum, gained the first prize of £200, whilst Dr. William Dale, of Plymouth, was awarded the second prize of £100.

DISEASED MEAT.

AT the Police Court in Dublin last week, a woman named Murtagh was fined by the presiding magistrate the sum of £10 for exposing meat which was diseased for sale. The offender would have been sentenced to imprisonment but for the mistaken clemency of the solicitor for the Public Health Committee, who were the prosecutors, who begged the magistrate to inflict a fine because the defendant was a woman. Among the many privileges claimed for the sex, this is one of the strangest and least admissible. Women may be allowed to lecture us, to govern us, or to doctor us, but not to poison us.

IMPEACHMENT OF THE CONDUCT OF A PHYSICIAN.

THE case of *Harrison v. Whitney* came into the Irish Court of Probate on May 1st, before the Right Hon. John Warren and a special jury. It was a suit originally instituted by Dr. Harrison to establish a will made in his favour by the late Thomas Kirwan, formally a police constable, who afterwards became entitled to an estate of £300 a year. Dr. Harrison withdrew from the case subsequently, and a compromise was effected between the other parties. The judge, however, made some lengthened and very strong remarks upon the case; and those which referred to Dr. Harrison are, we think, such as to require the attention of professional authorities under the Medical Act. His Lordship said on this subject:

One topic remains—the conduct of Dr. Harrison. Dr. Harrison, the confidential physician of Thomas Kirwan, commenced his acquaintance from October 1871; within six months he obtained from his bedridden and dying patient two wills—a deed of land, gifts of stock, and trinkets, in addition to liberal fees paid to him as a medical country practitioner. He was connected with the making of four leases, at

nominal rents, to the herd Conlan, under circumstances of gross impropriety. He saw his patient lying in filth, without proper food, without suitable attendance, and never interfered until the 28th April, when Mr. Whitney and the herd suggested his transfer to Dublin. Attendants were procured—Connellan and his wife; and, if the wife were as respectable a person as her husband appeared to be, Thomas Kirwan would thenceforth have had proper care and treatment. But Mr. Whitney leaves, and immediately, by the contrivance of Conlan, Connellan and his wife are dismissed; and, from that 28th April down to the time of his death—a period of between four and five weeks—Dr. Harrison never informed Mr. Whitney of what had occurred, and never took any step whatever to secure decency or comfort for his miserable patient. The story is shocking; it is disgraceful; but worse remains. Dr. Harrison takes from his bedridden patient—about whose capacity you must entertain some doubt, though I do not mean to intimate my opinion that if that question had gone to you, you would have found that he had not sufficient capacity—but Dr. Harrison takes from this bedridden man private instructions for a will in his own favour; he brings out witnesses to attest its execution at one o'clock in the morning; and at that hour he gets the will signed by this man, who was dying of bronchitis, diabetes, and other diseases. That hour was selected by the doctor for the avowed object of securing secrecy, upon the flimsy pretext that Whitney and his friends were keeping watch over this man, for which there is no foundation. He brings that paper to his dying patient, and obtains this will in his favour; and I believe the jury I have the honour to address would not have hesitated one moment in finding that that will had been obtained by the fraud and undue influence of Dr. Harrison. The transaction is shocking and disgraceful to the character of a medical gentleman. If such transactions were frequent—I have known none such in my experience—they would disgrace the profession to which he belongs, and render it, instead of being a blessing, a curse to society. I confess I was astonished at the eulogy which I heard counsel pronounce on Dr. Harrison in the speech which he addressed to you yesterday. The evidence of the Rev. Mr. Geatley, which is unimpeached, satisfied my mind that there was no ground for the statement of the strong affection of this man towards his niece. If the fact had been otherwise, his niece should have been produced to prove it. Mr. Geatley says that when he drew the testator's attention to the propriety of making a will, he asked him about providing for his niece, and his answer was, "I gave her £500 when she went into the convent." Dr. Harrison was praised by Miss Kirwan's counsel. I could understand the object of it. He came forward at the end of his case, and, by his counsel, he professed to be influenced by his regard and consideration for the affection of Mr. Kirwan for his niece, and that that was the reason he withdrew. I denounce that as a mere pretext. If it were true that this man was attached to his niece, to the extent which induced Dr. Harrison to withdraw from the case, Dr. Harrison must have known it before the testator died, and before the litigation commenced. But, instead of giving up the case in deference to what he now pretends to believe, he endeavoured by every effort in his power to negotiate a compromise, and to get a miserable £300 from Mr. Whitney, instead of coming forward before the litigation commenced, and before his conduct was exposed, and giving up the case when his counsel told him, as I have no doubt they did, that he had no chance of a verdict. I see nothing to mitigate the conduct of Dr. Harrison from beginning to end. I think this is the most disgraceful transaction which disgraces the records of this court.

Conduct such as that denounced by the bench has always been the object of scornful detestation in the medical profession; and it is hardly possible, we imagine, that the General Medical Council can be indifferent to this scathing denunciation from the bench of a course which, the judge truly says, dishonours and disgraces the medical mission.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEDICAL MEETING.

THE next meeting is appointed to be held at the Union House, Dartford, on Tuesday, May 13th, at 4.30 P.M.; RICHARD H. HUNTER, Esq., in the Chair.

Dinner will be provided at the Bull Hotel at 6 P.M.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.
Rochester, April 28th, 1873.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETING.

THE annual meeting will be held at the Fountain Hotel, Canterbury, on Thursday, May 15th, 1873, at 3 o'clock; Mr. WILKS, of Ashford, in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

The following papers will be read at the meeting:--1. Dr. Parsons: "Case of Incarcerated Placenta." 2. Mr. Reid: "Induction of Premature Labour." 3. Mr. Rigden: "Is the appointment of Medical Officers of Health to Extensive Districts satisfactory to the Profession as being most conducive to the Public Health of the Inhabitants?"

Gentlemen who intend to be present at the dinner are particularly requested to inform me on or before Tuesday, the 13th instant:

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, April 30th, 1873.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETING.

THE next meeting of the above district will be held at the County Asylum, Hayward's Heath, on Friday, May 16th, at 3 o'clock; Dr. S. D. WILLIAMS in the Chair.

All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.

Dr. Williams will read a short paper, entitled "Remarks on the Diagnosis of General Paralysis of the Insane, illustrated by cases in the Asylum"; which also will be visited under his superintendence.

Dr. H. Moon of Brighton will read Notes of Two Cases of Fatal Peritonitis from Perforation of the Ileum in the course of Pythogenic Fever.

Dinner will be provided at the Station Hotel.

Notice of intended communications is requested at once by the Secretary.

THOMAS TROLLOPE, M.D. Cantab., *Honorary District Secretary*.

35, Marina, St. Leonard's-on-Sea, April 29th, 1873.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

THE annual meeting of the above Branch will be held at the Town Hall, Royston, on Friday, May 23rd, at 3 P.M.; D. B. BALDING, Esq., President, in the Chair.

The dinner will take place at the Bull Hotel, at 6 P.M. Tickets, 13s. each.

J. B. BRADBURY, M.D., *Honorary Secretary*.

Corpus Buildings, Cambridge, April 19th, 1873.

EAST YORK AND NORTH LINCOLN BRANCH.

THE seventeenth annual meeting of this Branch will be held at the Hull Infirmary, on Wednesday, May 28th, 1873; J. MORLEY, Esq., President, in the Chair.

The title of any paper which members may wish to read, must be forwarded to me on or before Wednesday, the 21st instant.

ROBERT H. B. NICHOLSON, *Honorary Secretary*.

21, Albion Street, Hull, May 6th, 1873.

SOUTH MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the George Hotel, Northampton, on Thursday, June 5th, at 1 P.M.; Dr. BRYAN, President, in the Chair.

Dinner at the George Hotel, at 4 P.M. Charge, 5s. 6d., exclusive of wine.

Gentlemen who intend to read papers, and those who wish to dine, are particularly requested to communicate, as early as possible, with the Honorary Secretaries.

J. M. BRYAN, M.D. } *Honorary Secretaries*.
WM. MOXON. }

Northampton, May 6th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE next meeting of the above district will be held at the Infirmary, Chichester, on Friday, June 6th; Dr. TYACKE in the Chair.

Any member or gentleman desirous of reading papers or bringing forward cases, is requested to communicate forthwith with the Honorary Secretary.

WM. J. HARRIS, *Honorary Secretary*.

13, Marine Parade, Worthing, May 5th, 1873.

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, May 22nd, at 7.15 P.M.; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, } *Honorary Secretaries*.
E. C. BOARD, }

Bath, May 5th, 1873.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, APRIL 8TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

ON THE ELEVATED HEALTH RESORTS OF SOUTHERN HEMISPHERES, WITH SPECIAL REFERENCE TO SOUTH AFRICA.

BY E. SYMES THOMPSON, M.D., F.R.C.P.

THE author observed that, whereas works on special health-resorts suited to the very wealthy and very delicate were almost numberless, there was a need for more general information about those less accessible resorts which were within the reach of persons of moderate means. Chronic chest disease, or a tendency thereto, was not to be combated by a winter or two spent in a sunny health-resort, and what was needed was a prolonged sojourn in a climate, and under circumstances diverse from those in which the disease originated.

The author had peculiarly favourable opportunities for gaining information about the Australian and South African colonies. The climates were classified, not according to latitude and elevation (Dr. Hermann Weber), but according to elevation and observed mean annual temperature. Isothermal lines were shown by a map to pass through countries in the Southern hemisphere in a very different and much more northerly position than did the isothermal lines corresponding to them in the Northern hemisphere. Statistics of mean annual observations were misleading as criterions of actual temperature and rainfall, for thus places very dissimilar were grouped together—e.g., Lisbon and St. Helena, in which case the winter temperature of the former is 12 deg. colder, and summer 11 deg. hotter, than in the latter; while a place might have a dry climate and a heavy rainfall—e.g., the Karnatic—and *vice versa*. Again, in the same district, the physical geography of the country might lead to vast diversity in forming a sound opinion of the climate, so it was needful to study each place in detail, although the isothermal lines were of service for general indications. So also with regard to latitude; for it must be remembered, that for each parallel of latitude a lower elevation was sufficient for securing immunity from phthisis than in the corresponding parallel of the Northern hemisphere.

After touching upon the difficulty of deciding between the claims of the various European health-resorts, some details were given as to the facilities and advantages of sea-voyages, the superiority of the sea-voyage to India over the Suez route, and of the passage round the Cape of Good Hope over that round Cape Horn.

The first group of health-resorts described was that of the Cape. Cape Town (lat. 34 deg. S.) itself lies low; it is too hot, and subject to violent south-west winds; but Wynberg, reached by railway, nine miles off, is healthy. Graham's Town (1800 feet elevation), is healthy, and somewhat cooler than Pieter Maritzburg, the capital of Natal. It bears the same climatic relation to Port Elizabeth as Maritzburg does to Port D'Urban. Natal (lat. 28 deg. to 32 deg. S.) has low coastlands almost subtropical in character, but the land rises in steps, or plateaux. Maritzburg, its chief town, fifty miles from the coast, has an elevation of 2000 feet, and the land rises immediately behind to a height of 3,800 feet. The prevailing moisture-laden S.E. winds make the rainfall on this ridge considerable, but a few miles inland, mist, cloud, and rain, lessen. The high table-land extends beyond the Drakenberg mountains; these form the backbone of this part of South Africa, and rise here and there to a height of 9,500 feet. The leading peculiarity of the climate is, that in winter it has almost constant sunshine, and little rain, though abundant rain and cloud in summer, so that the mean temperature of winter is greatly raised, and of the summer is agreeably depressed. The Free State (Orange River, or Transvaal), is an elevated (5000 feet) pastoral country, extending westward from the Drakenberg. The air is very exhilarating, whereas Natal is somewhat too relaxing for a perfect sanatorium. The character of the climate is described, and the mean temperature, rainfall, etc., exhibited by tables, and evidence collected from public reports of local medical men, etc., is given as to the prevalent diseases of the country.

Passing westward beyond this, the climate becomes yet drier, and the land more sterile, until we reach the rainless and utterly barren country of the interior. The point to be sought is that at which there is no excess of either dryness or humidity, and this is to be found in the neighbourhood of the capital of the Free State, Bloemfontein. A few years ago, there was much difficulty in reaching this place and obtaining suitable provision for an invalid; but the increasing prosperity which has followed in the wake of the diamond discoveries is improving this, and when the railway has taken the place of the slow ox-waggon, it will become easily accessible.

A passing notice was given of the elevated Indian sanatoria, which, although north of the equator, are south of the equatorial heat-line, and thus meteorologically in the southern hemisphere. Among these are mentioned the Neilgherries, 7,600 feet; Neurelia, the sanatorium of Ceylon; and the mountain health-resort above Penang.

The climate of Australia was next compared with that of South Africa, the Natal winter being more healthy for invalids than summer or winter in Victoria, and the Victoria summer probably more healthy than that of Natal. Queensland resembles Natal in one respect: that the summer is the rainy season in both; but the former has no table-lands above 2000 feet, an insufficient elevation for this latitude. The Darling Downs, behind Sydney, are about the same level, rising even to 3000 feet, and there are very healthy stations at nearly 2000 feet elevation on the Murray River. Mont Lofty, behind Adelaide (2000 feet), is highly spoken of. The climate of Tasmania is very delightful, but its highest mountains are under 4000 feet, and there are no really elevated health-resorts.

New Zealand is very mountainous, having peaks rising to 12,000 or 14,000 feet, but its ridges are like the Sierra of Spain, and there are no table-lands at any considerable elevation. The extreme windiness of the climate is its chief evil, but sheltered plains may be found, as at Cook's Straits.

At the South American resorts on the east coast (Buenos Ayres, etc.) there appear to be no high lands; but on the west coast every important town has its elevated sanatorium. Some of these are highly eulogised, and, as compared with the hot and crowded ports below, have doubtless many advantages; but there are few English, and English doctors are rare. The country is dry in many places, exposed to earthquakes, as well as political revolutions. Piura, above the port of Payta, lat. 5 deg. 9 min. S., is specially praised.

An appendix consisted of twenty cases, chiefly of lung-disease, in which southern health resorts have been tried. The family history and physical signs of the chest, before and after the trip, were briefly given, with sufficient details for the recognition of the cases, and to demonstrate the influence of the climates referred to.

Dr. BURNEY YEO spoke of the results in cases sent to the elevated regions of Switzerland. He thought that only a few of those sent to the Engadine could do well, considering the altered conditions of life. There was first a rapid alteration of temperature; then the cold was great through more hours of the twenty-four than here. Thirdly, the air was more rarefied. Patients who had a large portion of lung disorganised could not live under such conditions. As the air was more rarefied, respiration must be quickened. He remembered a patient who died asphyxiated within twenty-four hours of his arrival. The cold also stimulated the action of the lungs, increasing the rate of respiration. He had seen patients in the Engadine rapidly pass through all the stages. Some cases did badly in elevated regions and others did well; in these latter there was a latent power of active respiratory function. If the lung were more diseased or the heart weak, or the circulation disordered, then they did not do so well; too much strain was thrown upon the system. He thought the following did well in those regions: cases of chronic laryngeal catarrh and chronic bronchial catarrh in young people, and diseases of the nature of catarrhal pneumonia in the summit of the lungs.—Dr. MANN knew the region in Natal to which Dr. S. Thompson had referred as a health resort. A ridge of high land ran across the colony of Natal, about one mile high and about seventy miles from the sea; and projecting ridges ran from this range to the sea. Beyond this mountainous ridge was a depressed area, said to have been once a sea. This was the health-resort referred to. The climate was determined by the range of hills. There was a constant south-east wind, which brought cold and moisture from the Indian Ocean. During the summer the wind was most laden with moisture, so that the rainfall was from January to March and from September to December. There was little rain from May to August. Further up the country, the rainfall was less. Beyond the slope, in the Free States, the temperature was all the year the same as during the winter in Natal. The great drawback to a residence in the Free States was the want of the comforts of life and the difficulty of conveyance. As the colony advanced, fixed stations would be established. The Cape climate was the oppo-

site to that of Natal. There was rain in winter and heat in summer.—Dr. THEODORE WILLIAMS thanked the author for the excellent information he had given about Natal and other health-resorts, but differed from him with regard to the importance he attached to Kuchenmeister's theory, that elevation above the sea-level, varying according to the latitude, necessarily gave an immunity from phthisis. There were several places below the level of the sea where phthisis was unknown, as the Khirgis Steppe, 100 feet below the sea-level; and parts of Madras. There were, it was true, certain elevated positions where there was an immunity from phthisis. He thought the theory had been too readily adopted. He did not agree with Dr. Yeo as to the harm resulting from living in the elevated regions of Switzerland, as patients in South America had passed months at higher levels than St. Moritz without any bad effects. An elevated health-resort should, he thought, be sought in the Andes, where a great choice of elevation could be combined with equable temperatures. In Bolivia, cases of phthisis were unknown, except as exotics. Cases of rapid consumption were sent from Peru to the upper ranges of the Andes—to La Paz, Quito, and Santa Fé de Bogota, and the result was highly satisfactory. The Lima authorities had recently erected a hospital for soldiers at an elevation of 10,000 feet at Jauja. Patients sent to the Andes by English and French physicians had done well. Dr. Williams referred to the case of a Swiss watchmaker suffering from phthisis, who went to La Paz; his health greatly improved; he went to the lowland of Panama, and became worse; he returned to La Paz with benefit, and again relapsed on reaching Panama. He repeated this several times, and even revived when in a dying state on reaching the highland. There was a feeling in South America that if a patient were consumptive and he went to the hills early, he always recovered. This was perhaps exaggerated; but without doubt the belief rested on a basis of facts.—Dr. SYMES THOMPSON thought that what he had said of the Engadine agreed with the views generally held by physicians who had had patients there whose lungs were much destroyed. The difficulty of breathing was great, and aggravated by the cold and alteration of temperature. He had brought forward his account of South Africa as meeting this. There was no snow, no severe cold, as in the Engadine. He agreed with Dr. Mann that probably health-resorts could be found on the elevated table land as good as those in the Free States. As to the case which Dr. Williams had given in detail, he would say that one of the patients went to Natal four times and recovered each time from an attack of hæmoptysis; the voyage and his residence there each time benefited him. With regard to a question asked by Dr. Sansom, there was no evidence to show that heart-disease was prevalent in the South African colonies.

Mr. JOHN WOOD exhibited a patient on whom he had successfully operated for extroversion of the bladder. He had performed the operation in his usual way.

TUESDAY, APRIL 22ND, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

ON SOME RESULTS OF TREATMENT IN AFFECTIONS OF THE NERVOUS SYSTEM.—BY CHARLES ELAM, M.D.

THIS paper was almost exclusively devoted to therapeutics, and subsidiarily to prognosis. It was divided into two parts: the first related to the treatment of certain forms of brain disease, and the second to that of epilepsy, considered more as a collection of phenomena than as any distinct pathological entity. In the first part, three cases were related where striking and unexpected benefit resulted from treatment by the bichloride of mercury.

The first case was that of a boy, aged 6, who, on being brought first to hospital, presented every appearance of being affected with an advanced organic disease of the brain, most probably of tubercular origin, characterised by imperfect paralysis, squinting, double vision, and stammering, with greatly enfeebled faculties. As it was considered that no treatment could render the case more hopeless than it appeared to be, Dr. Elam prescribed half-drachm doses of the solution of bichloride of mercury, and ordered the patient to be kept in the recumbent position. This treatment was continued, without change of any kind, for two months, at the end of which time recovery was complete. There was no trace of disease, bodily or mental, to be detected.

The second case was one of a female child, aged 3, presenting the aspect of perfect idiocy, with general paralysis both of upper and lower extremities, loss of speech and power of attention, with involuntary and constant passage of urine and fæces. For similar reasons this case was treated like the former, and in one month the child was able to run about, to attend when spoken to, and to attempt to imitate articulate sounds when told to do so. A change in medicine was followed by an immediate and serious relapse, and the bichloride had again to be re-

sorted to, when improvement again occurred. The child was still under treatment, but very much improved in every way.

The third case was one of subacute congestion of the brain in an adult, where treatment by the bichloride produced the most favourable results.

The second part of the paper related to the treatment and prognosis of epilepsy, and the propositions attempted to be illustrated were as follows:—1. During the last five or six years our relations as a profession to epilepsy have greatly changed. Formerly this disease was considered one of the most serious and intractable that we had to contend with, whereas now, in its relation to treatment, it will compare favourably with any other forms of chronic disease. 2. The great majority of cases received benefit from treatment at the outset, and a by no means small proportion appeared to be cured from the first, never having another attack after the commencement of the treatment. 3. Another large section resist treatment for some time, even months or years, after the first improvement and subsequent relapse, and yet ultimately yield to it and recover; that is, the intervals are so prolonged that it amounts to a virtual cure, years elapsing without any attack. 4. Hereditary and congenital epilepsy, and also that resulting from injury to the head, are in many cases amenable to treatment, often with very great relief and indefinite prolongation of the intervals, and in some cases appearing to be entirely cured. One of these undoubted cases had been seven years without any return of the affection. 5. The most intractable cases may be classified under three heads:—(a) Those that are both congenital and hereditary; especially where there has been not only epilepsy, but insanity, amongst the ancestors. (b) Those where there is faulty formation of the head, as want of bilateral symmetry, or, what is worse, marked deficiency in the cerebellar region. (c) Those cases where the head is well proportioned, but much smaller than the natural standard, as, for instance, the occipito-frontal circumference, ranging from eighteen to nineteen inches in the adult. Cases were related illustrative of these positions.

The treatment chiefly relied upon was founded upon the employment of the bromides of potassium and ammonium alone, or combined with ammonia, chloric ether, the alkaline carbonates or iodides, tonics, arsenic, belladonna, etc. The most important adjunct, however, in the writer's opinion, was the chloral hydrate, which, when given in doses of ten to fifteen grains with the bromides, rarely fails to reduce very greatly both the number and violence of the attacks, and sometimes, even in old and hopeless cases, put an entire stop for some weeks to the fits. One of the most successful of the hereditary cases was treated entirely by digitalis and iron, no bromide having been given.

ON THE HISTOLOGY OF THE BLOOD OF THE INSANE.

BY HENRY SUTHERLAND, M.D., M.R.C.P.

In this paper the results of the microscopical examination of the blood of one hundred and forty-three lunatics were described in detail. All the patients who were made subjects for experiment were in fair bodily health, and their blood was examined at the same interval of time after food in all cases. The inspections under the microscope were also made as nearly as possible at the same period after the blood was drawn, so that all fallacies in observation were reduced to a minimum.

It was remarked, that any great augmentation of the number of white corpuscles usually indicated a low degree of vitality in the insane, and that the cerebral disorder had made some considerable progress; also, that an absence of rouleaux-forming power in the red corpuscles coincided with a similarly depressed state of health. These two conditions were followed by a speedily fatal termination in a large proportion of the cases in which they were observed. These observations applied chiefly to cases of general paralysis of the insane, in the male. In ten men suffering from this disease, whose blood was found to exhibit one or other or both abnormal conditions, five died within three months from the date their blood was examined. One of these men was in a moribund condition when the blood was drawn, but in the other four patients there were no symptoms which indicated such a rapidly fatal termination of their cases beyond the presence of these peculiarities in their blood. These remarks, however, did not apply to the same extent to this disease in women, the prolongation of life in female general paralytics being accounted for by the fact that the disease does not run so rapid a course in females as in males, and that in most asylums the females live longer than the males, because they are more comfortably provided for on the women's than on the men's side of the hospital.

Absence of rouleaux, together with an increase in the colourless corpuscles, appeared to be conditions almost peculiar to general paralysis, and were observed in four out of twenty-nine (male and female) cases, or in fourteen per cent. These two appearances were found to coexist in only four other cases out of the one hundred and forty-three ex-

amined, or in three per cent. of the whole number. Absence of rouleaux alone, and augmentation of white globules alone, were found to exist in other less fatal forms of insanity, but not to the same extent as in general paralysis.

The conclusions drawn from the examination were as follows:—In the insane generally, a leucocythæmic condition frequently exists. Any great increase in the number of white corpuscles at the expense of the red, and an absence of rouleaux from the blood of the insane, are conditions which generally indicate a very low degree of vitality. In general paralysis, epileptic insanity, and masturbating insanity, the blood is more deteriorated, and the vitality is more lowered in the male than in the female. In mania, melancholia, and dementia, the blood is more deteriorated, and the vitality is more lowered in the female than in the male.

PRETERNATURAL CAVITIES IN THE BRAIN OF THE SANE AND THE INSANE.—BY ROBERT BOYD, M.D., F.R.C.P.

[Communicated by ROBERT LEE, M.D., F.R.S.]

Cerebral cysts, cavities, and depression, regarded as traces of the process employed by nature in arresting or curing apoplexy from effusion of blood in the brain, were worthy of investigation. In many cases, principally of the insane, these cavities, etc., terminated in partial softening of the brain, several in pulmonary, a few in cardiac and other diseases. These cavities were seldom found in early life, although cerebral apoplexy, softening, and tumours of the brain, were not uncommon in infants and scrofulous children. As insanity rarely occurs before puberty, the comparison made in this paper between the sane and the insane is confined to fifteen hundred and sixty cases of adults, six hundred and ninety-five in the St. Marylebone Infirmary, presumed to be sane, and eight hundred and seventy-five, certified as insane, in the Somerset County Asylum. It was found that these cysts and depressions were one-third more frequent in the insane than in the sane; and, as usual in cerebral diseases, much more frequent in males than in females, and in the more advanced period of life, after sixty years, except in epileptics, who seldom arrive at that age. The most numerous class was that resulting from apoplexy, to be distinguished by the permanent blood-staining from peroxide of iron.

Dr. THOMAS BALLARD spoke in favour of treating such cases as were described by Dr. Elam antiphlogistically. He employed blood-letting with great advantage, even in very young children. Mercury, probably, acted in the same way.—Dr. DICKINSON said, that cavities were often formed in the brain, in certain diseases of the organ, also in diabetes, and in general paralysis of the insane. In many instances they were very small. The effusions which gave rise to them were sometimes the result of extravasation; sometimes, as he had noticed, the result of migration of the blood-corpuscles. In some cases cavities were the result of changes after death.—Mr. NUNN asked, with reference to a case in which gangrene of the cerebellum was said to have taken place, whether there was any obstruction in the arteries going to the part, and also how the pus became foetid, seeing that the air had no access to it?—Dr. BOYD said, that in the case referred to, there was no disease of the vessels, the gangrene was the result of acute inflammation of the cerebellum.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

APRIL 2ND, 1873.

J. MATTHEWS DUNCAN, M.D., in the Chair.

Pseudo-hypertrophic Muscular Paralysis.—Dr. ARTHUR GAMGEE showed a boy aged 11, an example of this affection. A sister and other relatives had died of consumption. The lower half of the body was quite out of proportion to the upper, which was thin and weak. Eighteen months ago, he began to walk on the tips of his toes; when exhibited, his knee-joints were partially flexed, and he could not walk at all. Though apparently enormously powerful, his muscles were very feeble; the hypertrophy being, not in the muscle, but in the interfibrillar fibrous tissue.

Operative Treatment of Stricture of the Urethra.—Mr. T. ANNANDALE read a paper on this subject. After explaining that he would allude only to permanent strictures, and to their operative treatment, not their medical, he described his impressions of the value of quinine as a preventive of the rigors, and in other feverish conditions often seen after passing an instrument. He divided permanent strictures into three classes: 1. Simple organic stricture; 2. Organic stricture complicated by spasm; 3. Organic stricture with complications such as retention, obliteration of urethra, extravasation, abscess, fistula, calculus in the bladder or urethra. For the relief of these varying conditions, four operative procedures are adopted: 1, dilatation; 2, splitting;

3, internal division; 4, external division. In no case of organic stricture could a permanent cure be expected without the precaution of the occasional passing of an instrument. In stricture of the first class, Mr. Annandale recommended gradual dilatation; and he preferred metallic to flexible instruments, and conical ones to the ordinary kind. He had found that splitting by Holt's method was apt to be followed by contraction. For the second class, dilatation was unsatisfactory; and the external division, often performed by Mr. Syme, was rarely advisable, and sometimes dangerous. For this, Mr. Annandale had practised Maisonneuve's operation of internal division in six cases, of which five recovered perfectly, and one died of pyæmia on the seventh day after the operation. In his case, the parts cut in the operation seemed healthy. For the third class of strictures, Mr. Annandale approved of external division, not by Syme's method, but by that of Gouley of New York, on a catheter grooved at its point.—Mr. JOSEPH BELL, while agreeing in the main with Mr. Annandale's views as to the first and third varieties of stricture, believed internal division to be wrong in principle and unsatisfactory in result.

Diseased Liver and Spleen in a Child.—Dr. ARTHUR GAMGEE read the notes of a case which had come under his notice in the Children's Hospital, in which great enlargement of the spleen and considerable enlargement of the abdominal lymphatics coexisted with a state of the liver which at first sight appeared to be identical with the interstitial hepatitis (cirrhosis) of adults. The liver was nodulated, and its substance intersected with bands of connective tissue, which clearly corresponded in distribution with Glisson's capsule. Microscopic examination showed that fibrillar connective tissue, which in many places swarmed with lymphoid cells, passed between the lobules of the liver—without, however, penetrating these. In the year during which the patient was under observation, a very great development of fat took place beneath the skin, and in the omentum and mesentery. There was never any dropsy or jaundice. The patient died of hæmatemesis and intestinal hæmorrhage, coming on after a walk of two miles. The most careful examination failed to reveal any affection of the mucous membrane of the alimentary canal. Dr. Gamgee, therefore, attributed the hæmorrhage to an intrahepatic obstruction to the portal circulation.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, JANUARY 31ST, 1873.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

Flap-Extraction of Cataract.—Dr. ARCHIBALD JACOB read a paper on the advantages of this operation, introduced one hundred and twenty-five years ago by Daviel. The author believed that great care should be taken in the selection of cases. The solidification of the lens should be complete. Dr. Jacob always operated on the left eye from the front, with the right hand. Ether was useful as an anæsthetic, and the eye should invariably be steadied. For this purpose, a new instrument, of Parisian make, shown to the Society, was stated to be most effective. The forceps should be applied almost opposite the puncture of the conjunctiva. The plane of the knife should be parallel to the iris, and the instrument should entirely fill up the incision, so as to prevent the escape of the aqueous humour. All sawing movements of the knife should be avoided. A slight escape of fluid was, however, sometimes useful, as it cleared the anterior chamber of fragments of cortex, etc. In two out of eight cases, where the cornea was incised, sloughing had occurred. As regarded treatment, rest, exclusion of light, and a few slips of isinglass plaister over the eye, were alone required. The author gave statistics of seventy-one operations for cataract. In eight instances, he had performed scoop-operations with iridectomy, with the result of four perfect recoveries, two partial recoveries, and two failures. The linear extraction of Von Graefe was followed, in seven cases, by one failure, two partial, and four complete recoveries. Among fifty-six flap-extractions, the eyes were lost on seven occasions, there were six partial, and forty-three perfect (or nearly so) recoveries.—Mr. H. R. SWANZY said that, in the flap-operations, ripeness of the cataract was indeed necessary; but this ripeness was often long postponed. The linear extraction had given ninety-three, or even ninety-six or ninety-seven per cent. of successes. Mr. Swanzy used no anæsthetic in operations of this kind. The principle of fixation must be regarded as most useful.—Dr. MORGAN asked whether it might not be sometimes advisable to expedite ripening by causing traumatic cataract, and whether the results of the linear extraction were as successful here as abroad.—Mr. SWANZY answered Dr. Morgan's last question in the affirmative.—Mr. T. P. WALSHE described Liebreich's new operation as being the best for the removal of cataract.—After some remarks from Mr. KELLY, on the subject of ambidexterity, Dr. JACOB, in replying, said he objected to the removal of any portion of the iris, as it caused a deformity.

CORRESPONDENCE.

THE DISCUSSION ON THYROTOMY.

SIR,—My statement in your issue of April 26th, that "the greater part of Mr. Durham's article consists of a translation of certain portions of Planchon's *Faits Cliniques de Laryngotomie*," appearing from your editorial note to be liable to misinterpretation, I wish to explain that it would have been more technically correct to have said that "Mr. Durham's article consists mainly of appendix, and that the greater part (of this appendix) consists of a translation of certain portions of Planchon's *Faits Cliniques de Laryngotomie*."

Of the thirty-two cases in the appendix, nineteen are contained in Planchon's monograph, though in eight cases Mr. Durham does not acknowledge that they appeared in this treatise. There are, in addition, four cases translated from the German. The appendix is not entirely a translation, inasmuch as the remaining nine cases having been taken from English and American sources, no translation was required. There is only one case in the appendix which had not been previously published, and that is described by Mr. Durham as being both "incomplete" and "complete."

Mr. Durham's article consists of seventy-three pages, and of these twenty-three constitute the body of the article, and fifty the appendix. Of this appendix, thirty-one pages are occupied by the nineteen cases to which I have referred as appearing in Planchon's work. Most people would consider that such an appendix—more than twice the length of the paper—was an integral part of the article, and that the whole contribution was mainly a translation.

I am, etc., MORELL MACKENZIE.

13, Weymouth Street, Portland Place, W., May 3rd, 1873.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, May 1st.

CENTRAL LONDON SICK ASYLUM.—In reply to a question from Mr. Hardy, Mr. Hibbert said that the Guardians of the Strand Union had persistently declined to send their sick to the Central London Sick Asylum, on the ground that they had accommodation for all classes of the poor in their own workhouse. The Guardians of the Westminster Union had formerly sent their poor, but not since last June, and the reason they assigned was, that they had provided proper accommodation in their own workhouse. The Local Government Board were not satisfied with the accommodation provided. They had no power directly to compel the Guardians to send their sick poor to the Asylum; but if the Guardians did not avail themselves of the accommodation provided at the General London Sick Asylum, they would have to contribute towards the expenses of the establishment without deriving any benefit from it, to the serious loss of the ratepayers of the union. The matter had been under the serious consideration of the Local Government Board for several months, and they expected in the course of a few days to take such steps as would be the means of transferring the sick poor from the union to the Asylum.

ARMY MEDICAL DEPARTMENT.—Major Arbuthnot asked the Secretary of State for War whether, considering the dissatisfaction expressed through the medium of the medical, military, and other organs of the press, and in other ways by officers of all grades in the Army Medical Department, with the terms and probable operation of the Medical Warrant recently issued, he would take into consideration the advisability of recommending changes and modifications in that Warrant, such as might appear calculated to render it more acceptable to the medical service.—Mr. Cardwell: An unavoidable delay has occurred in gazetting the promotions consequent upon the recent Warrant, and also in making the appointments to the new brigade depôts. Now that the promotions have appeared, I expect that, as soon as the appointments to the brigade depôts shall have been made, the misunderstandings which have undoubtedly prevailed will be removed or greatly modified. If it shall appear, upon a proper representation, that any grievance remains, it will be duly taken into consideration with a view to explanation, or, if necessary, to alteration.

Wednesday, May 7.

PUBLIC HEALTH BILL.—Sir C. Adderley moved the second reading of this Bill. A digest of the sanitary laws had been made by the Government, with a view to their consolidation next year; and the object of this Bill was the collection and adoption of all the amend-

ments recommended by the Royal Commissioners in their report on this subject.—Mr. Corrance said that he still urged there should be an united county authority instead of placing a matter of such great importance under the authority of an irresponsible Crown officer. The Bill referred to eight Acts of Parliament; and, instead of endeavouring to digest the present laws, the house ought at once to consolidate them. The effect and nature of this Bill would be to entail enormous expense without any adequate return. He moved that it was inexpedient to add to the duties at present imposed upon sanitary authorities constituted by the Act of 1872, until their powers were better defined by a consolidation of the statutes, and appointments had been completed in conformity with the intentions of the Act.—Mr. Hibbert said that the Local Government Board and the Government were prepared to give a hearty support to this Bill.—Mr. T. Collins said the house could not give its time this session to a due consideration of this question. They ought not to be over hasty in legislating.

It being a quarter to six o'clock, the debate, by the rules of the house, was adjourned.

OBITUARY.

MICHAEL COOKE, M.R.C.S., SURGEON TO THE NORTH DEVON INFIRMARY, BARNSTAPLE.

MR. MICHAEL COOKE died on April 5th, after a protracted illness, at the age of 59. The deceased was the son of a substantial yeoman, at High Bickington, and commenced the study of his profession under Dr. Cocks, of that place. On establishing himself in Barnstaple he soon acquired a considerable practice. He was an union medical officer, and also filled the post of surgeon of the North Devon Infirmary. Mr. Cooke was long a member of the Town Council of Barnstaple, and in 1863 was elected chief magistrate of the borough. At the time of his death he was an alderman.

DAVID SKAE, M.D., PHYSICIAN TO THE MORNINGSIDES ASYLUM.

OUR obituary contains (says the *Scotsman*), the name of a man who has long held an eminent position in his profession, and has occupied an important and responsible office in Edinburgh. Dr. Skae was educated at St. Andrew's and Edinburgh Universities, where he approved himself a highly distinguished student. At an unusually early age he became a lecturer, first on anatomy, and then on medical jurisprudence, in the Extra-Academical Medical School of Edinburgh. He was generally considered one of the ablest amongst a band of distinguished men, who afterwards shed lustre on the Edinburgh Medical School, and of whom Martin Barry, John Reid, George Wilson, John Goodsir, James Y. Simpson, and William Henderson, not to mention the names of the few survivors of the group, will not readily be forgotten in the annals of medical science. Dr. Skae acted for ten years as surgeon to the Lock Hospital. He was appointed in 1846 to the office of Physician Superintendent of the Morningside Asylum, and he has ever since devoted his whole attention to the management of that institution, and in connexion therewith to the subject of mental diseases. This class of ailment he studied and expounded so successfully, that he was considered one of the very highest living authorities on the subject, either in this or any other country. His classification of insanity formed an epoch in the history of this branch of medical science, and is now almost universally adopted in this country and on the continent. He was engaged, at the time of his death, in preparing a treatise on insanity. Dr. Skae was one of the most kindly and genial of men, large-hearted, sympathetic, and tolerant, with a refined taste and most subtle humour, a singularly clear judgment, and well balanced mind. Under his superintendency the Morningside Asylum has acquired a world-wide reputation, and has become a school in which have been trained a large number of the medical superintendents of the English and Scotch asylums. The asylum itself has grown under his management to twice its former size. By his death its unfortunate inmates have suffered a great loss, and most deeply is he regretted by them all. Dr. Skae, who was in his sixty-fifth year, had been in somewhat failing health for the last three years, and died of a painful disease of the throat.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, May 1st, 1873.

Brown, George, Callington, Cornwall
Jackson, Henry, Great Torrington

The following gentlemen also on the same day passed their primary professional examination.

Mitchell, C. J. C., Guy's Hospital
Treharne, J. L., Guy's Hospital

As an Assistant in compounding and dispensing medicines.
Smith, James William, Camberwell New Road

MEDICAL VACANCIES.

THE following vacancies are announced:—

- ALCESTER RURAL, and other Sanitary Districts, combined—Medical Officer of Health: £600 per annum.
BALLINASLOE DISTRICT ASYLUM—Apothecary: £50 per annum. Applications to Dr. Eaton, Resident Medical Superintendent.
BASFORD RURAL SANITARY DISTRICT—Medical Officer of Health: £500 per annum. Applications to R. B. Spencer, Esq.
BIRMINGHAM DENTAL HOSPITAL—Surgeon-Dentist.
BRIGHTON AND HOVE DISPENSARY—Two Resident House-Surgeons: £100 per annum, furnished apartments, coal, gas, and attendance.
BUXTON URBAN SANITARY DISTRICT—Medical Officer of Health: £40 per annum.
CARMARTHENSHIRE INFIRMARY—House-Surgeon: £100 per annum lodging, coal, and candles. Applications to H. Howell, Secretary.
CHAPEL-EN-LE-FRITH, Glossop, and Hayfield Rural Sanitary Districts, combined—Medical Officer of Health: £300 per annum.
CHEADLE UNION, Staffordshire—Medical Officer for the Alton District: £23 per annum, and fees.
EDGEWORTHSTOWN, co. Longford—Medical Attendant to the Royal Irish Constabulary.
ELY UNION—Medical Officer for District No. 5 and the Workhouse: £51 per annum, and fees.
GORT UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ardahan Dispensary District: £100 per ann., and fees.
GRANARD UNION, co. Longford—Medical Officer for the Street Dispensary District: £100 per annum, and fees.
HUDDERSFIELD INFIRMARY—House-Surgeon.—Assistant House-Surgeon: £80 per annum, increasing to £100, and £40, board, lodging, and washing, respectively.
KIDDERMINSTER INFIRMARY—House-Surgeon: £120 per annum, rooms, coal, gas, and attendance.
LAMBETH—Dispenser: £90 per annum and extras.
MAIDSTONE UNION, Kent—Medical Officer for District No. 6: £67 per ann.
METROPOLITAN ASYLUM DISTRICT—Assistant Medical Officer for the Asylum at Leavesden: £150 per annum, board, and residence.
MORPETH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
NORTH LONDON CONSUMPTION HOSPITAL—Physician.
NORTH RIDING INFIRMARY, Middlesborough-on-Tees—House-Surgeon.
POPLAR—Public Analyst.
ROYAL GENERAL DISPENSARY, Bartholomew Close—Physician: £40 per annum.
ST. GEORGE and ST. JAMES DISPENSARY, King Street, Regent Street—Physician-Accoucheur.
SALISBURY URBAN SANITARY DISTRICT—Medical Officer of Health: £60 per annum.
TIVERTON UNION—Medical Officer and Public Vaccinator for the Bradninch District: £27 per annum, and fees.
TORRINGTON UNION—Medical Officer for the Winkleigh District.
TOWCESTER UNION—Medical Officer for the Towcester District and the Workhouse: £110 per annum, and fees.
WAREHAM AND PURBECK UNION—Medical Officer for the Winfrith District: £45 per annum.
WESTMINSTER HOSPITAL—Physician.—Assistant-Physician.—Assistant-Surgeon.—House-Surgeon.
WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per annum, board, and residence.
WOLVERHAMPTON AND STAFFORDSHIRE HOSPITAL—House-Governor and Secretary: £120 per annum, board, and residence.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

WHITE, George B., Esq., appointed Assistant Resident Surgeon to the Dispensary, Nottingham, *vice* Richard Johnston, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

- MALINS.—On April 28th, at 8, Old Square, Birmingham, the wife of *Edward Malins, M.D., of a daughter.
WRIGHT.—On April 28th, at the Hollies, Summer Hill, Birmingham, the wife of *M. Hall Wright, Esq., Surgeon, of a son.

MARRIAGES.

- SANDES—MACNAMARA.—On May 8th, by special licence, at 95, Stephen's Green, by the Rev. Samuel Houghton, F.T.C.D., Thomas W. Sandes, Esq., eldest son of the late Stephen C. Sandes, Esq., of Oak Villa, Tralee, co. Kerry, to Amy, eldest daughter of Rawdon Macnamara, M.D., ex-President of the Royal College of Surgeons in Ireland.
SLOMAN—DONKIN.—On May 1st, at St. Andrew's Church, by the Venerable Archdeacon Utterton, assisted by the Rev. P. H. Newnham, *Samuel George Sloman, Esq., jun., of Farnham, to Margaret Sarah Julyan, daughter of the late Henry Donkin, Esq., of Farnham, Surrey.

DEATH.

WILLIAMS, E. E., Esq., Surgeon, at Llanegwad, Carmarthenshire, aged 37, on April 6th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Burdon Sanderson, "On the Infective Product of Acute Inflammation."

FRIDAY.—Medical Microscopical Society, 8 P.M. Mr. Atkinson, "On the Preparation of the Brain and Spinal Cord for Microscopic Examination"; Dr. Osler, "The Action of Certain Reagents upon White Blood Corpuscles"; Dr. F. Payne, "Some Points in the Structure of the Omentum."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

A YOUNG MEMBER wishes to know whether an English diploma is recognised in Spain; and, if not, how a Spanish one is to be obtained? Also, where he could get information as to the present state of medicine in Spain?

. Perhaps our friendly associate, Dr. Jelly, who practises in Madrid, would kindly furnish some information.

DR. CLARK'S communication has been handed to the General Secretary, Mr. Fowke, to whom ALL COMMUNICATIONS CONCERNING THE LIST OF MEMBERS SHOULD BE ADDRESSED.

MR. E. W. JACKSON.—The communication is unsuited for our columns.

M.D. can claim her fee under the circumstances stated.

CROXTON v. WINSLOW.—We have received the papers on the case of Croxtton v. Winslow, with pain. They seem to be circulated in a very vindictive spirit against Dr. Winslow, and do not include Dr. Winslow's answer on the facts.

THE steady increase in the numbers of our readers, the extension throughout the kingdom of the operations of the Association, the activity of the Branches, and the wide scope of the places, societies and subjects now brought into relation with our readers, make constantly increasing demands upon our space; and enforce a selection from the material at command, varying with the claims of respective subjects, authors, and official writers. Hence we have been unable to publish yet many of the papers mentioned some weeks ago as being in type, and we must ask contributors to consider that their claims are not necessarily overlooked because the publication of their communications is delayed.

THE "PRIMARY" PASS LISTS AT THE ROYAL COLLEGE OF SURGEONS. WE are requested by Dr. Cayley, Dean of the School, to correct the statement contained in the paragraph from the *Students' Journal and Hospital Gazette* which was quoted in our last issue, that, of the Middlesex Hospital students, one gentleman was unsuccessful. All the students sent up by that school passed successfully.

A CORRESPONDENT asks to be furnished with the names and the addresses of the officers of any provident medical dispensaries in the West of England. Perhaps he had better communicate with Dr. Nankivell of Torquay, who could, we think, give him the required information.

ERRATUM.—In the list of Officers of Branches in last week's JOURNAL, page 498, under the head of Lancashire and Cheshire Branch, for *President-elect*, E. White, Esq., Warrington; *Vice-President-elect*, T. S. Smith, M.B., Warrington; read *President-elect*, Charles White, Esq., Warrington; *Vice-President-elect*, Joseph Smith, M.D.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MR. HEMMING (Kimbolton).—The further report on Electrical Instruments is in type, and its publication is only delayed by the constant pressure on our space.

NURSING WARDS.

THE following advertisement has appeared in the *Times*.

"Nursing Wards for Sick Women.—London Diocesan Deaconess Institution, 50 and 51, Burton Crescent, W.C. Patients of a respectable class, upper servants, wives of artisans, etc., specially cases requiring great care or likely to be lingering—last stages of consumption, etc.—not admissible in ordinary hospitals, are received here. Such cases are specially costly, but the percentage of success is very large. Will those who have riches, help? Wine, brandy, etc., as well as money, gratefully acknowledged. The patients pay out of wages or scanty savings, 7s. a week, and deserve help, because trying to help themselves. Treasurer, J. A. Hallett, Esq. Bankers, Messrs. Bosanquet, Salt, and Co."

The above is an excellent institution, we believe; but its medical statements need a little revision. It can hardly be seriously meant that a "very large percentage of success" is achieved in treating patients "in the last stages of consumption not admissible in ordinary hospitals"; but that is what is stated. The advertisement needs correction.

AN URGENT APPEAL.

SIR,—I take this opportunity of making known, through the medium of the JOURNAL, the facts of a very sad case, feeling quite sure that it only requires to be mentioned to elicit sympathy and help from those of my professional brethren who are able to contribute in some small way to its relief.

Dr. William B. Clayton, who was for nearly thirty years connected with the Dispensary of Athy, co. Kildare, was driving home, on the night of March 23rd, from paying a professional visit. When passing through the town, his Croydon came into contact with a heap on the road. He was thrown out on his head. He however managed to pick himself up, and reached home just in time to tell what had happened to him. He became unconscious at once; symptoms of compression of the brain set in; and he died in two days afterwards from extravasation of blood, etc., leaving a wife and eight children wholly unprovided for.

Dr. Clayton was a man of sterling character, endeavouring to do his duty to the best of his ability, and was respected by all who knew him. Leaving his family, as he did, in needy circumstances, was no fault of his; as he tried to insure his life some years ago, but was found ineligible. A fund is now being raised for his family; and I will only be too happy to receive and acknowledge any subscription sent to me for that purpose.

Dr. Clayton's eldest son has commenced the profession, and it would be hard to think he should be prevented from proceeding with it owing to the want of funds.

I am, etc.,
LAMBERT H. ORMSBY, Surgeon to the Meath Hospital, Dublin.

12, Lower Fitzwilliam Street, Dublin, April 30th, 1873.

P.S.—The following gentlemen will also receive and acknowledge subscriptions for the above:—Rev. Henry McDonald, the Rectory, Athy, co. Kildare; Frederick Haughton, Esq., Levinstown, Athy, co. Kildare; F. M. Carrol, Esq., J.P., Moon, Ballymore, co. Kildare; Rev. R. W. Baggot, Fourtown Glebe, co. Kildare.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, May 3rd; The Manchester Guardian, May 7th; The Aberdeen Daily Free Press, May 3rd; The Bath Express, May 3rd; The Birmingham Daily Post, May 7th; The Birmingham Daily Mail; The Hull Packet; The Daily Bristol Times and Mirror; The City Press; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Graily Hewitt, London; Dr. G. M. Humphry, Cambridge; Mr. Campbell De Morgan, London; Dr. Southey, London; Dr. Kelly, Taunton; Our Edinburgh Correspondent; Dr. Dixon, London; Mr. Reeves, London; Mr. Durham, London; Mr. Hemming, Kimbolton; Mr. Millar, London; Mr. F. Foster, Wolverhampton; Mr. G. Lawson, London; Dr. Mackey, Birmingham; Dr. Hughlings Jackson, London; Dr. Ferrier, London; Dr. B. W. Foster, Birmingham; The Secretary of the Clinical Society; Dr. Broadbent, London; Dr. A. R. Graham, Weybridge; Dr. Morell Mackenzie, London; Dr. Algave, Paris; The Secretary of the Pharmaceutical Society; Dr. Carbonari, Florence; Mr. Groves, London; Mr. Blackett, London; Mr. Blower, Liverpool; Dr. Clark, Clifton; Our Dublin Correspondent; Dr. Brunton, London; Mr. Lloyd Owen, Birmingham; The Secretary of the Royal Medical and Chirurgical Society; Mr. C. R. Thompson, Westerham; Mr. Clement Godson, London; Dr. Crombie, London; Dr. Burdon Sanderson, London; Mr. Batley, Drinkwater; Mr. Cawley, Malvern; Mr. W. J. Harris, Worthing; Mr. Holmes, London; Mr. W. H. Day, London; Our Paris Correspondent; Mr. Fowler, Bath; Mr. Lock, Tenby; Dr. Fleming, Birmingham; Mr. McGill, Leeds; Mr. Good, Dorchester; Mr. A. T. Norton, London; Dr. De Chaumont, Netley; Dr. C. Kelly, London; Mr. H. Royes Bell, London; Dr. Bryan, Northampton; Mr. R. H. B. Nicholson, Hull; M.D. Ed.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Pathological Society; Dr. Althaus, London; Mr. H. M. Jay, Chippenham; Dr. Barclay, Leicester; Enquirer; Dr. Tiffen, Wigton; Mr. W. B. Hughes, Liverpool; Dr. Cayley, London; Dr. Trollope, St. Leonard's; Mr. Balmanno Squire, London; Mr. Clegg, Epping; Dr. W. B. Hunter, Matlock; Dr. Macnamara, Dublin; Our Glasgow Correspondent; Mr. Spencer Wells, London; Dr. J. Maxwell, Edinburgh; The Secretary of the Faculty of Physicians and Surgeons, Glasgow; Mr. W. J. Nixon, London; etc.

INTRODUCTORY ADDRESS

ON

THE OPENING OF THE TWENTY-SIXTH SESSION
OF THE ARMY MEDICAL SCHOOL.**Delivered at Netley, on April 2nd, 1873.*

BY

F. S. B. F. DE CHAUMONT, M.D., F.R.C.S.E., Surgeon-Major,
Assistant-Professor of Hygiene.

Now, gentlemen, in order that our influence, which, as I have said, must always be great, may be for good both to the service of the country and to our profession, as well as to the community at large, it becomes our duty to consider how we are best to discharge the various functions committed to our charge, and to use our utmost endeavour to carry this knowledge into successful practice. We must ever bear in mind that the end and object of our position, and, indeed, our very *raison d'être*, is war, and that but for its possibility (or rather we may say certainty) the services to which we belong would have no existence. Therefore, it ought always to be before our thoughts that it is for efficiency during that hour of war, which may or may not come to all of you, but which is sure in these times to fall to the lot of some, that we are retained and paid in time of peace. In everything that we do this great consideration should have a place, and no opportunity should be lost of adding to a knowledge which may be priceless in the hour of need. Neither should we presume too much upon previous success, for no amount of success will ever atone for subsequent failures. The greatest enemy of progress and true efficiency is that complacency of pride founded upon previous success, and it is a danger to which nations are as liable as individuals. It engenders a pernicious trust in traditions and an idea that what has been will be again. In this way the memories of Marathon and Salamis were undoubtedly the causes of the disaster of Syracuse; Rosbach and Leuthen led Prussia to the shame of Jena; whilst Jena and Austerlitz have in our own time brought forth the bitter fruit of Gravelotte and Sedan. It is safer far to remember our defeats than our victories; and our failures in the Crimea have proved of more lasting benefit than the brilliant and successful feats of arms which have added lustre to our name. No; success once achieved is done with, and ought to have no further influence, except to spur us on to fresh achievements, remembering the motto of Cæsar:

"Nil actum reputans si quid superesset agendum."

Taking this, then, as the principle that should pervade our whole course of action, let us consider what is specially demanded from the army or navy medical officer. In a strictly professional point of view, he is called upon to be ready to act in any capacity. He may find himself (and in future probably more frequently still) the sole medical man with a corps, or in a ship, and must, therefore, be prepared to act with promptitude and energy under any circumstances. He is even in a more difficult position than a general practitioner at home, for the latter can generally have the benefit of the advice of some professional brother in unusual or difficult cases. But the military or naval practitioner has often no such resource, and he must be prepared to play the game off his own bat and take the consequences. In like manner, he is called upon to perform a number of other duties besides the mere medical or surgical practice which is usually thought of as his proper vocation—for he must be his own sanitary officer, his own analyst, must superintend the record of meteorological and other observations, and generally discharge a multiplicity of functions which rarely, if ever, fall to the lot of a practitioner in civil life. It is true that those duties may be scamped or performed in a mere perfunctory manner; but we trust that a better spirit prevails, and that each will endeavour to do his share of the work to the best of his power; and it were well when a sense of responsibility may oppress you, or the absence of assistance tends to make you nervous, to remember a saying of Franklin's—"To be thrown upon one's own resources is to be cast into the very lap of fortune." There is one duty which our varied opportunities of observation demand from us, and which we are too liable, all of us, to neglect; and that is, to note and record for the general benefit those cases or points of scientific value which come before us. Procrastination and indolence too often fight against us here, and much is lost that might advance scientific know-

ledge. You cannot be too careful to cultivate the habit of observing accurately, a much more difficult thing than one would be inclined at first sight to imagine; and on this point the remarks of Sir John Herschel, in his *Preliminary Discourse on the Study of Natural Philosophy*, are of especial value. A habit also of noting down at once anything that strikes you as of importance is invaluable—for all notes are valuable in the ratio of their nearness in time of record to the fact recorded. However good the memory may be, the clearness of the recollection must get partially dimmed, and many apparently slight but really important touches lost; which may, perhaps, prove essential in the long run and their absence rob the whole record of its value. *Litera scripta manet* is a good motto for a worker in a scientific profession, but if memory be the only tablet, it too often proves to be written in water. Search also carefully for confirmatory evidence, and strive to cultivate the judicial mind, accustoming yourselves to weigh and estimate the value of each apparent fact or observation. In short, the precept of St. Paul, to "prove all things, hold fast that which is good," is one to be ever borne in mind; and by doing so we shall so far steer clear of the reproach which has attached to our profession of producing "more false facts than false theories." And it were wise also to apply this method of occasional verification even to the most time-honoured principles and apparent axioms. It is astonishing what hoary impostors may be thus sometimes unmasked. Be especially chary of giving too great value to mere hearsay evidence, or statements that have been obtained otherwise than at first hand. It is a well-known fact that if half-a-dozen persons see the same occurrence, and each be required to furnish an independent narrative thereof, we shall in all likelihood receive six totally different accounts. And yet none need be essentially false, but the power of estimating the value of each detail will vary, and one point will strike one man and another another, each consequently and unconsciously giving prominence to a part of the story that may not be in the least essential to the result. A slight acquaintance with the mathematical theory of probabilities is of importance as bringing out the bearing of this in a striking manner. All persons are not equal in their power of accurately transmitting the truth, not from any wilful or conscious falsehood, but from the natural imperfection of our organisation. Now, if a statement be transmitted through a succession of persons, the ultimate value of it will be represented by the product of the personal value of each individual. Thus, if we take a certain number of persons of very high personal value in this direction, and say that each is capable of transmitting 99 per cent. of the truth, we shall find, even under such favourable circumstances, that we have after transmission through ten individuals only nine-tenths of the truth left, but after transmission through a hundred individuals there is little more than one-third left, and this is a greatly exaggerated estimate. What chance, then, has a tradition, handed down orally for ages, of containing any appreciable amount of the original truth?

In your position as sanitary and medical advisers to the officers commanding your regiments or ships, you have great and responsible duties to perform—duties which will demand both knowledge and judgment—for upon your advice so given, serious issues may often depend. If it be founded on erroneous opinions or insufficient knowledge, it may not only entail direct evil consequences, and compromise both yourself and the profession and department whose representatives you are, but it may also lead to your advice being disregarded and your opinion slighted on another occasion when both may be right. Of course, the best of us are liable to error, and some allowance must be made; but the error in most cases will be slight when an honest endeavour is made to reach the truth. And here, remembering the comparatively limited and certainly imperfect character of human knowledge, I would venture to warn you against too great dogmatism in your statements or advice; for it is, to say the least of it, embarrassing to be forced afterwards to retract an opinion enunciated with all the flourish of certainty and knowledge, when further researches prove its premisses to be false. Of course, dogmatism, like hypothesis, is necessary to a certain extent, and has its due place in all teaching; but a wise man who is open to learn by experience soon comes to distrust it and to eschew it as much as possible. On this point, the following remarks of a critical writer are apposite.

"The fact is that men, as they acquire depth and solidity of knowledge, find the original sharpness of the outlines gradually becoming softened or rubbed away by scepticism and thought. They find that, in a great measure, the clear distinct divisions and definitions which they have been taught by the instructors of their youth are not the eternal truths which they supposed them to be. That mind is not worth much which has not had occasion to readjust and alter a great deal of what was imparted to it, both in the physical and mental sciences, as certain truth—truth as certain as Algebra. A dogmatist is the best answerer of questions; and boys are generally dogmatists, not

* Concluded from page 526 of last number.—Published by authority of the Secretary of State at War.

from an overweening conceit in their own judgments, but from a confiding reliance on the infallibility of their instructors."

Now, gentlemen, it would be in the highest degree suicidal on my part to try to shake your confidence in your instructors at this early period of the session; but I bear in mind that I am not addressing a class of first year students, but a body of fully qualified medical men, who have passed, as we may say, the days of *zeal*, and are capable of accepting in its true spirit the statement that we desire in our teaching to dogmatise as little as possible. Indeed, the numerous doubts and difficulties we have to lay before you will show that what I say is *de bonne foy*; and that we only hope to point the road on which you must hereafter travel, guided much by your own light—a light, however, which need not fail if the lamp be trimmed on the principles of true science. Progressive experience will bring these truths more and more home to you, and you will be able fully to appreciate the witty summing up of the whole matter by Jerrold, who said that "*dogmatism was merely puppyism arrived at maturity.*"

In your personal relations with the officers with whom you are hereafter to be associated, it should be your endeavour to keep up as much as possible the reputation for scientific knowledge which has fortunately often attached itself to the army or navy surgeon. But this will demand hereafter more continuous effort than heretofore. Formerly, the medical officer was almost the only one whose calling led him to study science at all, and therefore in this matter a very slight and superficial knowledge was often sufficient to place him in a position of importance and even pre-eminence. But now that the desire for scientific training is permeating all classes, and knowledge is so far increasing that some of my acquaintances, who are rather *laudatores temporis acti*, express their belief that the masses are too well educated, it is not a mere smattering that will suffice; and for a man to be considered really scientific, an amount of knowledge is required that would have almost set up a professor in times gone by. The increasing accuracy, too, of the hitherto less certain physical sciences renders their acquisition more and more difficult—one part in a million being now an appreciable and even large amount in chemistry—whilst the application of rigid mathematical demonstration is becoming daily more possible to branches of knowledge which were vague and visionary a few short years ago. For instance, I may cite the progress made in the measurement of muscular force and energy, the determination of the mechanical equivalent of food; and particularly the ingenious researches and calculations of the Rev. Professor Haughton on the law of least action in Nature. Not a decade passes but some new and practically illimitable field is opened up, so that even now a single branch of a science is more than can be mastered within the life-span of one man. Indeed, it is many years now since the story was told of a German mineralogist who devoted his life to carbonate of lime, and at its close expressed his regret that his studies had been so diffuse.

You will thus easily see that, if we are to hold our place as scientific men, we must not rest on our oars, but make continuous and ever increasing endeavours to keep up with the advance of the times, for which purpose the opportunity of a return to this school after a term of service ought to have the highest value; and we are glad to think that it is only the comparatively small space at our command here that limits the number of officers who avail themselves of it.

During your service you will frequently find much leisure time on your hands, and it will be for yourselves to decide how it is to be spent, much of your future success depending upon the decision to which you come; for this time is, properly speaking, not your own to idle or misuse. It is true that even Apollo does not always bend his bow, and that the mind demands relaxation; but still, even when that is fully allowed for, there is much time that calls for profitable use after the professional duties strictly demanded of you are finished. If every one stuck rigidly to his own special calling, and to that alone, I fear the progress of knowledge would be much slower than it is. We must remember that there is always a fresh generation growing up who are to come after us, and who will continually demand more and more to satisfy the increasing appetite and increasing capacity for knowledge. To this we may apply the beautiful lines of Lucretius:

"One race increases and another wanes,
And in brief space the living pass away,
And, like the runners in the games, hand on
The torch of life to their successors...."

But as in those very games the torch required to be alight and blazing, so must we see that the one we hand to our successors be not less bright than when it came to us. Allow me, therefore, to suggest the adoption of some one or more collateral pursuits on which you may profitably ring the changes from your strictly professional studies. In this way you will, in addition to other advantages, guard against a considerable danger—viz., professional bigotry and narrow-mindedness.

Nothing so warps the mind as the habitual movement in a groove. This obtains in every profession and every science; and, to my mind, there never was a falser word spoken than that which said:

"A little knowledge is a dangerous thing;
Drink deep, or taste not the Pierian spring."

It is true, a man should drink deep of that knowledge which concerns his own particular calling; but, as regards other subjects, there is one thing that is more dangerous still, and that one is, no knowledge at all. Perhaps the danger of too close attention to one line of thought is nowhere better seen than among mathematicians: I do not mean the master minds of mathematics, who open up new countries in the science, but the ordinary average student of the science, who is often the victim of a singular credulity. I might cite examples of this; but I will merely point out that the matter has been well and ingeniously treated by the American writer, Edgar Allan Poe, in his curious story of the *Purloined Letter*, where the hero trusts to outwitting his opponent because he is a mathematician, and nothing more. Had he been both a poet and a mathematician, he would have failed. It may be easily understood that, though we may reduce some portions of it to rigid demonstration, it is hopeless to think of measuring the cosmos, when even in our own limited sphere we are compelled to introduce apparently impossible, and certainly incommensurable, quantities, in order to treat satisfactorily that which we may know. How, then, can we measure the infinite? It was for such reasons as these that the late philosopher, Sir William Hamilton, questioned the value of mathematical studies as an exercise for the mind; for he said, "A mind comes ill-trained for the hunting-field of probability by assiduous locomotion on the railroad of calculus and demonstration". Now, life is to us but a hunting-field of probability, and what is applicable to pure mathematical studies is, *mutatis mutandis*, applicable to other branches of knowledge. It behoves us, therefore, to make every effort to expand the mind and to enlarge our field of knowledge, knowing that for the healthy intellect a change of occupation is the truest rest. Hear what the eloquent author of *Friends in Council* says: "We are not here to promote incalculable quantities of law, physic, or manufactured goods, but to become men—not narrow pedants, but wide-seeing, mind-travelled men. Who are the men of history to be admired most? Those whom most things became; who could be weighty in debate, of much device in council, considerate in a sick room, genial at a feast, joyous at a festival, capable of discourse with many minds, large souled, not to be shrivelled up into any one form, fashion, or temperament."

And now, gentlemen, let me say, in conclusion, one thing, which may indeed seem superfluous. Knowledge is an excellent thing, but we shall fall far short of our great calling unless we cultivate, in addition, those high and chivalrous sentiments of truth and honour which go to make up the true gentleman. Ours is a noble profession, and in this sense let *noblesse oblige*. The old proverb says, "Manners makyth man"; but in regard of these we may agree with Lord Bacon, who says, "To attain good manners it almost sufficeth not to despise them; and, if a man labour too much to express them, he shall lose their grace, which is to be natural and unaffected." To this we may add, that he who makes honour the guiding rule of life will not fail to show it in his manners to his fellows.

And now, gentlemen, in wishing you God-speed in your career through this school, and afterwards in the service to which you belong, let me say that each one of you carries the happiness and prosperity of his future life in his own hand; and, more than this, that upon your individual conduct depends whether the inevitable advancement of your department shall be hastened or retarded, for as years pass on a stricter account will be demanded of all public servants as to how they have bestowed the talent entrusted to them. Let us hope that when the time of reckoning comes, ours may not be found laid in a napkin.

SPONGE-TENT IN EPISTAXIS.

I HAVE read with pleasure the remarks of Mr. Skinner in the JOURNAL on the use of sponge-tents in cases of bleeding from the nose. I can corroborate what he says in regard to his plan of treatment. For about six years I have always used sponge-tents in cases of epistaxis. The method of preparation is very simple. Have a long piece of fine sponge, dipped in a solution of gum, compressed with twine, dried; and, after the twine has been unrolled, the sponge is thickly coated over with white wax. This is easily passed along the floor of the nostril, leaving a piece of red tape for extraction. The tent may remain for six hours, and must be gently rotated before extraction, to prevent fresh hæmorrhage.

JAMES YOUNG, M.D. Edin.

LECTURE

ON THE

CLINICAL IMPORTANCE OF ACQUIRED DEFORMITIES OF THE UTERUS.

Delivered at University College Hospital.

By GRAILY HEWITT, M.D., F.R.C.P.,

Professor of Midwifery and Diseases of Women, University College; Examiner in Obstetric Medicine to the University of London.

GENTLEMEN,—The discussions which have recently taken place on the subject to which I now propose to direct your attention, invest it with great interest and importance. The doctrines which are enunciated in the work published by myself a few months ago, and which lay claim for the acquired deformities, flexions, and changes of place of the uterus, a degree of clinical importance which they have not usually received, have, as might have been expected, undergone much criticism. The questions at issue cannot be settled in a moment; nor is it a matter of wonder that in this, as in all other affairs, the “influence of authority” should for a time delay the reception by the professional mind of ideas not in consonance with those more generally accepted.

Changes in the “place” of the uterus are very familiar, prolapsus in its various forms being well known; but changes in the “shape” of the organ, although known frequently to exist, have not been thought to be of primary importance; nor have they been associated—certainly not on a large scale—with the discomforts with which patients affected with these, together with other affections (*e.g.*, inflammation) of the uterus, are troubled.

The statement which I have put forward, to the effect that “patients suffering from symptoms of uterine inflammation (or, more properly, from symptoms referable to the uterus) are almost universally found to be affected with flexion or alterations in the shape of the uterus, of easily recognised character, but varying in degree,” and which has been questioned, is one the truth of which can be verified only by observation, it being a question of fact. The “fact” is, however, most important; and it is the expression of observations and a patient and continuous inquiry which I have carried on for some years past. Other unprejudiced observers will, I am quite sure, find the statement to be substantially correct. It is essential to draw especial attention to it, because this fact is a part of the basis of the system of uterine pathology which I have adopted.

The statistics which I have collected within the walls of this hospital, and to which I would in the first place refer, bear out the statement in question. During a period of over four years, I saw here 1,205 patients. Of these, there were 624 cases presenting uterine symptoms, and in which an examination was made; 397 (or 63.6 per cent. of the cases examined) were found to be affected with alteration in the shape or position of the uterus; the remaining 36.4 per cent. being cases of pelvic cellulitis, cancer, fibroid tumours, hæmatocele, hypertrophy of cervix uteri, and certain other minor disorders. And it resulted further that, while menorrhagia, leucorrhœa, and amenorrhœa were exceedingly common, these three disorders collectively, *unassociated* with flexion or change of position of the uterus, only amounted to 4.5 per cent. (included in the 36.4 per cent. above mentioned) of the 624 cases. Dysmenorrhœa is not mentioned as a distinct disease at all, for the reason that, in every case where it existed and the patient was examined, the uterus was physically changed as regards shape. Nor does “inflammation of the uterus” pure and simple come into the category—not because it was not present, but because it was common, associated with leucorrhœa, menorrhagia, flexions, etc. Further particulars concerning certain other cases, ninety in number, where an examination was not made, and where, consequently, the diagnosis was less exact, will be found in the new edition of my work.

It has been objected, that these statistics are not exact; and further, that they have been constructed to support a foregone conclusion; further, that it would have been easy to deduce a different conclusion from them—giving prominence, for instance, to inflammation of the uterus, instead of flexions. As to the accuracy of the observations that flexions were found to exist in so large a proportion of the cases, I shall not seek to prove it in any other way than by reasserting it; the observations having been made in a public hospital, extending over a space of more than four years; the record made at the moment, open to criticism as regards accuracy by others present, and duly preserved.

As to the “fact”, then, that these alterations in the shape of the uterus are frequently found to be present in patients applying for relief from uterine suffering, simple denial of its accuracy will not suffice. To refute it, statistics and observations on an equally extensive scale must be adduced. The argument that these statistics were concocted to support a foregone conclusion is difficult to meet; for the same argument might be applied to the procedures of any scientific investigator, however unbiassed, skilful, and unprejudiced. I can only say that I have had no object in advocating this, that, or any other view, as regards uterine pathology. My sole object has been to arrive at the truth, and I have merely recorded the facts which have come before me. The other objections will now be considered.

The great question is the clinical value or importance of change of shape of the uterus. This, after all, is the vital one. It does by no means follow, because flexions of the uterus are frequently observed in patients applying for relief, that these particular changes in the uterus are the most important; nor, indeed, does it logically follow that they are of any importance whatever. This we are all free to admit. The proof that they are of importance must be chiefly of a clinical kind. My clinical experience enables me to affirm that they are of very great importance in causing the symptoms which induce patients to seek for relief. A principal objection made to this is, that flexions of the uterus do not *of themselves* occasion inconvenience to the patient, but that the pain, inconvenience, or what not, are due to the associated inflammation; and some go so far as to say that the inflammation causes the flexion. Here we are distinctly at issue. What is the nature of the relation between the two things—the change of shape and the inflammation (I should prefer the term “congestion” to “inflammation”, but the point is not material to the present discussion)? I have nowhere stated, what has been imputed to me, that the flexion is the *fons et origo mali*; and I repudiate that view. On the contrary, the proposition above quoted from my recent work is immediately followed by another. “The change in the form and shape of the uterus is frequently brought about in consequence of the tissues of the uterus being previously in a state of unusual softness, or what may be often correctly designated as chronic inflammation.” This part of the question is elsewhere more fully elaborated; and I have been at great pains to show the mutual effect of the previously diseased state of the uterine tissues, and this alteration of its shape, in perpetuating and rendering chronic the sufferings of the patient. Let us, then, clearly understand each other. I have not denied, and do not deny, the importance of the tissue-changes in the uterus—very far indeed from it; but what I call especial attention to is the effect of the flexion in perpetuating, and not unfrequently actually giving rise to, the congestion or other tissue-changes. Some, who differ from me on other points, agree in admitting the fact of the frequent *simultaneous* occurrence of flexions and congestions. “But,” say they, “it is the congestion which causes the suffering, and the flexion goes for nothing;” or reasoning to that effect. The basis of this objection, which it is worth while to consider for a moment, appears to be that flexions are, as it is asserted, frequently found in patients who have no symptoms or inconvenience from them. It is undoubtedly true that in some few cases, where a flexion has existed for some years, the patient ceases to suffer markedly therefrom. The uterus does in some instances in process of time become accustomed to its altered shape—chiefly, I believe, however, in cases where the flexion is not very acute. Simple retroversion of the uterus, for instance, with but very slight flexion, comes into this category. As to the *frequent* occurrence of cases of flexion without symptoms, I deny that it exists. A further objection made by those who uphold this view is that, when the patient is treated by attacking the congestion, the flexion is found to disappear or to become materially lessened by this means; and inasmuch as, by taking away blood from the uterus, by cauterisation, etc., the patient is relieved, therefore it follows that the flexion is only of importance when it is associated with or caused by the inflammation of the uterus which is present. But I read these cases differently, and draw a very different conclusion from them. Let it be supposed, for the sake of argument, that I admit (which I do not) that flexions only occasion suffering when there is flexion *plus* congestion. Does it necessarily follow that the congestion is the solely important element? I concede that the congestion is important; but, inasmuch as it is either produced by the flexion, or, at all events, kept up by its means, it is the flexion which is the more important. I believe the explanation which I have given in my work of the way in which congestion is favoured and produced mechanically by the actual bending of the uterus, and by the impediment to the free course of the circulation in the walls of the organ, is correct; and it has not yet been pointed out that this explanation is at variance with anatomy or with physiological laws. It is evident enough that to take away blood from the uterus will diminish the congestion for the time;

and a succession of depletions may even do permanent good. Further, in some few cases it may be essential to adopt this means of lessening the congestion. But, if my view of the *rationale* of congestion of the uterus in these flexion cases be true, it follows that we may more profitably devote our time and attention to removing the cause of the congestion, than to simply palliating it. I assert that the effect of mechanically treating the uterus (which does not imply that pessaries or other internal mechanical agents are necessarily employed at all) is most marked, and that cases treated on this principle rapidly undergo improvement in regard to the congestion. No one who has not, as I have for some time past, systematically regarded the shape of the uterus as a very important subject of attention, can judge of the results obtainable in this way. My experience of the great value of attention to this element in the case has led me to adopt the view that the flexion is the most important feature.

We all know that congestion of the uterus is one of the natural events to which it is liable, and that it occurs when the uterus is in a state of perfect health. It is known also that the uterus may be congested continuously, and that this may pass into a state of chronic inflammation (so called) without the organ having undergone a change of shape. But does it follow, as would seem to be implied by those who find fault with what I have said, that an alteration of the shape of the uterus, amounting not unfrequently to a complete doubling up of the organ on itself, will have no influence in producing or keeping up congestion there existing? Because congestion may occur without alteration of shape of the uterus, is that any argument in favour of the statement that flexions are of no moment as etiological elements in the case?

Another point: the uterus is an organ very little sensitive to the touch. I have frequently passed the sound into the uterus as far as the fundus, without the patient being aware that any instrument had been used. But the sensitiveness of the uterus to the touch in bad cases of flexion is something hardly to be described in words. Is the uterus *ever* found in this sensitive state, apart from the existence of a severe flexion? Putting on one side acute pyæmic inflammation of the uterus, I should unhesitatingly answer no.

Clinical observation alone has led to my frequently associating the suffering of the patient with the alteration in the shape of the uterus, and in this way. It has been my constant practice to inquire of the patient what is complained of, and what it is which gives inconvenience. It is a very curious fact, that patients questioned in this way almost invariably begin to describe a pain in the front, back, or side of the pelvis, which is increased on motion or by exercise; and this pain is, in its various forms, the principal element in the case in the patient's view of the matter. Generally, of course, there are other symptoms—leucorrhœa, profuse menstruation, dysmenorrhœa, etc.—which are now more, now less prominent features; but this does not invalidate the fact that pain, increased on motion, is important in the patient's eyes. My experience has taught me that the feelings and sensations of the patient are of great consequence; and that in diagnosis they are, when duly estimated, of great value. All are familiar with the fact that patients do complain of pains such as above described; but I do not know that the fact that they are frequently spontaneously brought forward by patients affected by uterine disorders, has been so distinctly alluded to by writers on these subjects. Be that as it may, however, I have found so great and close connexion between certain definite conditions of the uterus and certain definite statements of the patient in regard to her suffering, that I have repeatedly accurately made the diagnosis from the latter alone in the public practice of this hospital. What, however, is equally important, is, that patients very generally experience mitigation of those (to them) prominent symptoms when the flexion is dealt with, and means are taken, by rest or appropriate mechanical appliances, to prevent the fundus of the uterus from falling lower on the side to which it happens to tend. This is a matter which is only to be tested by experiment; and the truth of the statement now made has been tested by me for so long a time, and so very often, that I do not in the least think it is possible for it to be other than the truth. It is obvious enough why the pain is increased on motion: it is because the flexion is increased, and the malady thus for the time aggravated.

Another fact, the result of clinical experience, and which is of great interest in reference to the question at issue, is the remarkable frequency with which patients ascribe the commencement of their sufferings to some particular "mechanical" incident, such as a fall, a strain, prolonged walking exercise, standing, getting up shortly after child-bed, etc.; or at least the great frequency with which the malady is traceable to such events, on inquiring minutely into the history of the case. The injurious mechanical effect of strains, and such accidents as those above alluded to, cannot be denied; and no one carefully in-

quiring into the history of cases of uterine sufferings can fail to see the obvious connexion between the cause and the effect. As already stated, the tissues and attachments of the uterus may be, and frequently are, in a weakened state at the time of the accident, or strain or overwork is brought to bear upon them; but, as a matter of fact, they do give way, and the result is an alteration of shape of the uterus, as well as an alteration of position. The patient is subsequently quite conscious that something is not right; and then, on examination, the uterus is found to present the various combined effects of the injury itself, the inflammation it has caused, and the other secondary results, about the respective importance of which the discussion has taken place.

In short, the more attentively actual cases are scrutinised and regarded, the more obvious and important the "mechanical" element will be found to be. It is impossible, in fact, to disregard it in dealing with cases of uterine disease; and it is quite certain that it will be considered with great attention in the future. It will come to be an admitted axiom, that decided variations from the natural shape (the acquired deformities) of the uterus are generally associated with suffering and chronic disease; and that in very few instances can the patient be cured until the uterus is made to assume its natural shape and position.

The bearing of these remarks on the treatment of diseases of the uterus is obvious enough; but I would protest against the assumption which seems to have been made by some of my critics, that, because there is a "mechanical" disease present, I recommend that a mechanical internal appliance should be employed in every case. This would be absurd and unnecessary. One of the great agents we have at our command—the regulation of the position of the body—has very great influence in modifying the position and shape of the uterus, especially in cases where the affection is recent. In chronic cases, special mechanism is often necessary. Particular cases require attention to details; but this does not invalidate the fact, or detract from the value of the principle—viz., the fact that flexions of the uterus constitute the most severe and troublesome of its maladies; and the principle that, while other elements in the case must not be disregarded, the flexion must, by position of the body or by suitable appliances, be removed, if the patient is to be restored to health and comfort.

ABSTRACT OF LECTURE

ON

DISEASE OF THE NECK, WITH DYSPNŒA NECES- SITATING TRACHEOTOMY: PROBABLE CAN- CEROUS NATURE OF THE DISEASE.

Delivered at the Medical School of the Middlesex Hospital.

By CAMPBELL DE MORGAN, F.R.S.,

Surgeon to and Lecturer on Surgery at the Middlesex Hospital.

A MAN, aged 52, came into the hospital on the 1st November, 1871, with swelling and ulceration in the neck, and some dyspnœa. He gave an excellent family history. His father died at the age of 70; his mother at 50; his brothers and sister were alive and healthy; and he was not aware of the existence of any tendency to special disease in his family. He had himself been a very healthy man. He had never had syphilis—so he said.

About seven months before his admission he caught a severe cold, and a week or two afterwards, he noticed that the glands on the right side of the neck were slightly swollen. For some time before this, although his general health was good, he had had occasionally difficulty of breathing—enough to attract his attention, though he thought little of it. At this time, he was sure, there was no perceptible swelling. As the dyspnœa became more marked, and some swelling now made its appearance in the neck, a medical man was consulted, who used iodine lotion, but without benefit. The swelling increased, and, as he described it, broke, leaving an ulcerated surface. At length he came into the hospital. At this time there was a tumour involving the sterno-mastoid muscle. The fibres of the muscle appeared as though they were lost in the tumour. The tumour was hard, about three inches long, and nearly two inches wide. Its centre corresponded in level with the great cornu of the hyoid bone. It was painless and free from tenderness. An oval ulcer, smooth and dryish on its surface, occupied the centre of this tumour; it was flat, with rounded everted edges, looking as though it had ulcerated through, and then had overlapped the skin. The ulcer was about one inch and three-quarters long, and an inch wide. It gave him little or no pain. Situated just over the greater cornu of the hyoid bone, was a small movable tumour about as large as a pea. On the left side there

were a slight hardness and fulness in a situation corresponding to that of the tumour on the right side, and deeper in could be felt some very small nodules of hardened glands. The larynx was slightly thrust towards the left side; but no deep-seated tumour which could produce this was detected, and the tumour on the sterno-mastoid certainly did not pass inwards sufficiently to account for it. The patient's great distress arose from his dyspnoea, which at times, especially when he lay down, was very urgent, while at other times he was comparatively easy. The respiration was always croupous, and the noise was such as to keep himself and all about him awake; but he had no discharge of matter from the throat, and had never brought up blood. He had at times some, but not great, difficulty in swallowing, and this depended on spasm. I could never thoroughly examine the state of the throat. At times I could see enough to satisfy me that there was no great swelling about the pharynx; the sensitiveness of all the membranes of the mouth and throat was so great, however, that any attempt to press down the tongue or to pass the finger towards the larynx was attended by a fit of dyspnoea threatening suffocation. So far as I could feel, there was nothing unnatural in the state of the parts.

The difficulty of breathing became at length so severe when he attempted to sleep, that he was threatened with suffocation; and as this condition was increasing, and he had been almost sleepless for many nights, I gave direction to the house-surgeon to perform tracheotomy should he find the dyspnoea persist. This was done on the morning of the 9th November, and the man soon fell asleep, and remained so for fourteen hours. From that time he continued comparatively easy. He breathed partly through the larynx, for there was frequently stridulous breathing: he could speak, moreover, showing that air passed the vocal cords. The throat remained sensitive, but not so much so as before the operation. I was able to examine it better, but could not detect swelling. The tumours went on for some time increasing in size and number, and the trachea became more deflected to the left side. Later, he had a slowly increasing difficulty in swallowing, so that at length he could only take liquid food; but, though he took it by the mouth and by the rectum, he continually lost flesh. By and by, the tumours in the neck, instead of increasing in size and number, became smaller; and the ulcer also diminished, and in some parts cicatrised. He never had any pain or trouble from them. He gradually wasted away; but, as I often pointed out to you, the wasting was not that of cancerous cachexia. He had no wandering pains. His pulse became slower and weaker, like that of a man dying of starvation. His countenance wanted that peculiar look so usual in persons becoming exhausted under cancer.

He lingered on until June, presenting no fresh symptom. I had at first entertained no doubt of the nature of the case—considering it to be a deep-seated epithelioma, of which the tumours in the neck were secondary growths. But as the case went on, and the neck-tumours became more quiescent, while no kind of evidence of deeper seated cancer declared itself, I confess I began to doubt the correctness of this opinion. Could it be some form of lymphoma, pervading not only the neck, but extending to the deeper organs? The dyspnoea and dysphagia might be due partly to some small tumour pressing on the larynx or œsophagus, or involving or irritating the par vagum. I examined him often and very carefully, but could find no sign of tumour in the abdomen or upper thoracic region; and all his secretions were quite natural. I need scarcely say that the possibility of scrofula or syphilis being present was well considered: it was clear, however, that he was not the subject of either of these diseases. His death in June, about sixteen months after the appearance of his first symptoms, revealed the actual nature of the disease, though its course was not a common one. Towards the anterior wall of the œsophagus, a little below the level of the first ring of the trachea, was a soft patch of epithelioma; it did not involve more than about a third of the circumference of the tube, the remaining part being healthy. The growth had extended through to the posterior part of the larynx and trachea—a small nodule projecting through the cricoid cartilage and upper ring of the trachea: there was also one small patch of the same disease in the œsophagus, a little below the larger mass. The tube of the œsophagus was not encroached upon to such an extent as materially to diminish its calibre. In the neck on both sides were deposits of epithelioma in the glands—in parts breaking down into abscess. They formed a mass which nearly enclosed the posterior part of the larynx and the side of the œsophagus; without, however, encroaching on them. None of them were in a state of active growth; and in most parts fatty and granular degeneration was found pervading the cells. In no other part of the body could any trace of the disease be found.

There are some points of great interest in this case. First, as to the primary seat of the disease: it would seem that this was the upper part of the trachea or lower part of the larynx. The first symptoms were

those of dyspnoea; dysphagia did not come on for many months afterwards. Now, primary cancer of the trachea is rare; still more rare is it to find cancer in such a situation remaining almost innocuous for so great a length of time. I should rather suppose that, notwithstanding the absence of dysphagia, the œsophagus was first affected, and that the spasmodic dyspnoea was the result of reflected irritation. The very fact that the laryngeal disease amounted to little more than a projection of a cancerous nodule, would contradict the notion of this being the part first developed. Again, we know that cancer of the œsophagus does give rise at times to dyspnoea, though I have never seen it so marked as in this case, unless the larynx had become involved. But nearly eight months before his death his paroxysms of suffocation were so severe as to call for tracheotomy; and yet to the end he could use the vocal cords enough to utter one or two words when the tube was closed, though the dyspnoea soon came on if it were removed.

The duration of the disease, especially when considered with reference to the early rapidity of its invasion, is interesting. The glands of the neck were very early and somewhat extensively diseased—more so than we generally find in connection with cancer of the œsophagus; one mass of them ran very speedily into ulceration. But for some time before his death the disease had become quiescent in the glands, and could not have made much progress in the œsophagus. It often occurred to me that this quiescence or retrogression might have been due to the continually diminishing quantity of food which he was able to take. A very little food goes a great way with a man suffering from dysphagia; a great deal is returned, and the effort necessary to swallow any soon causes the patient to leave off. He really appeared like a man dying of inanition. He had a dry hard skin, a small and slow pulse; his extremities were cold, and his features pinched; but he had none of that feeling of excessive prostration which we generally find in those dying of cancer. I have elsewhere expressed my opinion that the practice often followed of feeding up patients with cancer is not a judicious one; and that, while in feeding the body, you feed the cancer, so in starving the body, or at any rate in giving no more nourishment than is absolutely needed, you check the growth of the tumour. In practice I have seen great benefit from acting on this hypothesis, though I have not ventured to starve my patient. I recommend them, however, to limit the quantity of meat and to adopt a more vegetable diet, taking as small an amount of stimulants as they can bring themselves to. Might this case have been one of Nature's experiments? Of one thing there is no doubt, that, under starvation, the disease did not increase. Bear in mind, however, that my recommendation of a restricted diet is only applicable to such time as the disease has not produced contamination of the system. In patients suffering under cancerous cachexia the mucous membrane of the stomach is, as Dr. Fenwick has pointed out, in a disorganised state; and your difficulty will be in getting your patients to take and digest sufficient nourishment, while stimulants in moderation will remove to some extent the feeling of prostration which is so distressing to them.

ON THE USE OF ARTIFICIAL RESPIRATION AND TRANSFUSION AS A MEANS OF PRESERVING LIFE.

By T. LAUDER BRUNTON, M.D., D.Sc.,

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IN his admirable *Lessons in Physiology*, Huxley says that "the brain, the lungs, and the heart, have been fancifully termed the tripod of life; but, in ultimate analysis, life has but two legs to stand upon, the lungs and the heart, for death through the brain is always the effect of the secondary action of the injury to that organ upon the lungs or the heart." This conclusion is founded on the experiments of many observers, among the most interesting of which are those of the Abbé Fontana and Legallois.* The former found that the brain was not necessary to life; for he could cut off the heads of rabbits and guinea-pigs, and yet keep their bodies alive by connecting a pair of bellows with the trachea, and keeping up artificial respiration. As he himself says, an animal can live quite well without a head: artificial respiration and the circulation of the humours in the various parts are quite sufficient. The headless trunks evidenced their vitality by displaying sensitiveness to impressions, and executing what the abbé considered to be voluntary movements, but which we would now term simply reflex

* Fontana, *Traité sur le venin de la vipère, sur les poisons Américains, sur le laurier cerise, et sur quelques autres poisons végétaux*. Florence, 1781, tome i, page 317.—Legallois, *Expériences sur le principe de la vie*. Paris, 1830, tome i, p. 130.

actions. Legallois went even further than Fontana; for, not content with cutting off the rabbit's head, he tied the aorta and vena cava, and then cut away the whole of the posterior part of the body, leaving only the headless thorax. This fragment of the body, mutilated as it was, still remained alive; the fore paws showed sensibility when irritated; and the thorax twisted when the skin over it was pinched, or more distinctly still if the lower end of the spinal cord were touched. Even when the experiment was carried farther, and the whole of the cervical with part of the dorsal spinal cord was destroyed, evidences of life could be observed in the posterior two-thirds of the thorax. These experiments demonstrated beyond doubt that, if the lungs and heart could perform their functions with any other fragment of the body as they do with the thorax, it might be kept alive. As Legallois himself says, "if the place of the heart could be supplied by a sort of injection, and if at the same time a supply of arterial blood, either natural or artificial, if such a formation of blood were possible, could be obtained, life might be maintained indefinitely in any fragment of the body whatever; and consequently a decapitated head might be kept alive and in possession of all the faculties pertaining to the brain. Not only could life be maintained in this manner, either in the head or in any other isolated part of an animal's body, but it might be recalled after its entire extinction; it might even be recalled to the whole body, and a veritable resurrection, in every sense of the word, might be effected." Perhaps it may seem that the success of his experiments rendered Legallois too sanguine; but his anticipations have already in great part been fulfilled, and a decapitated head has been partially at least restored to life by M. Brown-Séquard. His experiment, as related by M. Vulpian,* consisted in cutting off the head of a dog immediately after it had been killed, and connecting the carotids and vertebral arteries with an apparatus for artificial circulation. After eight or ten minutes had elapsed, and all signs of excitability in the medulla oblongata and the rest of the encephalon had been gone for several minutes, defibrinated and arterialised blood was injected simultaneously into the vertebrals and carotids. In a few seconds, signs of life began to appear, and the muscles of the eyes, in fine, acted in such a way as seemed to prove that the cerebral functions were re-established.

Hardly less astonishing than Brown-Séquard's experiments are those of Preyer,† who has succeeded in restoring their vital properties to a frog's muscles after they have been brought into the state of rigor mortis by dipping them into warm water. This condition depends on coagulation of the muscular substance or myosin; and circulation of blood alone through muscles in this state is of no use, for it cannot soften the hardened myosin. Something more is, therefore, necessary. Coagulated myosin is soluble in a solution of common salt; but, though a muscle dipped in such a solution may lose its hardness and again become soft and pliable, it does not regain its vitality. By combining the two methods, however, the difficulty has been overcome; and, by first dipping the rigid muscle in a solution of salt, and then allowing blood to stream through it, Preyer has had the satisfaction of seeing frogs jump and swim by the aid of muscles which had been almost as hard and stiff as a piece of wood only a short while before.

Nor are nerves and muscles the only parts which can be kept alive by artificial circulation. Glands also preserve their vitality; and Ludwig and his pupils,‡ by maintaining artificial circulation in them, have succeeded in making livers secrete bile, and lungs excrete carbonic acid, for hours after they have been excised from the body.

More examples might be given; but the above are sufficient to show the power of artificial circulation to keep any part of the body alive after the death of the rest. The converse of this is also true; and, if blood be prevented from circulating through any part of the body, that part will die, although the rest may remain healthy. So generally known is this, that no one ever thinks of tying a bandage so tightly as to stop the circulation, and leaving it thus, as he well knows that death, or, as we usually term it, mortification, of the ligatured part would be the result. It is easy for any one, indeed, to observe for himself the destructive effects of want of blood and the vivifying power of renewed circulation, by repeating the experiment devised by the Danish physiologist Steno or Stenson more than two hundred years ago. A gentle steady pressure with the thumb on the abdominal aorta of a rabbit, so as to stop the circulation for a couple of minutes, is all that is necessary to produce complete paralysis of the hind legs of the animal; and a few minutes more of renewed circulation suffice to restore them to their normal state. It might almost seem that the tripod of life had been reduced to one leg—viz., a circulating apparatus or heart; but this is not the case, for it must be remembered that

the blood which circulates must be oxygenated or arterial; and if, as in the case of artificial circulation, there be no lungs to effect its oxygenation, their place must be supplied by agitation with air, though this is at best but a poor substitute. Indeed, it is rather because the blood carries oxygen than nutriment to the tissues, that arrest of circulation causes them to die so speedily; for Kronecker found* that, after he had exhausted the muscles of a frog by constant irritation, he could restore their contractility by passing through their vessels a solution of permanganate of potash, which, like the blood, could supply them with oxygen, although it could yield them no nourishment.

The body is made up of a number of parts; and, if the heart stop, the circulation ceases; or, if the lungs fail to perform their duty, so that the circulating blood is no longer arterialised, all the parts, and therefore the whole body, will die. But the parts will not all die at the same time; and this is a point of great practical importance. The brain and spinal cord generally die first, and the heart may be pulsating as regularly as ever when all respiratory movements have ceased; and no irritation, however intense, will evoke the faintest indication of consciousness, or excite the slightest reflex action. The muscles retain their irritability still longer than the heart; and they continue to possess their power of contraction, and the lungs their ability to oxygenate the blood, even after the cardiac pulsations have entirely ceased. Here, then, we come to the third leg of the tripod of life—viz., the brain—for want of which the other two cannot stand. The whole body, in fact, may be, and often is, alive, with the exception of the nervous centres. The heart is alive; the lungs are alive; but the brain is dead, and, without it, the respiratory muscles will not work. The want of oxygen weakens the heart; it gradually stops; and then the other parts of the body die, each in its turn. But, if the respiration can only be kept up artificially, the heart will go on beating; the circulation of arterial blood through the brain may gradually restore its power; the rhythmical movements of natural respiration will again begin, and the life of the animal once more be securely established. This is no mere fanciful dream, but sober fact, as the successful efforts of the Humane Society to resuscitate persons apparently dead abundantly prove. It has, moreover, been lately demonstrated in a striking manner in some experiments of Schiff.† These were made for the purpose of ascertaining what the use of artificial respiration would be in concussion or compression of the brain, or in cases of apoplexy where a clot has formed in the medulla oblongata, and, by pressing upon that part of it which presides over the innervation of the muscles of respiration, has put a stop to these movements. In order to imitate the effect of an apoplectic extravasation, Schiff anaesthetised a dog with ether; and, after exposing the medulla oblongata, destroyed a considerable part of it with a scalpel or sound, though he always left one lateral column at least intact. Immediately after the injury, the respiration ceased, the tongue became swollen and livid, convulsions occurred, and the animal appeared to be dying. The heart became weaker and weaker; but, when it had almost ceased to beat, artificial respiration was begun. Very shortly the pulsations regained their normal strength, and the death-like lividity of the tongue gave place to the rosy hue of health. After respiration had been kept up for a few hours, it was discontinued; and then, if the injury to the medulla had not been too great, spontaneous respiratory movements commenced, but they were still feeble. They became much stronger if artificial respiration were again renewed for half an hour longer—strong enough, indeed, to keep the animal alive without any artificial assistance. It is true that, when the lesion had destroyed the one side of the medulla, only one-half of the thorax took part in the respiratory movements; but this was in many cases quite sufficient for the wants of the animal. In the only case in which Schiff attempted to keep the animal alive permanently, he was perfectly successful. The beneficial effects of artificial respiration were equally encouraging when natural respiration was arrested by compression of the brain through the injection of tepid water under high pressure into the cranial cavity. From these experiments, it is evident that we may hope for the best results from the use of artificial respiration in some of those cases of apoplexy where an extravasation almost instantly arrests the respiratory movements, either directly by destroying a part of the medulla, or indirectly by causing compression of the brain. It may be thought that there is a considerable difference between the compression produced by the injection of tepid water and that which is due to an extravasation of blood, inasmuch as the water will be rapidly absorbed, while the blood will not. To a great extent this is true; and we can hardly expect very much good from artificial respiration in cases of apoplexy where the clot is large and the affection of the respiration is gradual. In those cases, however, where a small extravasation only

* *Revue de Cours Scientifiques*, 1864-5, tome ii, p. 217.

† *Centralblatt für die Med. Wissenschaft.*, 1864, p. 76.

‡ Ludwig's *Arbeiten*, 1868, p. 113, and 1870, 38.

* Ludwig's *Arbeiten*, 1872, p. 182.

† *La Nazione*, 1872, No. 102.

has taken place in or near the medulla, the respiratory movements are abolished, just as in Schiff's experiments, by what may be termed the shock, although the medulla could carry on respiration well enough if time were given it to recover from the immediate effects of the injury. The employment of artificial respiration for a few hours would give the time required.

In another class of cases—that of poisoning by woorara, hydrocyanic acid, etc.—artificial respiration is invaluable. In his *Travels*,* Waterton tells a melancholy story of a poor Indian who, when shooting at a monkey sitting in a tree straight above him, was wounded near the elbow by his own arrow as it fell down. He immediately became convinced that it was all over with him. "I shall never," said he to his companion in a faltering voice, and looking at his bow as he said it; "I shall never bend this bow again." Having said this, he took off the little bamboo poison-box which hung across his shoulder, and putting it, together with his bow and arrows, on the ground, he laid himself down beside them, bade his companion farewell, and never spoke again.

It is not true, as some persons formerly supposed, that the minutest quantity of woorara in the blood is sufficient to cause death. It is a very powerful poison, certainly; but there is a limit to its virulence; and, if there be too little of it in the blood, it will have no action. On this account, it is not usually poisonous when swallowed; for it is excreted by the kidneys as quickly as it is absorbed from the stomach, and so there is never enough in the blood at any one time to produce any effect whatever on the body. The result is very different, however, when the kidneys are prevented from acting by ligatures applied to the ureters. Then the poison, which is gradually absorbed from the stomach, goes on accumulating in the blood; and by and by, when it has reached the necessary amount, it produces exactly the same effects as if it had been injected directly into the veins. When the poison is applied to a wound, it is usually absorbed more quickly than the kidneys can excrete it, and so poisoning occurs. But, if a ligature be applied above the wound so as nearly to stop the circulation, the absorption of the poison may be hindered so much that it is not taken up from the wound any faster than the kidneys can excrete it. Thus the whole of it may be got rid of, without its ever being able to produce any toxic effects whatever. If the circulation be allowed to go on at all in the wounded part, it is rather difficult to regulate it exactly enough to ensure that too much poison shall not be absorbed at once. It is, therefore, better to apply the ligature so tightly as to stop the circulation altogether, and only remove it occasionally for a few seconds at a time. In this way, it is easy to control the absorption of the poison by removing the ligature with more or less frequency, and leaving it off for a longer or shorter period, as seems advisable. But it is not by regulating the absorption of woorara only that we are able to prevent its toxic action. Even when a large quantity is circulating in the blood, and the animal seems perfectly dead, recovery is still possible.

The woorara, curare, or ticunas poison—for it has all these names, and several more—has little or no action on either the brain or the muscles; but, as Bernard has shown, it paralyses the motor nerves; and so the rhythmical nervous impulses which the medulla usually sends to the muscles of respiration, cannot be transmitted, and breathing ceases. Many years before Bernard's experiments, however, Sir Benjamin Brodie† observed that, in animals apparently killed by this poison, the heart continued to beat for a long time; and the idea occurred to him that, if he could keep up respiration for a sufficient length of time, the poison would be eliminated, and the animal completely restored. His first attempts were unsuccessful, but after a little while he succeeded completely; and since then his experiment has been so frequently repeated, that no physiologist can doubt that the complete restoration of an animal poisoned in this way is merely a matter of time, unless the dose has been so overwhelmingly great as to paralyse the heart. I have myself twice restored to life rabbits which a dose of woorara had apparently completely killed, by keeping up artificial respiration in the one case for one, and in the other for four hours; and in foreign laboratories I have seen them partially restored, and only rendered motionless by repeated doses of woorara, oftener than I can well recollect. Hydrocyanic acid is a much more dangerous poison than woorara; for it seems not only to arrest respiration by paralysing the brain, spinal cord, nerves, and muscles, but also to stop the circulation by destroying the power of the heart. The heart, however, is not so soon affected as the respiratory organs; and Brodie succeeded in restoring animals poisoned by small doses of it given in the form of oil of almonds.

The poison of the cobra di capello resembles prussic acid rather than woorara in the universality of its action; for some experi-

ments which I made about a year ago in the laboratory of Dr. Burdon Sanderson seem to show that it paralyses the spinal cord, the motor nerves, and the muscles themselves. The heart also, as Dr. Fayrer and I have found, seems to be paralysed if the dose be very large, as it may be also by an excessive dose of woorara; but it almost always continues to beat for a long time after respiration has ceased. To this fact I have drawn particular attention in my appendix to Dr. Fayrer's admirable work on the *Thanatophidia of India*. The same thing was observed by Fontana (*op. cit.*, tom. i, p. 80) in poisoning by the bite of the viper, and by Weir Mitchell in poisoning by the rattlesnake. Weir Mitchell* found that the heart might be kept pulsating for a long time by means of artificial respiration; but his results do not seem to have been so encouraging as to lead him to propose it as a means of saving life. Dr. Fayrer and I have been more fortunate, and on one occasion we have succeeded in keeping the heart of a rabbit beating for eight hours after the animal was apparently dead. Nor had the heart ceased to pulsate even then; but the hour was late, the room was cold, the assistant was no doubt tired, and the experiment was consequently given up. Although respiration had been continued for a much longer time than is usually necessary with woorara, the animal gave no signs of returning sensibility. This seems to indicate a difference between the poisons. On the probable cause of this, I will have something to say in a later part of this paper.

The service which artificial respiration renders in cases where breathing has ceased in consequence of asphyxia, whether due to drowning, strangling, or poisoning by carbolic acid in brewers' vats or close rooms, is so generally recognised, that it is unnecessary to say anything about it here. Its use in poisoning by strychnia is not so well known, and, so far as I am aware, it has only been tried upon animals. Before I proceed to speak of this, it may be well to say a few words in explanation of the term apnoea, which I shall have to use, as it is employed by physiologists in a different sense from that which is attached to it by many physicians. On the meaning of dyspnoea, both physicians and physiologists are agreed; and both apply it to the violent respiratory efforts which occur when the blood is imperfectly aerated. Apnoea, however, is not unfrequently used by physicians in the sense of extreme dyspnoea, where there is excessive difficulty of respiration. Physiologists apply it to a very different condition—viz., that in which the blood is so excessively aerated that there is no need for breathing at all. This will be much better understood by the reader if he will try a simple experiment on himself. Let him note how many seconds he can hold his breath, and he will find that he can only do so for a very short time. Let him then quickly take several deep breaths, and repeat the experiment. He will now notice that for several seconds more than on the first trial he does not feel any inclination to breathe at all. This is the state of apnoea as understood by physiologists. A years ago, Rosenthal and Leube‡ discovered that, when rabbits were kept in this condition by means of artificial respiration, a fatal dose of strychnia might be injected subcutaneously without producing any effect. When the respiration was discontinued, and the animal was allowed to pass from the state of apnoea, convulsions came on even after the respiration had been kept up for as much as three hours. If it were continued for three and a half or four hours, however, the strychnia seemed to have been destroyed or excreted, and respiration might be discontinued without the occurrence of any convulsion whatever. That the lives of the animals had really been saved by artificial respiration, was shown by the fact that they died when a similar dose of strychnia was given to them some time afterwards, and respiration was not used. A year afterwards, another of Rosenthal's pupils—Uspensky—showed‡ that strychnia was not the only poison the action of which could be prevented by artificial respiration. The convulsive action of brucia, thebaia, and caffeine was abolished in an exactly similar manner; but no influence could be observed upon that of picrotoxin and nicotia.

The examples already given are sufficient to prove that life may often be preserved by means of artificial respiration alone, both in injury and in poisoning. If a man be found lying insensible in a close room, poisoned by the fumes of a charcoal fire, he can generally be restored by respiration if his heart be still beating. But this is not always the case; for the charcoal-fumes contain carbonic oxide, which unites with the colouring matter of the blood, and prevents it from taking up oxygen; so that it may pass time after time through the lungs, and yet remain venous. It is true, that after a while the carbonic oxide will be expelled from the blood, which then will become capable of taking up oxygen as usual; but the heart may stop, and all hope of recovery be lost before this can be effected, if the blood have

* *Travels in South America*, 1825, p. 71.

† *Phil. Trans.*, 1812.

* *Researches on the Venom of the Rattlesnake*, 1861, p. 81.

† Reichert and Du Bois Reymond's *Archiv*, 1857, p. 629.

‡ *Op. cit.*, 1868, p. 522.

been much changed by the deadly gas. In such cases, the only hope lies in removing the poisoned blood, and replacing it by healthy.

This does not by any means always succeed; but occasionally the recovery from impending death is almost miraculous, as in a case where it was employed by Dr. Hueter (*Berlin. Klin. Wochens.*, 1870, p. 341). The patient, who was a strong young man, was living in a hotel, and one night had a fire lighted in the stove of his room. Next morning, he was found perfectly unconscious; his iris and cornea quite insensible, and his pulse small and rapid. His respiration was weak and intermitting. Just as everything was ready, and transfusion of blood was begun, it failed altogether. Notwithstanding this, fresh blood was allowed to stream into the patient's radial artery; the poisoned blood was drawn from a vein; and respiration was kept up artificially. Gradually the pulse became stronger, spontaneous respiratory movements again began, and the cornea became sensitive. In about five hours, consciousness returned; and in a few days, health was completely restored. Excepting the veritable resurrection of which Legallois speaks, what can be more wonderful than the recovery from impending death just related? And, if the joint use of artificial respiration and transfusion is so successful in one case of poisoning, there seems to be no reason why it should not be so in all. In strychnia-poisoning, for instance, where the quantity absorbed has been too great, and death is impending, notwithstanding the use either of chloroform or of artificial respiration, part of the poison might be removed by abstracting some of the blood in which it was circulating, and fresh blood supplied. If convulsions were occurring constantly, transfusion would be nearly impossible, but they might be stopped either by much chloroform or by woorara. I have already mentioned that woorara is excreted rather quickly by the kidneys; and, consequently, artificial respiration for a few hours is usually sufficient to restore animals which have been poisoned by it.

Let us suppose it, however, to be slowly excreted. Many hours or even days might then elapse before the whole of it could be got rid of; and the maintenance of artificial respiration for such a length of time might be impossible. In such a case as this, the obvious plan of treatment would be, of course, to remove the poison along with the blood in which it was circulating, instead of waiting for its slow removal by the emunctories.

Now it appears to me that this is the treatment which must be adopted in cases of poisoning by the bites of snakes. We must combine artificial respiration with transfusion. The experiments of Dr. Fayrer show that the poison of the cobra is circulating in the blood of an animal which has been bitten by it; for this blood will kill another animal when injected into it. From those of Fontana, it would seem that the poison of the viper is eliminated from the body; for pigeons did not die if a ligature were placed on the bitten limb above the place where the wound had been inflicted, and removed after some time. Fontana thought that the poison had been destroyed in the limb, but was evidently puzzled about it, for some of his other experiments had shown him that mixing it with blood did not destroy its virulence. He imagined that he had completely stopped the circulation in the injured limb; but it is more probable that he had only partially done so, and that the poison was thus slowly absorbed from the limb, and, being excreted equally quickly, did the creature no harm. If this explanation of his experiments be not correct, it is difficult to understand why poisoning did not occur when the ligature was removed, as Waterton found to be the case in some similar experiments which he had tried with woorara. So long as the ligature was tight, the woorara remained confined to the limb; but as soon as the circulation was allowed to go on, the poison was absorbed, and the animal died. This may seem to be in direct contradiction to what I have already said regarding the probable comparative slowness of the excretion of snake-poison to that of woorara; but it must be observed that Fontana waited a much longer time before he untied the ligatures than Waterton did, and would thus allow a much larger proportion of the poison to be excreted. It must be noted also that the poison with which he experimented was that of the viper and not of the cobra, and there may be considerable differences in the facility with which they are excreted. It is, however, possible that I am mistaken in supposing that cobra-poison is more slowly excreted than woorara, as the facts on which I base the supposition are simply, that the poison of cobra, introduced into the stomach, seems to produce death more readily than woorara would do; and that animals may be kept alive for a longer time by artificial respiration without ultimately recovering. The poison of the viper, on the other hand, according to Fontana, may be swallowed in moderate quantity at least with impunity, though it also occasionally kills when taken in this manner, as woorara likewise does when the quantity is great and the stomach empty, so that absorption is rapid.

Enough has now been said to show the possible use of transfusion, combined with artificial respiration, not only in poisoning by carbonic oxide, but by strychnia and other poisons. Its employment in collapse from hæmorrhage requires no remarks at present. But, in order to make such a method serviceable, it must be easily performed, and a supply of blood easily got. Now I believe that a very simple apparatus indeed will serve the purpose of transfusing defibrinated blood. But how is a sufficient supply to be got? for it is evident that a considerable quantity may be required. The requisite quantity of human blood in most cases can hardly be obtained; but it has been experimentally shown that the blood of lambs and calves may be transfused into the blood-vessels of man without doing him any harm.

Two hundred years ago, an objection was raised to this method of proceeding by Laury (*Revue des Deux Mondes*, Jan. 1870, p. 393), who said that, as the blood of a calf or of any other animal whatever is composed of several different particles fitted to nourish the different parts of the body, what is to become of the particles which were destined to produce horns? And, if the blood of a calf be transfused into the veins of a man, as the disposition and habits usually accord with the temperament, will the blood of the calf not give the man the stupidity and brutal inclinations of this animal? Here we almost seem to have Darwin's theory of pangenesis; and, if this theory be true, are not Laury's objections well founded? As far as man is concerned, it may be difficult to give a positive answer either in the affirmative or the negative; but the experiments which Mr. Galton has made on rabbits, for the express purpose of testing Darwin's theory, show that in these animals transfusion has no effect either on the animals themselves or on their progeny. We may therefore, I think, safely conclude that the risk of injuring a man's character, or that of his descendants, by transfusion of an animal's blood, is not for an instant to be weighed in the balance against the chance of saving his life in those cases where alone the operation would be performed.

UNUSUAL CASE OF PARACENTESIS ABDOMINIS.

By WILLIAM B. HUNTER, M.D., C.M.Glas., Matlock.

THE following case presents circumstances which I have not hitherto met with, or seen referred to in the literature of the subject.

Mrs. M., middle-aged, and somewhat plethoric, suffered from ascites, with contracted liver and feeble heart. There was dropsy of the lower extremities, but the urine was non-albuminous. She had been tapped about two weeks before coming under my care, but the abdomen had rapidly refilled. Nothing unusual had been experienced (to my knowledge) in the operation; and it had been performed in the linea semilunaris about two and a half inches below the umbilicus. After treatment, which succeeded in improving the action of the liver and heart, and led to the disappearance of the dropsy of the lower limbs, but without any diminution in the ascites, I tapped in the linea alba, about two inches below the umbilicus, and, with the usual facility, removed about fourteen pints of fluid. Towards the end of the operation, a little abdominal pain was felt in the neighbourhood of the cannula, which afterwards gradually increased for forty-eight hours, accompanied by tenderness and some vomiting, but no increase of temperature, and as gradually subsided. In nine weeks the fluid had again accumulated to such an extent as to call for renewed interference, through uneasiness and inability to eat on the part of the patient. This time the puncture, though two inches below the umbilicus as before, was about an inch and a half above the cicatrix of the former operation, through the greater distension of the abdominal parietes on this occasion. Only a few ounces had escaped before there occurred an almost complete arrest of the stream, which, on introducing a probe through the cannula, was found to proceed from a solid body impinging on its internal opening. This was, to the feel, smooth, dense, and resisting; and, on carrying the probe laterally along its surface, was found to extend for an inch or more on each side. After consultation with a medical friend assisting (Dr. Meniert of Dresden), it was decided not to make a fresh puncture, but to remove as much fluid as could be obtained through the side openings in the cannula, and repeat the operation only so soon as the symptoms called for it again. Three quarts came away in the course of an hour or so; and, the flow having all but ceased, the cannula was removed, and a towel simply laid over the opening. The patient was quite comfortable, the tension having been relieved; and no abdominal pains supervened as before. For forty-eight hours fluid oozed from the opening and drenched the night-clothes, bed, and bedding; requiring repeated relays of material to absorb it, and even dropping from a waterproof covering into an utensil on the floor. Latterly, a pad two inches square, and secured by six

diverging tapes and elastic ribbons, was kept over the opening to avoid the possibility of air obtaining admission in the final stages of this process, and shortly after this the opening closed. The abdomen was then found to be free from fluid to the extent usual after tapping, and no trace of any solid body could be obtained by palpation or percussion in the neighbourhood of the site of the puncture. There was dulness over the lower abdomen, extending into each iliac fossa, but too remote from the puncture to throw any light on the obstruction. The cervix uteri was found, on vaginal examination, to be in its normal situation. I should have remarked, that the patient was kept on her side and somewhat prone during the flow. I can only suggest an unusually fatty omentum as having been the obstructing body, and would be glad to have any light thrown on the matter by others, not merely for the solution of the problem, but with a view to the avoidance in future of an awkward contingency in what is usually a simple operation.

CLINICAL MEMORANDA.

BRAWN POISONING.

IN my practice, a similar instance to that recorded in the last number of the JOURNAL, of urgent symptoms of poisoning after eating brawn, occurred in this place on the 1st instant. A gentleman, his wife, and servant, having partaken of brawn, suffered the most distressing vomiting, purging, and pain, which at length, after much difficulty, subsided. The butcher declared the ingredients perfectly healthy, nor could I discover anything poisonous connected with it. The fatty portion had somewhat a spongy appearance, and the mass generally decomposed earlier than usual.

As three, if not four similar cases, have occurred, in widely different parts of England and Wales, the question is, is there any epidemic or disease among pigs, at the present time? or are we to owe it to the *old* odds and ends that sometimes form portion of the brawn? or to decomposition? or to what? This matter requires serious investigation.

EDWARD W. S. DAVIS, Medical Officer of Health, Mountain Ash.

MARKS OF SUCCESSFUL VACCINATION.

THE other day a public vaccinator was reprimanded by a vaccination inspector for giving a certificate of successful vaccination immediately after the operation. Of course this was a very improper thing to do, and its repetition ought not to be detected without censure. But the question suggests itself, can a medical practitioner, soon after performing the operation, *i.e.*, before the little patient leaves the consulting room, declare, with any probability of being correct, that the lymph will take effect? To be able to do this must be of advantage to practitioners who have few vaccinations, and who have to depend on points and glasses of doubtful age, for their supply of lymph.

I believe that the question may be answered in the affirmative. I have noticed, for some years, that by about the time it takes for the lymph and blood to dry over the puncture, or scratch, the skin in the vicinity has become red, and the margin of the puncture elevated, and capped by a white "wheal." If the lymph be washed off, the white elevation about the wound is still seen, so it is not lymph which causes this appearance. I have never known a case of vaccination to fail in which this "mark" was noticed.

I have not seen in print, or heard any allusion to this little matter; I therefore think it worth while to publish my observation, that my professional brethren may test its value.

THOS. B. BOTT, M.D., Bury, Lancashire.

CASE OF COMPOUND COMMUNUTED FRACTURE OF THE SCAPULA.

THE subject of this injury was a man thirty-five years of age, muscular and healthy. On July 16th, 1872, he was engaged in his usual occupation of wood-cutting. A fir-tree having been partly sawn through, and about to fall, he struck his axe into the back, near the point of section, in order to prevent "splitting up." At the same moment the tree fell, and came in its descent across some poles, whereby its lower end was tilted up some distance, carrying the axe with it. The heavy axe, in coming to the ground, struck the man with one of its corners, just over the scapula. On examination, a clean cut wound was seen, extending for about three inches over the spine of the scapula, in an oblique direction from above downwards. The finger passed through this came to the broken edges of the scapula, finding to the inside the angle at the inner end of the spine separated, and broken into two fragments of nearly equal size, and to the outside the body of the scapula. The

inner fragments were drawn towards the median line, so that the finger passed easily to the under surface of the scapula. The wound was brought together by means of silk thread, a small opening being left at the most dependent position. By bringing the shoulders well back, the loose fragments of bone could be pressed into position; a pad was therefore placed to the inside and over the fragments, and a figure-of-eight bandage applied. In two days the wound had united, except at the lowest part, and the bones were in good position. The bandage and pad were applied every second day, as a rule, for a month, and a sling for some time longer. He recommenced work at the end of seven weeks, dating from the accident, without any inconvenience, and no deformity can be detected.

WALTER ROSSER, M.D., Trinity College, Glenalmond, Perth.

THERAPEUTIC MEMORANDA.

ARTIFICIAL FIBRIN AS A DIETETIC SUBSTANCE.

As a member of the British Medical Association, and in the common interests of humanity, I have much pleasure in calling attention to my discovery of this new dietetic substance. So far as I have employed it, it promises fair to be invaluable in medical practice, especially in cases of feeble alimentation and deficient nutrition, and second to none in those cases where rejection of food forms a prominent feature, or where the appetite and digestive powers are reduced to a minimum. As fibrinous material, it is of course highly nutritious, and eminently adapted to all cases where there is a deficiency of fibrin in the blood. It is, perhaps, unparalleled in its qualities of lightness and digestibility, and is moreover a great delicacy. In many urgent cases of rejection of food, etc., it not only remains where an egg otherwise cooked would not be tolerated, but its presence in the stomach has been found to create a feeling of want rather than of superfluity, and to promote rather than decrease the appetite for food.

The production of this substance is within the reach of every sick room, and is effected with great facility. It is formed by exposing albuminous material to the operation or influence of cold water, for a given period; and on account of its great plenteousness we employ the ordinary hen's egg for its production. When the shell is broken and removed, and its contents are immersed in cold water for twelve hours or so, they are found to undergo a chemico-molecular change, and to become solid and insoluble. This change is indicated by the assumption by the transparent white of the egg of an opaque and snowy white appearance, which far surpasses that of an ordinary boiled egg. The product, and the fluid in which it is immersed, must now be submitted to the action of heat to the boiling point, when the fibrin will be ready for use.

JOHN GOODMAN, M.D., Southport.

OBSTETRIC MEMORANDA.

CASE OF BREECH-PRESENTATION WITH THE LEGS EXTENDED.

ON the morning of February 15th, 1873, I was summoned to Mrs. George L., the wife of a farmer residing in the neighbourhood of Chippenham. On my arrival, I found her in labour, at full term, with her first child. The pains were neither severe nor frequent. The os uteri was dilated to the size of a florin; and the liquor amnii was stated to have escaped half an hour before my visit. The position of the child was dorso-anterior; and the breech was presenting in the left oblique diameter. I cleared out the rectum with an enema of warm water, and emptied the bladder by catheterism. The os dilated tardily, and the breech descended very gradually into the pelvic cavity. In the early part of the afternoon the left buttock came under the pubic arch. After reaching thus far, it would proceed no further; and in proportion to the pains, so the breech became more and more jammed into the pelvic cavity. I now decided to place my patient under chloroform, push up the breech, and try podalic version. Early in the evening, Messrs. Spencer and Briscoe lent me their kind assistance. The latter gave chloroform to the surgical degree; and, the contents of the bladder having been drawn off with a catheter, and the vagina nearly filled with lard, I supported the uterus externally with my right hand, while with my left I pushed up the breech, and passed the same hand on the inner and posterior surface of the child's legs to the fundus of the uterus, where the feet lay close to the child's face. I then seized the left instep and brought it down into the vagina. That being done, the labour proceeded as an ordinary footling case. In its later stages the patient

became conscious, and then Dr. Briscoe with both hands supported the uterus through the abdominal walls during the expulsion of the child and the casting off of the placenta, after which it contracted firmly, and the binder was applied. The discharge was not excessive, and neither vomiting nor severe after-pains disturbed Mrs. L., who enjoyed three hours' sound sleep the same night, and with the exception of a headache on waking the next morning, was none the worse for her sufferings the previous day. The infant made no inspiratory effort after its birth. I therefore divided the funis immediately, plunged the child into warm water for a minute or two, and then sprinkled cold water on its face and chest. This treatment was followed with the most beneficial result, for the child soon cried lustily.

I ought to mention, that directly after the child's birth the mother had two drachms of the liquid extract of ergot, and forty drops of aromatic spirit of ammonia, in a wineglass of water. She took no preparation of opium whatever. The only medicine she had subsequently to the ergot draught was a pill every three hours, composed of one grain of camphor and the same quantity of henbane. She kept her bed a fortnight, and passed the third week in the horizontal position on a couch, from which time she has enjoyed good health.

HENRY M. JAY, M.R.C.P., Chippenham, Wilts.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

CASES UNDER THE CARE OF DR. MURCHISON.

Locomotor Ataxy of an unusually acute character.—The subject of the affection was a man, aged about 40, who was admitted on February 11th with well pronounced symptoms of locomotor ataxy. It appeared that these had become developed within six weeks. He had lost the co-ordinating power of the muscles of his legs; he had both shooting and persistent pains in his lower extremities, with anæsthesia of the surface; a feeling of tightness round the abdomen, and his sight was slightly affected. He was treated on admission with a fourth of a grain of nitrate of silver, three times daily, which was increased to one third. He improved under this treatment. The remedy was omitted for a time, and during this period the improvement ceased; but, on resuming the silver, the man at once began to improve. Dr. Murchison, in his remarks on this case, further pointed out the diagnostic symptoms between this disease and tumour of the cerebellum and of the spinal cord.

Rheumatoid Arthritis.—In the next bed lay a man, aged about 40, who had been the subject of rheumatoid arthritis in one knee and one hand for a year. He had improved during the six weeks he had been in the hospital; at first on iodide of potassium, counter-irritation with perfect rest of the joint, which was fixed in a splint, and, latterly, on syrup of the iodide of iron.

Obstinate Sciatica.—This case, that of a middle-aged man, who had for two months suffered severely from pain in the left lumbar region and down the outside of the left lower extremity, was improving on iodide of potassium—quinine had failed. He at the same time was kept under the influence of morphia by subcutaneous injections of one third of a grain twice daily to relieve the pain.

Acute Rheumatism treated by Veratrum Viride.—We saw several cases of acute rheumatism in Dr. Murchison's wards. The preparation of veratrum used was the tincture in ten- to twenty-minim doses. Dr. Murchison remarked, regarding this remedy, that it had not appeared to act so well as formerly in his practice. It had not produced the sickness and reduced the pulse as before; and he had found by experience that, until the physiological effect had taken place, the remedy did not appear to relieve the disease. The cause of the failure of the remedy was probably some alteration in the strength of the drug.

Chronic Empyema, with permanent Dislocation of the Heart to the left side.—The patient, a man aged 28, was the subject of acute pleuritis nine months ago. Five months afterwards, he observed a swelling in the lower part of the right side. This was followed, a month later, by the escape of pus, externally, and the formation of two sinuses outside the nipple, from which the discharge had continued up to his admission, a week ago. It was then discovered that he had fluid filling the greater part of his pleural cavity, and that there was shrinking of the chest, there being a difference in circumference of one inch in favour of

the healthy side. The right shoulder was markedly depressed. There was some resonance above the right nipple in front, and feeble breathing over this space, but elsewhere the right side was dull. On percussion, there were the ordinary evidences of fluid to account for this dulness. His breath, on coughing, was fetid, and his expectoration was purulent. Moreover, he volunteered the statement, that the more he expectorated the less was the discharge from the sinuses. Still there were no satisfactory physical signs, as splashing, or metallic tinkling, of air in the pleural cavity. A remarkable feature in the case was the position of the heart, the apex of which continued to beat to the outside of the left nipple. There was nothing to push it over now. The probability was, that during the acute pleuritis the heart had been pushed to the left side and had become permanently fixed there by pericardial or pleuritic adhesions. The patient was improving under the influence of quinine and acids and two teaspoonfuls of cod-liver oil, twice daily.

Variable Temperature from Embolic Infarctions.—This case was that of a man, aged 56, who was admitted for mitral disease, dropsy, and bronchitis, but within the past few days he had become subject to variations of temperature; one day it was normal, another 103 Fah., and, in the absence of any appreciable cause, Dr. Murchison had thought that the rise in temperature might possibly be due to embolism. The case was, however, obscure.

[To be continued.]

LONDON HOSPITAL.

NOTES OF CASES OF DISEASE OF THE NERVOUS SYSTEM.

(By Dr. HUGHLINGS JACKSON.)

Case Illustrating Difficulties in the Diagnosis betwixt Cerebral Hæmorrhage and Softening from Embolism.—In this JOURNAL, October 29th, 1870, remarks were made by Dr. Hughlings Jackson on the occasional occurrence of cerebral hæmorrhage as a cause of hemiplegia in patients who have valvular disease of the heart. Of course, the first suggestion in such cases is that the paralytic lesion is local softening from embolism; but, if the patient be deeply comatose, it is as likely that there is bleeding from rupture of an aneurism of the middle cerebral artery. Dr. Hughlings Jackson referred again to these points at an necropsy on a man who died of rupture of an aneurism of a branch of this vessel. The patient was forty-four years of age, and was admitted under the care of Dr. Ramskill for anasarca with cardiac disease, Aug. 23rd, 1872. We now give particulars from notes by Mr. Morgan, as they were kindly supplied by him to Dr. Hughlings Jackson after the necropsy, but only such as apply to the question of diagnosis.

On October 15th, having previously been doing well, about 12.30 A.M., the patient got up to the stool, and soon afterwards was seen to be falling down. He was caught as he was falling, and was helped into bed; then the nurse noticed that he had lost the use of his left arm and leg; he wandered in his speech, but remained quiet during the rest of the day. On October 16th, he had rallied somewhat, and sometimes answered rationally when spoken to, but did not recognise everybody. The left arm and leg were completely paralysed. The face was drawn to the right side; he could not blow out his cheeks and could not whistle. The tongue was protruded to the left. *His eyes were turned to the right. He seemed to have difficulty in looking to the left, and when asked to look in that direction, moved his head instead of his eyes.* The temperature had risen to 103. On October 19th, he was very drowsy, stupid, and was not easily aroused. He was continually moaning, as if in a dream. He spoke indistinctly, and said the nurse was going to murder him. On the 21st, he seemed to be almost insensible to everything; he lay on his back, with the right cheek on the pillow; he moaned, and with each expiration his lips blew out. He had been very noisy during the night; the eyes were thrown a little upwards. He did not in any way notice his friends. He could be roused to a slight degree of consciousness. The face was pale and puffed; the lips livid. He died at 3.30 P.M.

Necropsy.—There was a subarachnoid hæmorrhage, chiefly in the right fissure of Sylvius. There was also a large cerebral hæmorrhage, the blood being in the same situation as in the ordinary run of cases of cerebral hæmorrhage, breaking up part of the corpus striatum and adjacent brain. The source of both hæmorrhages was a ruptured aneurism of the right middle cerebral artery. This aneurism was about the size of a pea. There were vegetations on the aortic valves. We omit other particulars of the necropsy.

In this case, Mr. Kibbler made the diagnosis of local softening from plugging of a branch of the right middle cerebral artery. He was correct as to the position of the lesion; the diagnosis of the nature of the lesion, although wrong, was, Dr. Hughlings Jackson believed, the most warrantable one. For it is to be observed that the patient was

not comatose at the onset. It is difficult to see how an error could possibly have been avoided in this case. This case supplies another fact in favour of the statements of Dr. J. W. Ogle and Dr. Church, that aneurisms of the larger cerebral arteries are associated with vegetations on the heart's valves.

Supposed Tumour of the Middle Lobe of the Cerebellum—There is now in the London Hospital a boy, seven years of age, who has, it is confidently believed, a tumour of the middle lobe of the cerebellum. As in two other cases we have reported from Dr. Hughlings Jackson's practice—November 4th, 1871, July 20th and August 3rd, 1872—and as in a case to which Dr. Hughlings Jackson refers as having occurred some years ago in Guy's Hospital under the care of Sir William Gull, there is great enlargement of the head. It is especially large above the ears. In the cases referred to there was, and it is believed there is in this one, so to speak, "ascites of the lateral ventricles," due either to pressure on the veins of Galen, or to closure of the cerebro-spinal aperture. When the boy first came to see Dr. Hughlings Jackson in November 1870, his usual medical attendant, Dr. Young of Aldershot, had, so far back, made the diagnosis of tumour of the cerebellum; there can be no doubt of its correctness. At that time, the boy had the characteristic reel, so called "loss of co-ordination," which occurs from paresis of the muscles of the back. At the present time, he has lost the use of the muscles of his back altogether; his legs and feet are stiff, and his feet turned in; he lies constantly in bed. He has had double optic neuritis, and the discs now are partially atrophic, but there is no evidence of defect of sight; it is impossible to test it carefully. The boy's mental condition is much deteriorated. This (see the reports of the other cases, and reference there given to Dr. Gull's remarks) shows how, from disease of the cerebellum, we may have mental symptoms. Obviously, they result because the brain is squeezed by the fluid in the lateral ventricle; the cerebellar disease leads to mental symptoms in a very indirect way.

Lips and Labials.—Those who have not examined cases of paralysis of the face, would perhaps believe that a patient could not pronounce the labials. But the fact is that, when only one side of the face is paralysed, he can say *p*, *b*, *f*, and *v*, if not quite well, so well that there is not the slightest difficulty in telling what he says. This is so for *p* and *b* when the lips on both sides are absolutely paralysed. One of Dr. Buzzard's patients had paralysis of the face on both sides. He had not a trace of power over his lips, and yet his *p* and *b* were well uttered, and his *pr* was strong. Dr. Hughlings Jackson was allowed to examine him on these points. Contrary to what seems likely at first glance, is the fact that paralysis of the palate causes defect of labials—for the reason that part of the blast which should separate the lips goes by the nose. Those who do not bear this in mind would easily believe that the lips are affected in such cases. For they would be sure to try the patient's power to whistle; and it so happens that a patient whose palate is paralysed, whistles badly, and for the same reason that his labials are imperfect; part of the blast goes by the nose. But if the patient's nose be closed (to, in some measure, remedy the defect in the action of the palate), the sounds come out more purely.

UNIVERSITY COLLEGE HOSPITAL.

A NEW USE FOR OLD STOCKINGS.

A PLAN of putting up simple fractures of the leg, which is not, we believe, generally known, and which country surgeons may sometimes find convenient, has lately been practised at University College Hospital. The broken limb is first bandaged with an ordinary roller; this is well coated with the gum and chalk mixture; a stocking is slipped on over this and similarly coated; another stocking is put on over this; and a final layer of gum and chalk over all. Thus, for a case of transverse fracture with little displacement, or of fracture of one bone, two or three stockings and a little starch or plaster of Paris supply a very neat and serviceable splint.

BELFORD HOSPITAL, FORT WILLIAM.

CASE OF TRAUMATIC HÆMATURIA.

(Under the care of JAMES W. ALLAN, M.B., C.M.)

D. MCK., aged 35, ploughman, was admitted to the hospital on January 14th, 1873, suffering from hæmaturia and pain in the right side. On Saturday, January 11th, he fell from a common cart filled with chaff, and the wheel traversed the right side of the abdomen. It would seem that the wheel passed over above the ilium, then over the right iliac fossa, and, lastly, over the right side of the pubes, making its exit between his legs. The road was hard bedded gravel. He suffered great pain during the passage of the wheel, but was afterwards easier.

On Sunday morning, he could not stretch himself nor walk. On admission, he could do both. His urine on the night of the accident was blood-red, and contained clots. He had then slight pain in passing it, but the stream was free enough. He still passed bloody urine, and micturated more frequently than before the accident. He vomited on the evening of the accident and every day since. The vomited matter did not resemble coffee-grounds. On examination, the abdomen seemed normal. There was no discoloration or mark of injury. Two leech-bites were present on the right side; leeches having been applied by the medical gentleman who first saw the patient, and recommended his removal to hospital. There was a dull percussion sound over the painful region—*i.e.*, between the lower margin of the ribs and the crest of the ilium. Pain was felt on pressure over the lower border of the ribs, and there was much pain over the right iliac fossa, but none on pressure over the pubes. About half a pint of urine passed at the time of examination was fluid almost as dark as porter, and undoubtedly loaded with blood. No clots were seen. Pulse 78, good, steady; his tongue was clean, and he had no feverishness. His bowels had been moved to-day. He had opening medicine. He was prescribed perfect rest in bed; as diet, beef-tea, milk and water, and ice, to be swallowed in chips. He was also ordered twenty-minim doses of tincture of the perchloride of iron every two hours. It was not considered necessary to use the catheter, as there was no evidence of fracture of the pelvis. The urine had been passed without difficulty, and the apparently equal diffusion of the blood through the urine pointed to the probability of the hæmaturia being due to hæmorrhage from the kidney.

January 16th. The urine was still highly charged with blood. He complained of pain in the right side. Gallic acid was ordered in five-grain doses every hour, and for the relief of pain a grain of opium every four hours. In the evening, he was ordered to have ten-grain doses of gallic acid every hour.

On the 17th and 18th, the urine was still highly charged with blood; but on the evening of the 19th, the quantity seemed diminishing.

On the 21st, the urine was improved in character. The opium was omitted, there being less pain. The patient was ordered five-grain (in place of ten-grain) doses of gallic acid every hour, and raw beat egg by way of nourishment.

January 25th. The urine presented an orange-brown colour almost like that of a strong infusion of Liebig's extractum carnis. He had opening medicine; and probably his getting up to stool had aggravated the hæmaturia. He was allowed more generous and varied diet.

January 13th. The urine was much improved. The patient had had ten grains of gallic acid every two hours during the day; he was now ordered to have that dose three times a day. The man's general condition was satisfactory.

February 1st. He was ordered to have ten grains of gallic acid twice a day. Afterwards the urine steadily improved in character, and he was dismissed cured on February 13th.

NOTE.—Notwithstanding the long continued loss of blood in this case, the patient never exhibited any serious constitutional disturbance; the pulse remaining good and steady. He was confined to bed during the first fortnight of treatment. Where it is said that the medicine was given every hour, the statement refers only to the day-time. In spite of repeated efforts, the character of the feces in this case was never satisfactorily ascertained.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

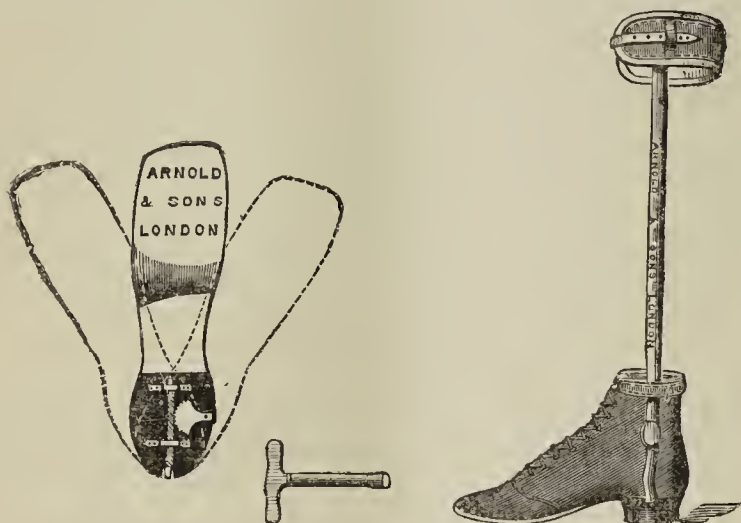
ETHER-INHALER.

A NEW ether-inhaler is figured and described by Mr. B. Wills Richardson in the *Dublin Medical Journal* for March. It is composed of a silvered copper or block tin box capable of containing an ounce and a half of ether. A broad and short tube conducts the ether vapour from this to the face-piece, the margin of which is formed by flexible metal and covered with Morocco leather. To increase the evaporating surface of the ether, the conducting tube is nearly filled with soft cotton candlewick, one end of which dips into the ether. The ether box opening of the tube is closed to two-thirds of its diameter, to prevent the fluid ether from passing into the tube when the patient is in the horizontal position. The admission of air during inhalation is regulated by the sliding or rotating cap.

NEW WALKING-BOOT FOR TALIPES CASES.

BY RICHARD DAVY, F.R.C.S.

IN the after-treatment of talipes varus and valgus, having so far rectified the distortion as to be able to dismiss the further use of the shoe, figured in the *BRITISH MEDICAL JOURNAL*, November 16th, 1872 (p. 548), I have found the employment of the following boot most useful. The mechanism for maintaining the needful inversion or eversion of the anterior part of the foot is placed completely in the block of leather at the heel; a small aperture at the point where the spur-box is placed admits the key for the movement. Any dirt is prevented from entering by the circularity of the leather corresponding to the shape of the steel rod.



The boot has been most carefully manufactured for me by Messrs. Arnold and Sons, 35, West Smithfield, and is well represented in the diagram. Figure 1 shews the boot applied; the mechanism at the heel is not noticeable. Figure 2 shews the concealed screw and pinion movement; and the aperture at the heel for the insertion and rotation of the key.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

QUININE AS AN ABORTIFACIENT.—Dr. A. Garden of Saharunpore quotes three cases in all which premature labour followed so closely on the administration of quinine, that he thinks there can be little doubt of their relation as cause and effect, though possibly the pre-existing fever might have predisposed the system to it.

TREATMENT OF PHTHISIS.—Dr. Macario (*Lyon Médical*, Dec. 22, 1872) attributes very successful results, in the early stages of consumption, to the use of the following formula: One ounce of a salt of ammonia and of chloride of sodium, one to two grains of arsenious acid, six drachms of cherry-laurel water, seven ounces of sugar, and three ounces and a half of water—making a syrup, of which a teaspoonful is given morning and evening.

TREATMENT OF WHOOPING-COUGH WITH QUININE.—Dr. Dawson, in a paper on this subject (*American Journal of Obstetrics*), says that the failure of quinine against pertussis, in the hands of others, is undoubtedly to be attributed to its administration, either in large doses at long intervals, or in the form of pills. He invites the profession to give to this treatment of pertussis a careful trial, feeling convinced that, if the following rules be carefully observed, few if any will be disappointed. 1. Give the quinine (sulphate or hydrochlorate) dissolved by acid in pure water only; for children under three years, from 5 to 8 grains, and for older children and adults, 10 to 12 grains, to the ounce. 2. Give not less than a teaspoonful every hour, or, at the longest, every two hours, during the day, and whenever cough comes on in the night. 3. Give nothing afterwards for some minutes to destroy the taste or to wash out the mouth. 4. Continue giving it, notwithstanding the first doses may be vomited. 5. Be sure that the quinine is pure and thoroughly dissolved. He attributes the rapid cure effected by quinine, not to the simple destruction of the fungus, but also to its nauseating bitter taste. The effect of a small amount of a solution of quinine, when taken into the mouth and swallowed, is instantly, from its bitter and nauseating taste, to excite a free secretion of thin mucus from the buccal mucous membrane and the salivary glands; and this softens and renders easy of dislodgment the tenacious mucus secreted from the mucous membrane of the pharynx. The frequent

repetition of the quinine keeps up this free secretion, and thus prevents the mucus from becoming tenacious and difficult of dislodgment. At each act of coughing, therefore, the accumulated mucus is readily loosened and expectorated, and unobstructed inspiration is obtained.

LOCAL APPLICATIONS OF THE DERIVATIVES OF TAR.—Mr. L. D. Bulkeley gives (*Brown-Séquard's Archives*) the following as the most useful formulæ.—*Creasote*. Creasote is of the greatest value in the scaly diseases, as also in relieving itching, particularly in chronic eczema. It is also useful as a wash in burns and chilblains. For the latter, Devergie advises the following ointment: \mathcal{R} Creasoti, liq. opii subacet., sing. gr. x; ext. opii gr. iss; adipis \mathfrak{z} j. M. Creasote has been strongly recommended in erysipelas, in the strength of two drachms to the ounce of ointment, almost a specific effect being claimed for it; also painted full strength over the inflamed surface. Squire has recommended to use creasote in chronic psoriasis, in the proportion of two ounces to one of white wax; the ointment to be rubbed firmly into the eruption morning and night, after removing the scales. McCall Anderson has found it useful, but too irritating in some cases. He adds from five to ten minims to ointments for the purpose of allaying irritation of the skin. Tilbury Fox employs six drops of creasote, with six grains of the nitric oxide of mercury to the ounce, in cases of psoriasis in hospital practice. The officinal ointment of creasote is of the strength of half a drachm to the ounce.—*Coal-Tar*. Dr. McCall Anderson (*Practical Treatise on Eczema*) indicates the employment of coal-tar in certain scaly stages of eczema, and gives a prescription whereby an emulsion is produced, on dilution with water, to suit the requirements of the case, and which, he imagines, represents in a measure the "*liquor carbonis detergens*". The following is Anderson's formula: \mathcal{R} Picis mineralis \mathfrak{z} ij; spiritûs rectificati \mathfrak{z} ij. Cola et adde liquoris ammoniæ fort. \mathfrak{m} vij; glycerini (Price) \mathfrak{z} vj; aquæ destillat. \mathfrak{z} xij. The "*liquor carbonis detergens*" he alludes to as an excellent preparation. He also uses coal-tar in eczema in the form of an ointment, thus: \mathcal{R} Picis mineral. \mathfrak{z} ij; glycerini \mathfrak{z} ij; adipis unguent. \mathfrak{z} iss. M.

DISEASES OF CHILDREN.

SCARIFICATION OF THE GUMS.—Dr. J. Lewis Smith, in his *Treatise on the Diseases of Infancy and Childhood* (of which the second edition has lately been published in Philadelphia) says that the gum-lancet is now much less frequently employed than formerly. It is used more by the ignorant practitioner, who is deficient in the ability to diagnose obscure diseases, than by one of intelligence, who can discern more clearly the true pathological state. Its use is more frequent in some countries, as England, under the teaching of great names, than in others, as France, where the highest authorities, as Rilliet and Barthez, discountenance it. It is well to bear in mind the remark of Trousseau, that the tooth is not released by lancing the gum over the advancing crown. The gum is not rendered tense by pressure of the tooth, as many seem to think; for, if so, the incision would not remain linear, and the edges of the wound would not unite as they ordinarily do by first intention within a day or two. If there be no symptoms except such as occur directly from the swelling and congestion of the gum, the lancet should seldom be used. The pathological state of the gum which would, without doubt, require its use, is an abscess over the tooth. As to symptoms which are general or referable to other organs, as fever and diarrhoea, the lancet should not be used if the symptoms can be controlled by other safe measures. All co-operating causes should first be removed, when, in a large proportion of cases, the patient will experience such relief that scarification can be deferred. If the state of the infant be such that life is in danger, as in convulsions, or there be danger that the infant will be permanently injured or disabled, as by paralysis, every measure which can possibly give relief should be employed without delay. In these dangerous nervous affections, therefore, the gums, if swollen, should be lanced.

TREATMENT OF INFANTILE SYPHILIS.—M. Blachez (Thesis on the Treatment of Syphilis) considers the important question whether pregnant women who are syphilitic should be treated with mercury, ought to be settled in the affirmative. He cites M. Depaul's results as demonstrating a greatly reduced mortality in the infant from this practice (which is nearly universal in this country). M. Depaul states that, out of two hundred and four cases of pemphigus in still-born children, he found only one case distinguishable as of syphilitic origin. Favourable results of mercurialisation of the infant through the mother's milk are cited, as well as of the ordinary methods of inunction, the administration of bichloride, and of the mercurial solution of Van Swieten.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 17TH, 1873.

MR. STANSFELD'S REPENTANCE.

CONVERTS in high places are always welcome; and we note with unaffected pleasure Mr. Stansfeld's appearance as a repentant confessor of the necessity of large areas and county boards for any complete sanitary administration. This is precisely the burden of the representations of the State Medicine Committee of our Association in the documents submitted prior to the issue of the Royal Sanitary Commission, and of the criticism of Mr. Stansfeld's Bill. Had the Boundary Commission then demanded been issued, there would have been none of the confusion and disorder which characterises the local arrangement of districts and of work under the new Public Health Act: a confusion and contradiction which must be fatal in a large measure to its usefulness. The Select Committee which Mr. Stansfeld now asks for, will be long before it has undone the mischief which he has presumptuously and ignorantly done by slighting the timely advice of men far better informed than he can pretend to be on the subject of sanitary administration. Already converted, as he avows himself to be, to the necessity of sanitary administration by county boards, we imagine that it will not be long before he recognises, also, the necessity of providing the medical officers over large areas with deputies in the persons of the local Poor-law medical officers. At present, we see adopted, in a few places, the principle of a large area and a competent medical officer—the middle part of the scheme—without either its beginning or end: without a competent authority or adequate staff of local informants. It is simply absurd to suppose that it can work well. Take such a case as that of Mr. Haviland, with two hundred and fifty thousand people under his sanitary care, and a district of fifty miles from end to end. It is ridiculous to suppose that he can work the district without local deputies. When these are added below and a county board above, we shall see the Association scheme complete; but after a fashion which has created unnecessary expense and delays, and done much to disgust those whose sympathies and aid it was most desirable to enlist.

THE HEALTH OF OUR COLONIES.

FROM official papers relating to Her Majesty's colonial possessions, just issued, we glean many items of public interest. The first paper refers to Jamaica, and we note that at Kingston the public hospital is undergoing considerable improvements. Additions are being made by which ample room for more beds is provided; and an excellent and airy surgical operating room has been erected. New baths have been also imported from England; and generally speaking, the hospital has been greatly improved. The management is spoken of in the highest terms of praise, and in every respect the hospital has become one that

is highly creditable to the colony. The health of the colony during the past year has been good. Several cases of small-pox, however, occurred in different parts of the island, but this disease nowhere assumed the character of an epidemic, and most of the cases have recovered. No exertion has been spared to press upon the Government Medical Department the importance of carrying vaccination to the greatest possible extent. Much was accomplished in this way, but Jamaica is still far from being protected by universal vaccination. For a considerable time during the year a rigid quarantine was enforced against cholera, which was raging in Cuba; but there were no manifestations of this disease amongst passengers from that island, and no case has occurred in Jamaica.

We learn from British Honduras, that the great necessity for a new hospital is forcing itself upon public attention, and plans for the erection of a building to be devoted to this purpose have been submitted. It is hoped that ere long the contemplated hospital will become a *fait accompli*. With regard to the health of the colony, as Europeans form but a small part of the population, sickness of every kind prevails to a much smaller extent amongst them than amongst the black population. The only diseases affecting them are intermittent and remittent fevers and liver-affections; and these are generally of the mildest description. The climate is such that a healthy European will undergo as much fatigue and exposure without being affected by it as he would in his own country; and, where ordinary care is taken, a moderately good constitution may resist the effects of climate for a long period of years without experiencing even the smallest degree of illness. The diseases which affect the coloured population are similar to some of those affecting the blacks of other colonies in the West Indies, but there is an absence of many of the most serious, as typhoid and typhus fevers, small-pox, scrofula, and leprosy. Intermittent fever is the most frequent malady amongst the blacks of British Honduras; but it is so mild in its character that very little attention is paid to it beyond the taking of a purgative followed by quinine, remedies which are often altogether ignored. The ague, which is in other countries a most distressing stage of the affection, mostly amounts to only a slight attack of very short duration; the other stages are equally mild. With regard to remittent fever, the baneful habit of rum-drinking is the predisposer of any serious attack. It is, however, very amenable to treatment, and its duration is generally short, if not neglected at the outset. Within the memory of the oldest inhabitant of the colony, small-pox has only prevailed once—viz., in the year 1856—when it was characterised by considerable virulence, very likely in consequence of the neglect of vaccination. Typhus and typhoid fevers are not known, and acute diseases, such as pneumonia and hepatitis, seldom assume the typhoid condition. Phthisis does not seem to originate to any great degree in the colony; while continued and low fevers are most rare. Rheumatism is frequent, but more often it is the kind following gonorrhœa than that produced by the effects of climate. As to scrofula and rickets, the offspring of the natives proper are wonderfully free from these affections; and the absence of deformed and misshapen children is remarkable. Of leprosy there are perhaps four or five cases in the whole colony, none of which are natives, and the necessity for making special arrangements for their treatment has never arisen. The cases are not severe; the disease is generally confined to a limb or some defined part of the body, and is slow in progress. In 1836 and 1854 cholera visited the colony, and on the latter occasion was severe. In the end of 1867 and the beginning of 1868 it again visited the island, but it was not so severe, and only carried off those who were either poor and ill-fed, or those who were immoderately addicted to spirit-drinking. There were frequent cases of cure recorded by medical men at the time. The public medical officer of the colony (Mr. A. Hunter) states that his experience of ten years has led to the conclusion that, for the black man, no better country exists than British Honduras, while as a temporary residence for Europeans it equals any of the West Indian colonies.

With regard to British Guiana, we find that the number of persons who died during 1871 was 7,324, or 3.78 of the entire population, as

against 2.9 per cent. in 1870. The Registrar-General, in his report, observes, that it is to be feared that a great portion of the mortality, especially amongst the Creole children, is caused by insufficient and innutritious food, unwholesome lodging, inadequate clothing, bad water, and want of timely medical aid. It is stated generally, however, that the health of the colony is not unsatisfactory. No epidemic has visited it, and no case of yellow fever has occurred. From the Bahamas, we learn that in 1871 the deaths numbered 805; while, with reference to the health of the colony, it is stated that "an improved and more extended system of drainage, with an efficient staff to enforce sanitary regulations, would add materially to the health of the place." It is to be hoped that a speedy improvement will be made in this respect. The health of the colony of St. Vincent has been very good during the year, although there was a slight increase of fever-cases in Kingstown, occasioned probably, it is said, by the opening of the streets for the purpose of laying the water-pipes. The mortality for the year has been considerably below the average, which is satisfactory. The hospital returns show that the most prevalent diseases were fever and phthisis; and in this latter class the mortality was highest, death carrying off no less than seven out of eleven cases. Considerable improvement and enlargement of the hospital are contemplated.

The principal civil medical officer of Ceylon reports that the health of the country during the year has been exceptionally good. Fever, in an epidemic form, has been scarcely known; and cholera has been confined to a few sporadic cases in the western province. The total number of cases reported during the year was 106, of which 62 proved fatal, or 57.16 per cent. Small-pox developed into an epidemic towards the close of the year in the western province, but only a comparatively few cases occurred in other parts of the island. The total number of cases reported to have occurred throughout the island was 3,103, of which 481 died, or 15.96 per cent. The returns submitted by the principal civil medical officer shew an increase of 528 in the number of cases treated in the Government hospitals over that of 1870, having been 8,916 against 8,388. The number of deaths was 962, or 10.78 per cent. of the total number treated. This is a decrease in the rate of mortality. The Government is engaged in the work of extending hospital accommodation throughout the island, and the official report is encouraging. Provision will be made for this work in the estimates, and the works pushed on to completion as rapidly as possible. The Government Medical School, which has been in successful operation for the past three years, will, it is believed, furnish a useful class of medical practitioners, and afford the materials for a subsidiary medical service in the colony. This is certainly very satisfactory.

The general health of the island of Mauritius has been good during the year, with the exception of an epidemic of influenza, which prevailed in the second and third quarters, and an increase of fever in the district of Grand Port and Savanne. Influenza caused many deaths, as did also fever. It is stated that the sanitary condition of Savanne appears to be deteriorating, that malarious fever is spreading, and has been unusually fatal. Deaths from dysentery have also been more than ordinarily numerous in Mauritius; and the proportion of deaths from fever alone was 47 per cent. The mortality, however, during the year was not above the usual average. Of the deaths recorded from causes not clearly defined, a large proportion were registered as from debility, or some equally vague term. The number of violent and accidental deaths was unusually large, and comprised 8 from poison, 66 from burns and scalds, 37 from drowning; while it is curious to note that an Indian girl, aged 13, hanged herself by accident when showing a young companion how the act was accomplished.

A NEW SCOTTISH BRANCH.

WE are able to announce that a new Branch of the Association is in course of formation in Scotland, for the counties of Ross and Inverness. The nucleus of the Branch will be formed by the conversion of the Inverness and Ross Medical Society into a Branch of the British

Medical Association. No doubt the vigorous success and local usefulness of the new Aberdeen, Banff, and Kincardine Branch has been influential in determining the members of the profession in Inverness and Ross to adopt this important step. The rapid progress of the movement by which our Scottish medical brethren are entering into equal union with us, in forming there, as we have here, Branches of one great British Medical Association, is full of good omen. We may hope that it will spread more widely; and that English Branches, Scottish Branches, and Irish Branches, will unite in equal numbers, as they do on equal terms, in the direction of this British Association, and in the local efforts to unite and invigorate local scientific and social efforts.

THE "Imperial Chateau" at Vichy is to be sold by auction at the end of this month. It is put up at £6000.

THE St. Mary's Hospital Dinner was held this week, under the presidency of the Marquis of Lorne. It was announced that it is intended to establish an additional ward for sick children.

THE Board of Health, having found at Constantinople (May 10th) that cholera had broken out at Widdin, has ordered quarantine for all vessels arriving from the Upper Danube.

Dr. WITHERS MOORE has been elected a physician to the Sussex County Hospital—succeeding the late Dr. Ormerod. Dr. Rutter has been elected to the post of assistant-physician, vacated by the election of Dr. Moore.

THE medical students of Grant College, Bombay, following the example of the students of several home medical schools, have commenced a periodical of their own, entitled *The Grant College Student's Journal*.

THERE has been a strike at the Brighton Workhouse, in consequence of the medical officer having stopped the supply of beer as part of the dietary, and substituted two additional meat dinners in the week. The refractory persons were charged before the magistrates, and punished by short terms of imprisonment.

CHOLERA IN AUSTRO-HUNGARY.

CHOLERA is again spreading in Pesth and the neighbouring city of Buda. In Pesth, during the second half of April, there were 202 new cases, with 102 deaths. In Buda, where the disease had apparently ceased on February 26th, there have been 59 cases since April 29th. In Bohemia, during the first half of April, three new cases were added to 49 remaining under treatment. Of the 52, 16 recovered and 28 died.

STATE MEDICINE EXAMINATIONS IN AUSTRIA.

AN order of the Austrian Minister of the Interior, recently issued, provides that all medical practitioners and veterinarians desirous of holding appointments in connexion with the public sanitary service shall undergo special examinations. These examinations will be held twice yearly, in spring and in autumn. The first will take place in October 1873. Medical men, before being admitted to examination, must produce (1) evidence of the possession of a diploma, granted by one of the Universities of the country, of doctor in general medicine, or of doctor of medicine and surgery and master in midwifery; (2) evidence of a knowledge of mental diseases, obtained either by ordinary attendance on a course of clinical instruction in the subject, or by attending the practice of an asylum for at least three months, or by holding an appointment as assistant medical officer in an asylum; (3) evidence of the possession of a theoretical and practical knowledge of vaccination, and of the elements of veterinary police and epizootics; (4) evidence that, after obtaining his doctor's degree, the candidate has performed subordinate duties for at least two years in a public hospital or other public medical institution, or has been in private practice for at least

three years. The subjects of examination are to be : 1. Hygiene and sanitary law ; 2. Forensic medicine, including forensic psychology ; 3. Pharmacognosis, including the knowledge of the most usual poisons ; 4. Chemistry (this and No. 3 with reference to the duties of district medical officers) ; 5. Veterinary police. There is to be an examiner in each subject, under the presidency of the chief sanitary officer or of a president appointed by the Minister of the Interior. The examinations will be written, practical, and oral. For the written examination, twelve hours will be allowed. The candidate must answer two questions, which may be on any of the subjects in this programme. Special attention, however, is to be given to hygiene, sanitary law, and forensic medicine ; and one of the questions must have a bearing on state medicine. The practical examination is to be conducted in a public hospital and in a chemical laboratory. The candidate will be required (1) to make an examination of a body, to dictate a report, and to express an opinion thereon ; (2) to examine and report on a wounded or an insane person ; (3) to make a qualitative chemical examination on some subject with reference to sanitary police, forensic medicine, toxicology, or pharmacognosis ; (4) to show that he has a practical knowledge of the use of the microscope in the examination of drugs, articles of food, and animal and vegetable parasites. The oral examination is to include all the subjects on which questions have not been already put. This part of the examination is to be open to the public. If a candidate fail in one of the subjects, he may present himself for examination in it at the next opportunity, or, at latest, at the next but one. If he fail in more than one subject, he may be admitted once, but not oftener, to another examination on all the subjects. The fee for the examination will be 24 florins. These regulations are not to affect the present district sanitary officers ; nor will they come into force until the end of April 1874 in places where appointments have been held for two years without interruption. The examination of veterinary surgeons is to embrace the hygiene of domestic animals, the legal applications of veterinary knowledge, epizootics, and veterinary police. It is to be written, practical, and oral.

WET-NURSING.

THE average mortality of infants one year old throughout France is 18 per 1,000. In the ten departments which chiefly receive *les petits Parisiens*, the infants whom fashion and morality in France consigns to rural wet-nurses, the mortality is 51.68 per 100. In the department of la Creuse, where the people marry early and mothers nurse their own children, the mortality is 12 per cent. ; in that department (spite much emigration) the births exceed the deaths ; in all the others the deaths exceed the births ; and a gradual depopulation is proceeding in France which excites the liveliest apprehension of the government.

THE RED CROSS AT KHIVA.

THE supporters of the principle of voluntary aid to the sick and wounded have not recoiled from the prospects of the hardships of a campaign even as formidable as that which lay before the Russian expedition to Khiva. The Russian Society for the Aid of the Sick and Wounded in War has sent to Khiva five surgeons, under the direction of Dr. Grunn. The material carried by the medical party consists of four tents doubled with canvas lining, and capable of containing sixty patients, osier baskets for the transport of the sick and wounded on camels, and a great supply of ambulance material and medical comforts.

IMPERIAL PRIZES.

THE Committee of the German Union in aid of the Sick and Wounded in War announces that Her Majesty the Empress of Germany, on the occasion of the International Exhibition in Vienna, has instituted two prizes each of the value of 2,000 thalers (about £300) for—1, the best Manual of practical Military Surgery ; 2, the best work on the Geneva Convention. The prize essay on military surgery must contain a brief and comprehensive account of the various modes and materials of dressing and of the operations to be performed on the field, and so repre-

sent the modern state of military surgery as to become an indispensable companion and practical aid to every army surgeon. The other essay must contain a history of the origin of the Geneva convention, an exposition and examination of its operations, and suggestions for its extension by addition or modification. The prizes may be written in German, French, or English. Each must be signed with a motto, and, accompanied with a sealed envelope containing the name and address of the author, must be sent to the above named Committee in Berlin on or before May 15th, 1874. The award will be made by three judges, one from the Austrian patriotic aid-association in Vienna, another from the International Committee in Geneva, and the third from the Berlin Committee. The decision will be announced on October 18th, 1874, the birthday of his Imperial Highness the German Crown-Prince. The author of a successful essay may publish it ; but if he fail to do so within six months, the right will lapse to the Berlin Committee.

ST. GEORGE'S HOSPITAL.

DR. ROBERT JAMES LEE has been appointed Assistant Obstetric Physician and Assistant Lecturer on Midwifery and Diseases of Women at St. George's Hospital.

THE WESTMINSTER HOSPITAL.

DR. WILLIAM H. ALLCHIN has been recommended as Assistant-Physician to the Westminster Hospital. No recommendation has as yet been made for the appointment of Assistant-Surgeon.

MEDICAL ARTISTS.

IN the *Times* notice of the old water-colour exhibition, we read :—We have already more than once had to notice with deserved praise the contributions to the Royal Academy of one of our most distinguished surgeons, Sir Henry Thompson. Mr. Seymour Haden, another eminent member of the same profession, stands high in the very first rank of contemporary etchers. The late Mr. S. Solly was no mean artist in water-colour. And now we have to add to the list of hands cunning at once with scalpel and pencil, a name not less distinguished than the most distinguished of these—Mr. Prescott Hewett, lately elected an honorary member of the Society, and a contributor to the present exhibition of two beautiful drawings (229, 242) from the banks of Poole harbour, under the suggestive title of "A Surgeon's Holyday". These drawings would do honour to the most meritorious member of the Society, by their fine silvery quality and exquisite sense of the harmonies of gray in soft, still, and rather hazy weather. They hold their own perfectly well on this screen among works by Walker and Alfred Hunt, Boyce and Dodgson, Davidson and Newton, and a new associate, who appears here for the first time, M. Alma Tadema.

ARMY MEDICAL MATTERS.

IT has been rumoured in certain quarters that the recent retirement of Surgeon-General Innes, C.B., from his post at Netley, was connected in some way with the financial irregularities there. Nothing can be further from the truth, however, than this ; for it is well known that the health of this distinguished officer has so far suffered from a long and arduous service of thirty years, as to cause his resignation to have been in contemplation for some time. And it ought to be no less generally understood, that the medical department of the Royal Victoria Hospital was in no way responsible for the unfortunate occurrences referred to.—Medical officers are expected to derive much comfort from the fact now being industriously circulated, that the recent forage regulations are to apply as rigidly to other branches of the service as to themselves. But this we fear may turn out to be illusive ; a competent field officer will always find it easy to prove his absolute necessity for a charger, whereas the more anomalous duties of a surgeon may cause difficulty, as we have already pointed out ; and we hardly see how this will compensate the surgeon-major employed on sedentary hospital duty for the allowance which he formerly enjoyed as a matter of course, but which the peculiarities of his position may now no longer allow him to claim.—The *Broad Arrow* and other papers have recently given pro-

minence to what, at first sight seems, a real grievance in connection with the late Army Medical Gazette. It has been pointed out, that two of the promoted surgeons have been permitted to reckon half pay along with their full pay service; and some of their junior brethren urge, with apparent justice, that this is illegal and prejudicial to the interests of the department. But the facts of the case are briefly these. The medical officers some time ago returned from India in bad health, and were placed on half pay. At the expiration of six months they were reported fit for duty, and ought, in the ordinary course of events, to have gone on active service; but, reductions happening to take place on the staff at that time, they were retained on half pay until absorption made room for a return to the full pay list. Now the proper course of action would have been to restore these medical officers to full pay, placing two of their juniors on the half pay list; the result of the mistake having been to deprive them, not only of time, but of money. While acknowledging, then, that a simple act of justice has been done in enabling them to count the service of which they were unjustly deprived, it is a question whether they might not be considered entitled to more direct pecuniary compensation.

THE ROYAL SOCIETY.

THE following is the list of names of members of the medical profession selected by the Council of the Royal Society, together with the statement of their claims appended to their names:—

William Aitken, M.D. Edin., M.R.C.S.E.; Professor of Pathology in the Army Medical School, Netley. Author of "Treatise on the Science and Practice of Medicine," 2 vols., sixth edition, 1871; Joint Report with Dr. Lyons, "On the Pathology of the Diseases of the Army in the East, etc.," 1855-56; Papers "On the Pathological Connexions and Relations of Epidemic Diseases in Man and the Lower Animals" (1857); Monograph "On the Growth of the Recruit and Young Soldier" (1862); and various papers on Pathology, etc., in the Reports of the Army Medical Department, Transactions of Societies, and Journals. Distinguished for his acquaintance with Anatomy, Pathology, and Pathological Anatomy.

Sir Alexander Armstrong, M.D., K.C.B., F.R.G.S.; Director-General of the Medical Department of the Navy. Hon. Physician to the Queen and to H.R.H. the Prince of Wales. Author of "Personal Narrative of the Discovery of the North-west Passage," and also of "Observations on Naval Hygiene and Scurvy." Distinguished for his acquaintance with the science of medicine and naval hygiene. Eminent as a physician and naval medical officer. Was medical officer of the Xanthian Expedition, and also of H.M.S. *Investigator*, at the discovery of the North-west Passage, and was for nearly five years continuously in the Arctic Regions. Gazetted for war services in the Baltic during the Russian war. Has been Deputy Inspector General of the Naval Hospitals, Malta, Haslar, and Chatham, and to the Mediterranean Fleet.

John Beddoe, B.A., M.D., Physician. Mem. Anthropol. Soc. Paris and Berlin. Author of "The Stature and Bulk of Man in the British Isles," and of papers on the "Physical Characteristics of the Ancient Germans" (Trans. Brit. Assoc.); "The Physical Characteristics of the Jews," "The Head-form of the Danes," "The Relation of Temperament and Complexion to Disease," "The Comparative Mortality of England and Australia." Distinguished as an anthropologist and Statistician.

George Edward Paget, M.D. (Cantab. and Dub.), D.C.L. (Oxford and Durham), LL.D. (Edin.) Regius Professor of Physic in the University of Cambridge. President of the General Medical Council of the United Kingdom. Formerly Fellow of Caius College, Cambridge. Physician. Author of a Paper on Morbid Rhythmical Movements (*Edinburgh Medical Journal*, 1846); Notes of an unpublished MS. of Harvey, 1862; The New Grain, 1862; and other papers.

George West Royston-Pigott, M.A., M.D. (Cantab.) Late Fellow of St. Peter's College, Cambridge, Wrangler, F.C.P.S., F.R.A.S., Member of the Royal College of Physicians (Retired Physician). Author of paper in *Phil. Trans.*, 1870; of "The Harrogate Spas;" of various articles in *Popular Science Review*, *Quarterly Journal Microscopical Science*, *Monthly Microscopical Journal*. Has for many years prosecuted original researches in High-Power Definition and Aberration, with a view to the detection of delusive microscopical phenomena, and to develop new powers of resolution in minute organic structure. Attached to philosophical pursuits.

BENEVOLENT INSTITUTION FOR CURED LUNATICS.

IN consequence of a suggestion made by the Medico-Psychological Society of Berlin, an association has been formed for the aid of the insane who have been cured. Among its supporters are Professors Liman and Westphal, and the principal bankers. Its object is to afford to those cured of their mental disease protection against want and care, and thus to obviate a return of this malady.

MEDICAL ACT FOR NOVA SCOTIA.

A MEDICAL Bill has been passed through the Legislature of Nova Scotia, and came into force on the 1st of May last; one of its provisions is, that after May 1st, 1873, any person practising as a physician or surgeon in the said province for gain or reward without being registered under this Act, shall forfeit a sum of twenty dollars for every day that he shall so practise. This appears, says the *Canada Lancet*, pretty severe, and as is usual under such circumstances, it is likely to defeat itself. We are glad, however, to observe that the medical profession in our sister province is taking steps to place itself in a better position in regard to irregular practitioners.

DEATH FROM CHLORAL HYDRATE.

THE *Canada Lancet* has the painful duty of announcing the death of Dr. C. B. Jones, of Toronto, on April 15th, from chloral hydrate. He had been suffering for some time from fissure of the anus, and he placed himself under the care of Dr. Campbell and Son, of Toronto, for treatment. He was put under the influence of chloroform, and the operation performed. He recovered nicely from the effects of the chloroform; but as he was still suffering considerable pain, he requested Dr. Campbell to give him some chloral, which he accordingly did. He took forty grains; and in about twenty minutes forty grains more combined with a quarter of a grain of morphine, were administered. Soon afterwards he became insensible, and sank, in spite of the usual appliances, death being caused by cardiac syncope. This is the second occurrence of the kind which has taken place in that city, and, as a curious coincidence, in both cases from similar quantities of chloral.

EXCESSIVE PUERPERAL MORTALITY.

IT is perfectly well known to all who have studied the subject, but we wish that the conviction were more active and wide-spread, that every woman who enters a hospital for the purpose of accouchement thereby lessens her chances of life. The excessive mortality which invariably attends child-birth in hospitals has been thoroughly demonstrated by British authorities, prominent among whom have been Dr. W. Farr, F.R.S., Sir James Simpson, Dr. Barnes, Dr. Hall Davis, Dr. Matthews Duncan, and Miss Nightingale. French authorities are becoming day by day more painfully impressed by the same distressing class of facts; and the Public Relief Administration of Paris has developed and is enlarging a system by which poor women claiming public assistance and reception in hospital at child-birth are directed to the homes of authorised midwives, who are paid a stated sum for the attendance and maintenance of the patient during her term of accouchement. In the last quarterly report of the permanent Committee on Prevalent Disorders of the Société Médicale des Hôpitaux of Paris, read on the 25th of April last, and showing the mortality of January, February, and March, from prevailing morbid causes, the excessive mortality of lying-in women from this influence of hospitalism is, as usual, very clearly seen. The figures of the quarter, which the reporter, Dr. Besnier, considers as one of "normal exacerbation", are as follows: 4.04 per cent. of deaths amongst women delivered in hospital; 1.29 amongst the women sent by the Public Relief Department to the city midwives; 0.37 among the women delivered at home by the medical officers of the public charities. Among the first class, 1,656 in number, there were 67 deaths; among the second, numbering 616, there were 8 deaths; among the third, numbering 2,868, there were 11 deaths. Thus, taking the third as a normal standard, there were sacrificed to the ignorant beneficence which accumulates lying-in women in hospital, sixty-two out of the sixty-seven women who died. Even

the accouchement at the house of the midwife introduces elements of possible infections and danger; and the true path to safety lies in the delivery of women at their own homes whenever possible. This is the course adopted at all our general hospitals. It is much to be feared that the few lying-in hospitals which we have in London are, in their small way, curses to the population, rather than blessings. Fortunately, their mischievous activity is conscientiously restricted by their managers within very narrow limits.

PROPYLAMINE IN THE TREATMENT OF RHEUMATISM.

M. DUJARDIN-BEAUMETZ presented recently to the Society of Medicine of Paris specimens of propylamine prepared from calf's stomach. He stated, however, that it was preferable to employ the chlorhydrate of trimethylamine, since solutions of propylamine were of very various degrees of concentration and intensity. He cited, in addition to his previous cases, a series of favourable results obtained by Drs. Martineau, Gimballt, Bouchard, and Cadet de Gassicourt. He considered chlorhydrate of trimethylamine to be a sedative of the circulation superior to digitalis. So largely is this substance being employed in the French hospitals, that £70 worth was asked for in one week: its present selling price is £6 the *kilogramme* (two pounds' weight).

CHLOROFORM-DEATHS.

THE records of such accidents are much less carefully kept in France, where vital statistics of hospital and private practice are not accurately registered or universally published, than in England. A case was, however, communicated by M. Lefort to the Surgical Society of Paris on the 30th April. The patient was an apparently healthy man 30 years of age, suffering from fissure of the anus. Anaesthesia was procured satisfactorily, and forcible dilatation was practised. After the close of the operation the patient was still sleeping, without any quieting symptoms, but presently became stertorous, cyanosed, and pulseless. The tongue was drawn forward; Silvester's method of artificial respiration and tracheal insufflation was employed, as well as the electric current, but without any effect. The necropsy disclosed no cause of death. The death of a well known lady at Lille, from chloroform administered for the purpose of extracting a tooth, has been the cause of some sensation.

TWO SIDES TO A QUESTION: ST. MARK'S HOSPITAL FOR FISTULA.

AT the thirty-eighth anniversary of this "excellent charity", it was announced that there were from sixteen to twenty beds empty, and a deficit of £865, which, the Lord Mayor said, was a disgrace to the City. On this subject, however, some persons will be far from concurring with him; and it will be generally considered that it would be more creditable to the good sense and good feeling of the managers of several institutions of the sort, which are wholly uncalled for, were shut up altogether. Not one sufferer would go unrelieved. There never was a case of fistula or hæmorrhoids requiring operation which was refused admission at a London hospital, or one requiring alleviation which was turned away from the out-patient department.

PNEUMATIC ASPIRATION IN STRANGULATED HERNIA.

M. DUPLAY reported in February 1873 to the Société de Chirurgie on a case of M. Tessier, in which three capillary punctures with the pneumatic aspirator were made. The result was unsuccessful, and kelotomy was performed. M. Tessier stated that the hernia was an entero-epiplocele, and his instrument imperfect. He called attention, however, to the fact that the punctures were harmless, and had left no trace in the intestine. M. Verneuil took the opportunity of mentioning a recent case in which he had punctured with the *aspirateur Dieulafoy* an irreducible strangulated crural hernia, drawing off five or six *grammes* of frothy dark sanguineous blood of characteristic colour. The size of the tumour was lessened by one-half, the hernia was reduced, and the patient recovered. M. Verneuil believed that he had only penetrated into the sac, which was the seat of an effusion of blood. This proceeding is becoming generalised in France as the

almost necessary accompaniment of the taxis in cases of strangulation, and preliminary to kelotomy. It appears to be always innocuous, and frequently effective.

HAMPSTEAD METROPOLITAN ASYLUMS DISTRICT HOSPITAL.

THE conversion of this hospital into an asylum for imbeciles and harmless lunatics has led to the resignation of Dr. Grieve, the medical superintendent. Dr. Grieve had the medical charge of the hospital during the small-pox epidemic; and it was in a great measure owing to his energy, and to the powers of organisation which he displayed, that the Hospital Committee was able to meet successfully the extraordinary pressure of the disease.

THE ADULTERATION OF FOOD ACT.

AT the Croydon Petty Sessions, on Saturday, a grocer was summoned for having in his possession a quantity of tea which, on being tested by the county analyst, was declared to be adulterated. The defendant's solicitor contended that there was no guilty knowledge on the part of the defendant, and remarked that the tea might have been, and probably was, adulterated by some Chinaman prior to its exportation to this country. To this the magistrates replied that it was fair to assume that the defendant knew the quality of the article in which he dealt, and if there were anything in it which was not tea, he must be aware of it. Secondly, if he sold it under such circumstances, that would be selling it with a guilty knowledge. They dismissed this particular case, but intimated that in future, when an article was so palpably adulterated that the seller was aware of it, and was found to be selling it as a genuine article, they should deem such evidence sufficient to warrant a conviction.

REPORT OF THE MASSACHUSETTS BOARD OF HEALTH.

THE fourth annual Report of the Board of Health of Massachusetts, edited by Dr. Derby, contains a great deal of valuable matter, including a report on Sewage and Sewerage by Professor W. R. Nichols, who visited England for the purpose last year. He finds little reason to expect good results from any chemical process thus far proposed. Irrigation with sewage gives, he thinks, better promise. There are, also, a further analysis of evidence as to the use and abuse of intoxicating liquors, and touching beer-shops and prohibitory laws; an analysis of substances used for flavouring drinks and food; a valuable article on Infant Mortality by Dr. Jarvis; articles on some of the causes of consumption, and on a great variety of other interesting and important subjects. These reports form a very valuable blue-book, and are such as reflect great honour on their authors and on the enlightenment of the commonwealth of Massachusetts, which supports and fosters the activity of its State Board of Health.

A SKETCH OF THE FRENCH HOSPITALS.

MR. J. F. WEST, Senior Surgeon at the Queen's Hospital, Birmingham, in an account of a recent visit to the French hospitals, which he read lately before the Midland Medical Society of Birmingham, criticises sharply some peculiarities which he noted in continental hospital practice. Describing the hospital-surgeon in his round, he says:

His dress strikes one at once as characteristic and peculiar. The head is covered with a black silk biretta, like that worn by Roman Catholic priests. The coat, generally old and blood-stained, has in its top button-hole a little red rosette, indicating that the wearer is decorated (and generally he well merits the distinction) with the Cross of the Legion of Honour: most strange to an English eye, however, is the large white apron, extending from the breast to the toes, with which he and his attendant *internes* (or house-surgeons) are clothed. On commencing the round, these aprons are all clean and spotless, and one begins to fancy that they are neither useful nor ornamental appendages. Not so, however, when you watch the professor and his assistants through the wards. You find that their progress from bed to bed is rapid, and that the aprons are in constant requisition to wipe the blood, pus, or urine from the hands. Recourse is much less seldom had to soap and water than with us, and there is an evident carelessness about ablution, which to a visitor seems, to say the least, strange.

Again, it is certainly rather a shock to our notions of decency and propriety to see the same finger which has recently been employed in passing a catheter or examining a rectum, after a hasty wipe on the apron, thrust into the mouth to examine some tumour of the tongue or jaws. This disregard of the feelings of the patient is carried to an extent which we should call extreme.

At the St. Louis Hospital, women with skin-diseases, whether syphilitic or not, are placed on a stool in a strong light, and then before the whole class requested by the physician to take off every article of clothing. There they stand perfectly naked, while the professor diagnoses their disease, and points out its peculiarities and proper mode of treatment to the assembled students. Such a disregard of the feelings even of prostitutes would not be sanctioned in this country. Indifference to the sufferings of their patients is again seen in the fact that at many of the hospitals the surgeon is attended through the wards by an *infermieri*, in his shirt-sleeves, carrying a brazier full of hot coals and the accompanying cauteries. These formidable instruments are not only displayed before the eyes of the patients who are about to be operated on, but they have to submit to them without having their eyes bandaged and without chloroform being administered. The agonised look of one poor little boy, whose hand was about to be scored with the hot iron for caries of the carpal bones, recalled to me those lines from Shakespeare's *King John*—

"O, save me, Hubert, save me; my eyes are out
Even with the fierce looks of these bloody men."

French patients, however, seem to bear pain more equably and unflinchingly than English, and to have a more implicit and unquestioning faith in their surgeons, and in the procedures they are adopting for their relief. Anæsthetics are certainly much less used than with us. I saw the actual cautery frequently applied, and also an amputation of the cervix uteri performed, without chloroform. But, worse than all, on one occasion some years ago, I saw a very eminent hospital surgeon try for half-an-hour to extract a hair-pin from the bladder of a woman, by means of forceps, without success, while the patient lay shrieking most piteously every time the sharp points of the pin lacerated the mucous membrane of the bladder and urethra, in the futile attempts made by him to get them into such a position that the smooth end of the hair-pin should first enter the vesical end of the urethra.

Mr. West pays a just tribute to the industry, devotion, research, and ingenuity of French surgeons and men of science, and to their many high mental qualities and great cultivation.

THE EDINBURGH UNIVERSITY CLUB, LONDON.

THE quarterly dinner of this Club was held at St. James's Hall on Wednesday evening last. Sir Alexander Armstrong, K.C.B., presided; and among the guests invited by the Council were the Dean of Westminster, Professor Sir W. Sterndale Bennett, Mus.D., and Dr. Sedgwick (representing the St. Andrew's Medical Graduates' Association). There were also present Professor Allman, Dr. George Harley, Deputy Surgeon-General Huntly Gordon, etc. Dean Stanley, representing Oxford, replied to the toast of the Sister Universities; and Sir Sterndale Bennett and Dr. Sedgwick returned thanks on behalf of Cambridge and St. Andrew's respectively. The Chairman in his speech discussed the recent changes in the University. Dr. Halley (Treasurer) and Mr. Harry Leach enlivened the proceedings by various songs; and the company separated after singing "Auld Lang Syne".

ADULTERATION OF MILK.

A WEAK and abortive report on the adulteration of milk has recently been presented to the Marylebone Vestry by the official food-analyst. We say abortive, inasmuch as we cannot possibly see any object to be served by it. That the major portion of all the milk sold in London is skimmed and watered was very well known before this report was made; and from the report all that is to be gathered is, that this practice is common in Marylebone. The names of the offenders (which the public would like to know) are carefully suppressed. Why this reticence? The weakness of the chemical work suggests the answer. The food-analyst in Marylebone recognises that the specific gravity test is of little value as applied to milk (he even says that he has found the specific gravity of genuine milk to range from 1.019 to 1.031), and still he encumbers his return with the specific gravity of each sample. The percentage of cream, he acknowledges to be utterly variable, and still

he gives it and abstains from determining the fat. He takes the solid residues in milk, and recognises the importance of doing so; but he is quite at sea in his calculations of the quantities of water with which the different specimens had been mixed. His determinations of curd (caseine) are absurd; as may be appreciated from the following examples: Sample No. 1 contained 13.3 per cent. of milk solids, and of these 8.40 were curd. The true quantity of caseine in milk is 4 or 5 per cent. (not 8.4). His determinations of the variations in the percentage of caseine in five samples of genuine milk is very remarkable. He found it to be 9.45, 5.45, 7.21, 8.40, and 4.70. No doubt he has been mistaking a mixture of fat and caseine for pure caseine, and the variation is simply the variation in the quantity of fat which he has left adherent to the caseine.

SCOTLAND.

THE NORTHERN BRANCH OF THE PHARMACEUTICAL SOCIETY.

AT the annual meeting of the Northern Branch of this Society, held at their new rooms in St. Giles's Street, Edinburgh, it was stated that the Board of Examiners had had 175 candidates for preliminary, 13 for the major, 54 for the minor, and 24 for the modified examination—in all, 264. Of these, 74 failed in the preliminary, 6 in the major, 23 in the minor, and 6 in the modified examination—in all, 109, or as nearly as possible 41 per cent. of failures. The Council could not but regret this large percentage of failures; but they expressed the fear that the recent changes carried out by the Board in London would very much increase the number of rejections. The result might be a serious diminution of apprentices and assistants entering the trade. It was stated, however, that correspondence was now going on between the London and Edinburgh Boards, which the Council hoped would result in some satisfactory arrangement.

THE WESTERN INFIRMARY, GLASGOW.

THE Committee for the erection of this institution have just issued a report of the state of the hospital, and they prefix to their report a short account of the origin and early progress of the enterprise. As early as 1846, there was a proposal to remove the University to new buildings to be erected in the west end; and, along with this scheme, the erection of a hospital was considered. The proposed removal was projected, because a railway company had obtained powers to buy up the old University; but, when this railway scheme fell through, the proposal to remove the University was also abandoned. Another railway having bought up the old university buildings in 1863, the present buildings were proceeded with; and a part of the scheme was the erection of a new hospital. It is proposed, however, in the new hospital, as now being erected, to subserve more than the necessities of the medical school. It has long been evident that the rapid extension of the city of Glasgow necessitates further hospital accommodation; and, seeing this, many benevolent gentlemen have joined the University authorities, and there is now projected, and in course of erection, a large and handsome Infirmary. In the meantime, only a portion of the building is being proceeded with; but, as only £9,000 are wanting to complete this part, we hope soon to be able to report that the entire hospital is in process of erection. When completed, it will contain three hundred and fifty beds; but it is intended to limit the number of patients at one time to three hundred, so that different parts of the house may periodically be vacated in succession, and undergo suitable purification. The wards are of such dimensions as to afford from 105 to 110 square feet of floor-space, and 1,575 cubic feet for each bed. The larger wards, of which there are seventeen, contain each from fourteen to eighteen beds; and other wards of smaller size make up the complement. The heating is effected by open fireplaces, and by the circulation of hot water. In this report we have also the record of certain negotiations gone into by the committee of the new hospital with the directors of the Royal Infirmary. It was thought by many, that it might be advantageous to administer the Royal Infirmary and

the Western Infirmary by the same board. Accordingly, the committee of the latter made an offer to the directors of the former, of which the following are the chief points. The new Infirmary was to be built and fully equipped, and to be free of debt, before being handed over; and the present committee, as they had undertaken, should also complete the work. The new Infirmary should be entirely under the board of the original Infirmary, with the exception that the Senate should have the nomination of physicians and surgeons to half the beds in the new hospital. The Senate should nominate these physicians and surgeons, who, if approved of, should be appointed by the managers of the Royal Infirmary; and, if not approved of, a fresh nomination should be made; and so on till the appointments were completed. These were the chief proposals. The directors of the Infirmary, while not refusing the offer, have shelved the matter by a resolution come to in August 1872, to the effect that it is not expedient to appoint any committee to consider the proposal till the Western Infirmary is in a more forward state. These negotiations are in the meanwhile, therefore, in abeyance. Another feature in the report is the arrangement come to by the committee with the directors of the Dispensary for Skin-Diseases, by which, in lieu of £2,000 subscribed by the latter, twenty beds are to be set apart for the treatment of cutaneous affections; and the directors of the Dispensary are to have the nomination of the physician. Negotiations are also going forward to bring into connexion with the new hospital an institution proposed to be established for the treatment of the diseases of children. If these negotiations come to a successful issue, the equipment of the Medical School of Glasgow University will be one of the best in the kingdom. We shall then have, within a reasonable distance of the University, not only a general hospital, but institutions where students may be taught the diseases of children, of the eye, and of the skin. The new western hospital of the Eye Infirmary is in a forward state, and this will be a great accession to the school.

IRELAND.

INCREASE OF SALARY.

AT a late meeting of the dispensary committee of the Lurgan Dispensary the salary of the medical officer, Dr. Bushell, was increased from £100 to £130 *per annum*, the days of attendance at the dispensary to be three a week instead of two as formerly.

TESTIMONIALS TO DR. PALMER OF WATERFORD.

THIS gentleman was last week presented with a testimonial from the members of the Independent Order of Odd Fellows, consisting of an address and a handsome gold ring; and on the succeeding day with a purse containing £150, and a gold watch, by his friends in Waterford, who acknowledged in this manner their esteem for his character and the high opinion they held of his professional abilities.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE election for examiners of candidates for the letters testimonial, for the Fellowship, and for the diploma in Midwifery of the College, took place on the 6th instant, when the examiners of last year were re-elected. We believe it would prove of utility to the College to have some new blood infused into the list of examiners.

SANITARY LECTURES.

THE last of the series of these lectures on public health was given on the 3rd of May, by Mr. Furlong, on the subject of "Sanitary Legislation." He remarked that the conditions which science and experience inform us are necessary for the preservation of health are not to be secured without the intervention of the State. Individuals may live in obedience to the laws of health, but in the majority of instances they will find their efforts frustrated by the neglect of their neighbours; and hence arises the necessity for sanitary legislation. He stated that the death-rate for Dublin was much too high, being last year 29 per 1,000, ex-

clusive of a large number of deaths not registered. This large mortality arose to a considerable extent from the neglect of sanitary precautions among the poorer classes, the sanitary inspection of the city being perfectly inadequate; the Public Health Committee being greatly to blame for not providing a sufficient number of properly qualified inspectors. He complained that municipal bodies did not do their duty, and were fonder of talking politics than trying to remove nuisances. Having referred to the proposed Public Health Act for Ireland, which he considered would be of immense service, he said that there was something beyond good laws and active administration that was required, namely, domestic sanitary co-operation. We wanted that every man and every woman in his or her own household shall be an officer of health. To secure this, we must have a better system of education in its practical aspects, and without this sanitary legislation can never secure those triumphs which it is calculated to achieve.—We understand that the Committee who have organised these lectures intend publishing the series in a volume at a price which will place them within the reach of all.

IRISH MEDICAL ASSOCIATION.

THE annual general meeting and dinner of this Association will be held on Monday, the 3rd of June, at the Royal College of Surgeons, in Stephen's Green. The Association has been instrumental in obtaining several instalments of justice for Poor-law medical officers, and is one which deserves the support of the profession.

HEALTH OF DUBLIN.

THE Registrar-General's report for the quarter ending March last shows that the number of births registered in Dublin during that period amounted to 2,341, or 30 per 1,000; and the deaths to 2,602, or 33 per 1,000. From this we find that the deaths exceed the births by 261! a fact which may be explained by the defective state in which the registration of births exists. The principal diseases which proved fatal were as follows:—Fever caused 68 deaths; 73 resulted from whooping-cough; scarlet-fever, 32; measles, 27; croup, 34; bronchitis, 542; pneumonia, 55; heart-disease, 118; convulsions, 153; paralysis, 60; epilepsy, 15; liver-disease, 33; consumption, 316; hydrocephalus, 44; and cancer, 32; whilst 56 deaths resulted from violence.

THE CASE OF DR. HARRISON.

AT a meeting held on Saturday, the 10th of May, in the County Court House, Roscommon, the Right Honourable Lord Crofton in the Chair, the following Resolutions were unanimously adopted.

1. Moved by The O'Connor Don, M.P., and seconded by T. A. P. Mapother, Esq., J.P.: That we have learned with regret and surprise that, in the recent law case of *Harrison v. Whitney*, the Judge of the Probate Court has, as we are persuaded, through a misapprehension of the true state of the case, the facts of which we believe were not fully placed before him, animadverted on the character of Dr. Harrison, which we (amongst whom his life has been spent) know to be without stain or reproach.

2. Moved by B. W. Bagot, Esq., J.P., and seconded by C. R. Chichester, Esq., J.P. and D.L.: That, from our knowledge of Dr. Harrison, and of the facts of the cause at issue, we are thoroughly convinced his retirement from the case in favour of the heiress at law, unadvised by, and subsequently disapproved of, as it was by his eminent leading counsel, was the spontaneous action of his own high principled and chivalrous nature, and dictated by motives wholly unselfish and diametrically opposed to those most erroneously attributed to him.

3. Moved by Captain Irwin, and seconded by P. Taaffe, Esq.: That, from our long and intimate acquaintance with his high and unsullied character, we hereby desire to express, in the most unqualified manner, our unshaken confidence in Dr. Harrison, as a man of honour, a long tried and trusted friend, a generous philanthropist, and an ornament to his great profession.

4. Moved by Taaffe Farrell, Esq., J.P. and D.L., and seconded by Captain Drought, J.P.: That an address, embodying the foregoing resolutions and expressions of the unanimous feelings of this meeting, be prepared for presentation to Dr. Harrison; and that a Committee be appointed by our Chairman to carry this resolution into effect, with instruction to give due notice of the date and time of presentation.

REPORTS

ON

SANITARY ENGINEERING IN HOUSES,
HOSPITALS, AND PUBLIC
INSTITUTIONS.

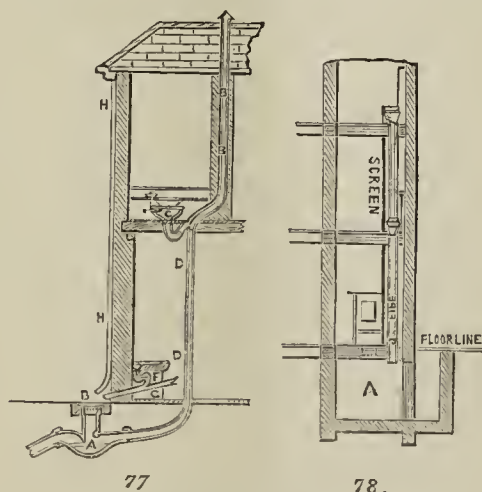
BY WILLIAM EASSIE, C.E.

VI.—WATER, EARTH, ASH AND CARBON-CLOSETS.

It is not to be denied that, in the case of London, where the water-closet system reigns supreme, the rate of mortality is wonderfully low. It is very doubtful whether an equally satisfactory result would follow were any of the dry-closet systems to replace it, although many have brought themselves to believe so. Earth-closets, ash-closets, and carbon-closets, have each been recommended as preferable to water-closets; but it is the growing opinion of all who carefully study the subject, that the last-mentioned is the most to be desired, especially in large towns and cities. In all likelihood, the earth-closet will ultimately find its proper place in isolated cottages, lodges, and the like; the ash-closet will be finally selected to meet the requirements of villages and districts where a sewer-rate must remain unknown; and the carbon-closet, under like circumstances, will be adopted in country workshops, and other exceptional places.

Sewage is beneficial to the earth, but the sewage should be brought to the earth, not the earth, after a costly fashion, to the sewage. Ashes also, when mixed with drainage, command a certain price; but they would be equally valuable if the admixture took place leisurely, at the sewer outfall. Charcoal also constitutes an excellent deodorant, but its value is greater as a filtering medium for the combined sewage of a town provided with sewers, as has been instanced at Newcastle-under-Lyne, where the manure so treated has been known to sell at £4 per ton.

Nothing can be more satisfactory than a good water-closet apparatus, properly connected with a well-ventilated sewer. It is cleanly to a degree, and at once allows the removal of all objectionable matter to a place where it can be utilised in a wholesale manner. The dry systems cannot be held up as *disinfecting* the soil, but as merely deodorising it. They may be otherwise theoretically perfect, but in practice they are cumbersome, and mean almost hand-to-hand collection. On an estate where water is plentiful, a well-constructed cesspool is preferable; and it is only when there is a paucity of water, and when a cesspool cannot be carried to a certain distance from the dwelling, or efficiently ventilated without creating a nuisance, that the dry systems become fairly valuable. As for the worth of the removed earth, or ashes, as a manure, they cannot possibly be more precious than the pumped-up liquids and solids of a cesspool, where all unnecessary water is kept from entering. All four systems have their own peculiar advantages in certain stated conditions of things: no one will gainsay that. In the following



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78.

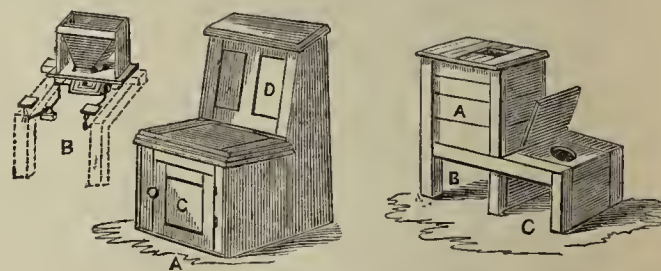
report I endeavour to point out where each is to be safely recommended. I have also figured the most improved contrivances for carrying out each method.

A perfect arrangement of a water-closet is drawn at figure 77. The

closet, C, is trapped below the seat, and the soil-pipe, D, is disconnected from the sewer by the ventilated trap at A, situated exterior to the house. It often happens, however, that this form of an opened-up delivery into the drain is objectionable, as the trap A may be situated in a small court-yard, where an exposure of the faeces, even for a moment, might be dangerous; and in this case the soil can be led direct into the drain in the usual manner, and only the rain-water pipe, H, the sink-waste, F, the bath-waste, G, and the cistern-overflows made to deliver over a disconnecting trap. But, in order to compensate for this departure from strict rule, it is necessary for the soil-pipe to run up to the roof outside the closet-trap, as drawn at F. By this means the drain is thoroughly ventilated. A soil-pipe, indeed, should always be ventilated, even when a disconnecting open trap is used outside; for a certain amount of lodgment will always be found in the soil-pipe, and in hospitals in which infectious disorders are treated, this might prove dangerous. The trap arrangement, B, here drawn, is that of Mr. Molesworth; but it can be easily copied if his specially contrived article be not to be obtained, as there is nothing patent about the disconnection of a drain, or the ventilation of a soil-pipe.

In places where there is no water-carriage of the soil it may be found advisable to make use of earth: and to show that this is feasible, I copy, at fig. 78, a plan devised by Messrs. Girdlestone for carrying out an upstairs system of earth-closets. A special apparatus is here employed, and the soil-pipe is carried down to a vault beneath the lowest closet. At the bottom of the receptacle of each closet is placed a sliding valve, which is opened by the withdrawal of a handle, when the holder is full, and the contents then fall down the pipe into a vault, as shown at A; or if there be no vault, into portable pipe-tanks, sold for the purpose.

Besides the earth and ash-closet systems, what has been called a carbon-closet system has been introduced into the market, from Leeds. It is a self-acting arrangement, the depression and elevation of the seat performing all the necessary work of distributing a minimum quantity of charcoal exactly where it is required, and removing the excrement. There can be no doubt that, if the charcoal be finely granulated, the deposit will be kept remarkably free from odour. Another advantage is that it can be worked with less than a fourth of the weight of the deodorising material as compared with earth or ashes. These carbon-closets can also be fitted to the several storeys of a residence, and in this case a reservoir of charcoal is placed at the top of the house, and all the closets draw upon it. A cesspit is situated outside the wall to receive the soil, etc., and is emptied by the scavenger once a year. The contents of the cesspit are then treated for the utilisation of the phosphates and ammonia, and the realised charcoal is returned to the closet reservoir for re-use.



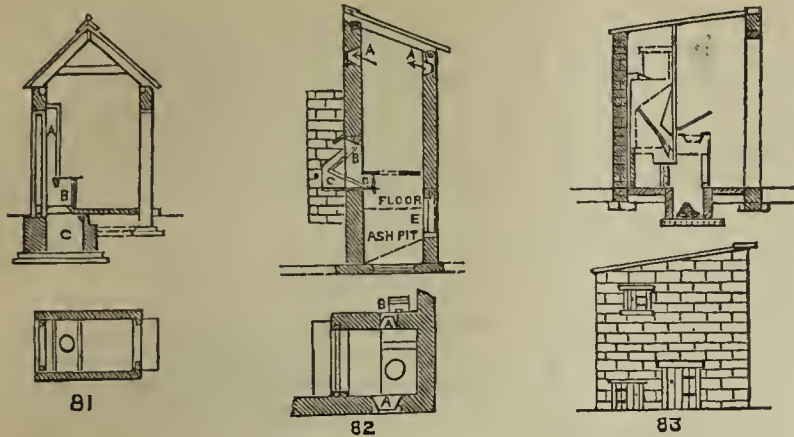
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Fig. 79 represents at A a view of the common earth-commode sold by the Moule Company, London; and it may be accepted as equal, at least, to any of those turned out by other firms. The dry earth is contained in the space D, and at B will be observed the kind of apparatus put there in order to measure out the proper quantity to distribute at each operation. I have here drawn a self-acting system, by which the earth is discharged when the upward movement of the seat takes place on rising therefrom. In all cases where these closets are used by the household, an automatic delivery of the earth is indispensable; for, without it, an omission to pull the ring, or lift up the lever, is of common occurrence. In sick rooms, this method of distribution of earth may be found objectionable, as more or less vibration follows the rising, and this is apt to disturb the nerves of a patient. The movable pan is enclosed in the space C.

Fig. 80 represents the Morrell ash screening and deodorising closet, supplied by the Sanitary and Economic Manure Company, of Manchester. It is very suitable for use in the back yards of lodges, or of isolated cottages; in fact, in all places where there is no regular communication with the sewer. When in use, the seat depresses, and communicates a motion to the screener, situated within the box, A, and thus the ashes which were introduced by the aperture at

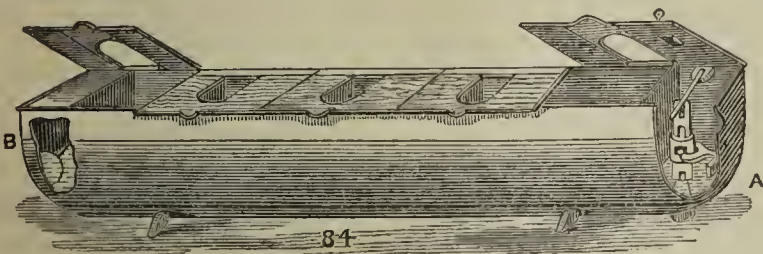
the top are agitated, with the effect of separating the ash-dust from the cinders, and placing the former in a measurer. On rising, the seat is elevated, and the ash-dust in the measurer jerked out over the soil which has fallen into a portable vessel at C, whilst the cinders are thrown simultaneously into the space B, ready for re-burning.



Where water-closets can be used, an ash-pit presents no difficulty, as the contents can be periodically removed; but where there is no sewer, and the site is too limited in extent to afford a properly constructed cesspool at a proper distance from the habitation where the drainage could be water-led, there is no doubt that an earth- or ash-closet would be found very desirable. An earth-closet, to be used where a separate ash-bin is kept, is drawn at fig. 81, in plan and section. The earth-box is represented at A, and between that and the closet-seat framing B, is fixed a Moule's distributing apparatus. A door is constructed at the back of the closet, so as to enable the earth-box to be filled, and the vault C emptied; but if there be means of making a gangway outside, the filling and emptying can almost as easily take place from the inside.

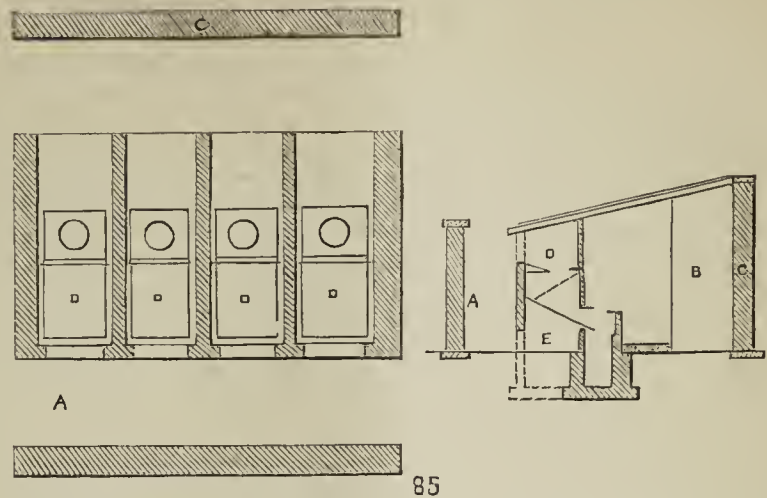
A Manchester ash-closet (Macleod's), with an ash-pit below for the general reception of all kinds of refuse, is drawn at fig. 82. Two air-bricks are built in near the roof, at A, to remove any smell from the closet, and the ash-pit is also concreted on the floor, so as to prevent any saturation of the soil. The ashes are put in the receptacle, B, and as the cinders fall towards the withdrawing box, C, the ash-dust finds its way into the distributor, D, so as to be ready for use. The pit is easily cleaned out by means of the door shown at E.

It frequently happens that it is found undesirable to construct a general ash-pit, where ashes, broken pottery, vegetable refuse, and garbage of all sorts can be accommodated, and rather to convey elsewhere everything except the ashes, using these as a deodorant for the excreta. In such a case I can recommend the Morrell ash-closet, drawn at fig. 83, having erected one, and experimented upon it from time to time. The upper part of the plan gives an elevation of this closet; the ashes as collected from the hearths being thrown in at the door, the cinders falling into a box, and the ash-dust and feces into either a portable tank behind the door, or into a water-tight vault. The upper sketch illustrates the cinders in the act of being screened, and the seat just after having been used.



Where there is a water-carriage to the sewer, and a number of closets are required to be nested together, a water-closet range is frequently erected, as drawn at fig. 84. The sketch given shows a range of five closets, before the partitions are put up, and doors fitted for privacy. The action of discharge is made by lifting up the lever at the lower and deeper end of the trough, A, whereupon the valve is opened, and the contents flow into the drain, or sewer. The water-supply is at the end, B; and when the lever at A is allowed to fall, and the valve drops into its socket again, the sluice-box into which the ballcock is fitted, and the trough itself, refill automatically to the proper height. This is an excellent arrangement for workpeople, or hospital servants, provided it be made the duty of some person to see the valves regularly lifted every day, and provided the range be fitted up in an open yard; but it would

prove objectionable inside a sick ward. In the latter instance, the very best automatically flushing single closets should be adopted, each one independent of the other, and duly ventilated by the soil-pipe. The above system was introduced by the Messrs. Macfarlane.



Closet arrangements on the nested, or range principle, can also be built on the earth or ash systems; and in large manufactories, where ashes are plentiful and water is scarce, or a sewer is absent, a plan like that shewn at fig. 85 will work sufficiently well. In order to obtain proper ventilation, however, the passage B, between the closet-doors and the curtain wall C, is indispensable. A passage at A is also necessary, in order that the ashes may be thrown into the cinder compartment, D, below which is situated the screener. If the ashes be first of all screened from large cinders and clinkers, so much the better, as the cinder receptacle, E, need not be emptied so often.

It will not be necessary to describe, or figure, a range of dry closets where carbon is used, because these would partake, more or less, of all the earth or ash forms of arrangement; but a word might be added as to the relative value of the products of these dry systems. We will take it for granted that the water-closet system is the best, because it is best suited for large towns, and has been proved, in the case of London, to be healthy; and we will also assume, that by precipitation, or irrigation, the greatest value can be derived from the products. With the dry-earth system, and supposing that 2½ lbs. per head of population of earth is made use of, the value of the manure mixed with other refuse is about five shillings per ton. It cannot fairly be taken at more, even when the same earth has been used over and over again. I should be inclined to estimate the value of the ash-closet manure at the same sum, *plus* a saving of 20 per cent. of fuel, brought about by the cinder-sifting apparatus. As for the carbon-closet, its value to the householder as a manure is *nil*; for ordinarily, when the tank is emptied, the contents are taken to the chemical works and burned in retorts, whilst the ammonia is distilled off. He would probably be allowed a certain price for the material; but it is safer to suppose that the chief benefit to him would result from the fact that he would be saved the purchase of fresh charcoal by the return of the carbon to him, freed from its phosphates and its ammonia.

THE BRITISH MEDICAL BENEVOLENT FUND.—The thirty-eighth Annual Report of the British Medical Benevolent Fund, for the year 1872, is full of matter showing the excellent work of this most admirable society. One thousand and forty-three pounds were voted as grants during the year; the total number of annuitants was increased to thirty-four; and the actual amount to annuitants during the year was £630. This is, perhaps, the most permanently and really valuable part of the Fund; and it is derived from investments. Unhappily, the investments were not increased in 1872 by any large benefaction; and we earnestly recall the attention of our associates to this subject. No fund has, we think, a more sadly solid plea for recollection of benevolent donors for gifts and legacies than this; but appears to be almost forgotten. Medical men are often called upon to advise friends and patients as to charities which may be selected for testamentary munificence; and we know how much and how justly hospitals and colleges of all sorts have benefited by their well founded and well directed advocacy. It is only necessary to read down the painfully interesting lists of annuitants and of cases of distress temporarily relieved, to gain the conviction that this society is doing a blessed work, and one of unalloyed usefulness and charity; and we sincerely commend it to the recollection of all practitioners who have it in their power to direct towards it the stream of munificence.

MEDICAL ACT (1858) AMENDMENT BILL.

THE above Bill, which is the Bill of our Association, is down for the second reading in the House of Commons, on Monday next, the 19th instant.

The Medical Reform Committee has done its part; and it now remains for each and every member of it to prove his fidelity to the principles which the Association has for so many years advocated.

In the *Times* of Wednesday last, three petitions are reported as having been presented against the Bill, each representing the opinion of one individual only. One of the petitions represented a person of the somewhat common name of William Brown, on which account his identity cannot easily be made out; the remaining two petitioners are named respectively, John Stead, M.D., and Joseph Butterfield, M.D. Neither of them is to be found either in the *Medical Directory* or in the *Medical Register* of 1873; the natural presumption therefore is, either that they are extremely young practitioners, or that they have some special reasons for endeavouring to oppose an amendment of the Medical Act of 1858.

Still, whatever their qualifications may be, the lesson which their petitions teach is, that every member of the profession, and particularly every member of the Association, should aid by every means in his power the passing of the Bill of the Association into law, and to this end should petition Parliament, and should influence, as far as may be possible, every member of the legislature in its favour.

It is manifestly to the advantage of the public, equally with the profession, that there should be no further delay in modifying the composition of the Council, extending its powers, and increasing its efficiency, as will necessarily happen if the Bill of the Association should become law. It is not improbable, that the presence of a fair proportion of direct representatives in the Council would already have resulted in the establishment of the Conjoint Boards of Examination, which, as at present constituted, the Council has proved itself unable to form.

The following form of petition has been extensively used at the present conjuncture. In several localities, all the medical practitioners, whether members of the Association or not, have signed it.

To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.

The humble petition of the undersigned Registered Medical Practitioners residing in

SHEWETH,—That a Bill has been brought into your Honourable House intituled the "Medical Act, 1858, Amendment Bill," having for its object to improve the education and attainments of candidates for the medical profession, and also to improve the composition of the General Medical Council.

That the General Medical Council, as now constituted, consists of seventeen members, representing the several universities, medical and surgical corporations, and licensing bodies of the United Kingdom, and of six members nominated by the Crown, together with a President chosen by the other members of the Council.

That the profession, as a body, is not represented in the Council, although all the expenses of the Council are defrayed by the fees exacted from the members of the profession on registration.

That the introduction of representatives elected by the profession will give the profession a confidence in the Council, which it does not at present possess.

That the "Medical Act, 1858, Amendment Bill" proposes to introduce into the Council representatives of the profession to be elected by the direct votes of the Registered Medical Practitioners.

Your petitioners, therefore, pray that the "Medical Act, 1858, Amendment Bill" may become law.

And your petitioners will ever pray.

Any registered medical practitioner may adopt it—all that is necessary being to write it out on one side of a sheet of paper and sign his name at the foot of it. When thus completed, some member of Parliament should be requested to present it to the House of Commons, *if possible*, on or before the 19th instant; or it may be forwarded to Francis Fowke, Esq., General Secretary, 37, Great Queen Street, London, W.C.

Every member of the profession is also earnestly requested to write or communicate to his own parliamentary representative the importance of supporting the "Medical Act Amendment Bill", as embodying the general wish of the profession.

The following petition of the Medical Reform Committee has been presented by Mr. Henry Cecil Raikes, Member for Chester.

To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.

The humble petition of the Medical Reform Committee of the British Medical Association sheweth—

That the British Medical Association numbers about five thousand members of the medical profession, and comprises a large proportion of the physicians and surgeons of the public hospitals and of the professors and lecturers attached to various schools of medicine throughout the kingdom.

That the British Medical Association has always occupied a prominent and influential position with respect to medical reform, and that the Medical Reform Act of 1858 was, in great measure, due to the efforts of the Association.

That, notwithstanding the passing of that Act fifteen years ago, many grave defects still exist in the granting of qualifications to members of the profession.

That there are at present nineteen different universities and corporations in the United Kingdom, each of which is empowered to grant one or more qualifications, each qualification entitling the possessor to be placed on the *Medical Register* as a legally qualified practitioner, and thereby enabled to practise all departments of the medical profession, although possibly only qualified in one.

That the requirements of the various universities and corporations from candidates vary greatly in extent and character, and that injury has resulted to the community from unworthy competition in the granting of degrees and licenses to imperfectly qualified men; and candidates rejected by one examining board are known to have succeeded in obtaining the licence of some other board of less stringent requirements.

That candidates who have obtained the degrees of Doctor of Medicine and other qualifications have, when seeking medical appointments in the army and navy, been frequently rejected by the Government examining boards for those services.

That the fee charged for granting diplomas ranges from half a guinea to more than a hundred times that amount.

That the General Medical Council, as now constituted, consists of seventeen members as representing the several universities, medical and surgical corporations, and licensing bodies of the United Kingdom, and of six members nominated by the Crown, together with a President chosen by the other members of the Council.

That the great majority of the members nominated by the Crown are intimately connected with the universities and corporations, and that there is, therefore, no direct connection between the General Medical Council and the general body of the registered members of the profession.

That, owing to the medical practitioners having no direct representatives in the Council, the profession evinces but little interest in its proceedings—a disadvantage which has been admitted in the debates of the Council.

That the Council, as at present constituted, no longer possesses the confidence of the profession.

That the introduction of representatives elected by the profession would give the profession more confidence in the Council than at present, and would also add to the knowledge of the Council with respect to the needs of the public and of the profession in medical education, sanitary measures, medical jurisprudence, and Poor-law medical relief.

That the demand for direct representation of the profession in the General Medical Council is in accordance with the almost unanimous voice of the profession.

That at each annual meeting of the Association held since 1866, as in Dublin in 1867, in Oxford in 1868, in Leeds in 1869, in Newcastle in 1870, in Plymouth in 1871, and in Birmingham in 1872, as well as at a special general meeting of the Association held in London in May 1870, for the express purpose of considering medical reform, resolutions were passed, with scarcely a dissentient voice, in favour of the necessity of direct representation.

The Irish Medical Association, the President and Fellows of the King and Queen's College of Physicians in Ireland, and the Royal College of Surgeons in Ireland, have also passed resolutions in favour of direct representation.

The Royal College of Physicians of Edinburgh, the Royal College Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, various medical societies in the large towns of England and of Scotland, as well as Branches of the British Medical Association, have petitioned the legislature for direct representation.

That a Bill has been brought into your honourable house intituled the "Medical Act (1858) Amendment Bill", and that provision is therein made for improvement in the examination of candidates for

the medical profession, and for the introduction of representatives, elected by the registered medical practitioners residing in the United Kingdom of Great Britain and Ireland, into the General Medical Council.

Your petitioners therefore pray that the "Medical Act (1858) Amendment Bill" may become law. And your petitioners will ever pray, etc.

EDWARD WATERS, M.D.,

Ex-President of the British Medical Association, Chairman of the Medical Reform Committee of the British Medical Association.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM A SPECIAL CORRESPONDENT.]

M. Dolbeau's Perineal Lithotrity.—Apparatus for Persons injured in War.—The Train Sanitaire.—Swimming Baths in the Seine.—Suicides.—New Ophthalmological Journal.

M. DOLBEAU, Professor of Surgery at the School of Medicine, and Surgeon to the Beaujon Hospital, performed an operation on Thursday last which, I am surprised to know, is not more generally adopted either in or out of France, although it was introduced into practice by M. Dolbeau ten years ago;* I allude to his operation for stone in the bladder, which he designates "lithotritie périnéale", and which he performed in the following manner. The patient, a man aged about 62, was placed on his back on the operating table, with the knees gently raised and supported against the trunk. Chloroform was administered, and, after having introduced the grooved staff into the bladder, M. Dolbeau cut through the skin and subjacent tissue to the extent of about four-fifths of an inch in the median line, and at the junction of the mucous membrane of the anus. Then, merely pushing the instrument (a straight sharp-pointed knife) through the membranous portion of the urethra on to the staff, he withdrew the knife and enlarged the openings with a dilator, just sufficiently to admit of the introduction of the stone-crusher, which, in shape, resembles the screw crusher depicted in the last edition of Druitt's *Surgeon's Vade-Mecum*, without the screw. The dilator being withdrawn, he introduced the crusher into the bladder, crushed the stone, and removed the fragments with it, stopping occasionally to inject some tepid water into the bladder, which he did through the wound in order to wash out the *débris* of the stone. The operation occupied more than an hour, and the patient was put into bed without any dressing. M. Dolbeau said these cases did not require any, as, the limbs being brought together and maintained in that position, union by the first intention generally takes place in less than forty-eight hours, at least in the internal incision; and the urine then takes its normal course. The time occupied seemed to me a great drawback in this operation, especially as the patient was under chloroform; but this, M. Dolbeau observed, was more than counterbalanced by the advantages it had over the other methods. Thus in the former the wound was considerably smaller, there was less risk of hæmorrhage, and the prostate and bladder were intact, all of which is the reverse of what obtains in lithotomy, whether central or lateral, as generally practised. As for urethral lithotrity, he considers that it is not less dangerous, but that, instead of proving immediately fatal, it kills the patient from secondary disease of the bladder and kidneys produced by the frequent repetition of the operation; he, therefore, seldom or never employs it except in cases where the stone is small and friable. Thus, it will be seen, that the operation under notice is different from those previously employed for stone in the bladder; and the only one that approaches it is the lithectomy or cystectomy of Dr. Willis. The other advantages of perineal lithotrity are so obvious, that they need not be entered into here. Since 1863, when M. Dolbeau first practised the new method, up to January 1872, he operated on thirty patients, of whom twenty-three were cured, and seven died. M. Dolbeau performs the operation in all cases where urethral lithotrity is impracticable or unadvisable—that is, when the stone is too large or too hard to be crushed or removed in the ordinary way. The stone in the present case was about two inches in its larger diameter, and composed of uric acid. M. Dolbeau admits of no contraindication beyond extensive disease of the urinary apparatus, or such a depressed condition of the patient that he is likely to sink under the operation. The dilator employed by M. Dolbeau is a most ingenious instrument, and well adapted for the purpose for which it was intended. It is intro-

duced in the form of a cone, and comes out a cylinder, and may be most advantageously employed for stone in women, as dilatation of the urethra may be effected to such an extent as to require no incision. For further information on the subject, I must refer your readers to Dr. Dolbeau's work on *Perineal Lithotrity*, which might be read with much interest and profit, as the author is decidedly one of the ablest, most conscientious, and most practical surgeons of Paris.

The Committee organised for the gratuitous distribution of apparatus to those amputated or otherwise mutilated during the late war, is bringing its work to a close. From a report just published, it would appear that the ascertained number of amputations amounted to 2,781. The Committee is presided over by the Minister of War, under the direction of the celebrated Nélaton.

Another Committee, composed of members of the Society for affording help to the wounded, met at Ivry last week, in the workshops of M. Bonnefond, to examine and report upon the *train sanitaire* which is to figure at the Vienna Exhibition. The train is composed of twenty-four carriages, twenty of which are for the wounded, and the remaining four for other purposes. Each sick-carriage contains ten beds, arranged in two rows one upon the other; but, in cases of emergency, it may hold fifteen beds. The carriages are warmed by a *calorifère*, and properly ventilated; one of them being disposed for a *salle à manger* for twenty-four patients. Among the other carriages, those allotted for the medical men seem comfortable. Each is divided into four cabins, each of which contains a bed which may be converted into a sofa, a chest of drawers, a table, and a lamp, with carpeting on the floor. The kitchen-carriage is well fitted up, and contains a reservoir which will hold 450 litres of *bouillon* or beef-broth, and partitions in the stove for the inevitable *tisanes* so much in vogue among the French. The pantry is well stocked, and among other comforts may be mentioned an ice-house, a wine-cellar, meat-safes, etc. All the carriages communicate with one another by corridors, and nothing seems wanting to meet the requirements of the sick. In times of peace, these carriages may be employed for conveying troops, by simply removing the furniture, and replacing it by benches. Here it may be asked, Why should not the ordinary passenger-trains contain sick-carriages as above? Surely accidents occur sufficiently often to require such an arrangement; and what a comfort it would be for invalid travellers!

The weather still continues cold, though we are reminded, by the appearance on the Seine of the floating swimming baths, that the hot weather is not far off. These baths seem to increase in number; and for Paris alone—that is, between Bercy and Auteuil—there are twenty-one, of which seven are allotted for the fair sex. Some of these baths are very large, and may contain five hundred persons at a time; and when the weather is warm some of these establishments make from £40 to £50 a day.

There seems to be a regular epidemic of suicides just now in Paris, for in one day last week there were found no fewer than six bodies of persons who had come by their death in different ways.

A small journal of about twelve pages in octavo has lately been started by M. Fano, a distinguished oculist and sub-professor of the Faculty of Medicine, the title of which is *Journal d'Oculistique et de Chirurgie*. It is to appear in monthly numbers. From the specimen I have seen, the journal promises to be very instructive; and M. Fano says in his programme, that his object in founding the journal was to popularise the science of ophthalmology; and he has added the word "chirurgie" to the title, as he considers that both the sciences are one, and ought not to be separated, and that no man can be a good ophthalmologist without being a good surgeon, and, I would add, a good physician also. In fact, every medical man ought to be an ophthalmologist, and he ought to be as expert in the use of the ophthalmoscope as he is with the stethoscope; and yet, as M. Fano says, this branch is the least cultivated in France.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

STOCKSBRIDGE.—Mr. Browning of Oughtibridge has been appointed Sanitary Medical Officer to the Stocksbridge Local Government Board, at a salary of £25 *per annum*.

NEATH.—Mr. E. R. Morgan has been reappointed Medical Officer of Health for the rural district of Neath Union, for one year, at the salary of £300.

* A description of the operation, as performed by M. Dolbeau, was given by our Paris correspondent in the BRITISH MEDICAL JOURNAL for December 25th, 1869. It has been unfavourably regarded by British surgeons.—ED. B. M. J.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held on Friday, the 30th instant, at the Office of the Association, 37, Great Queen Street, London, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, May 15th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH : MICROSCOPICAL SECTION:

THE next meeting of this section will be held in the Council Room of Queen's College, Birmingham, on Tuesday, May 20th, at 7.30 P.M.

WILLIAM HINDS, } *Honorary Secretaries*.
LAWSON TAIT, }

Birmingham, May 13th, 1873.

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session will be held at the York House, Bath, on Thursday evening, May 22nd, at 7.15 P.M.; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, } *Honorary Secretaries*.
E. C. BOARD, }

Bath, May 5th, 1873.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

THE annual meeting of the above Branch will be held at the Town Hall, Royston, on Friday, May 23rd, at 3 P.M.; D. B. BALDING, Esq., President, in the Chair.

The dinner will take place at the Bull Hotel, at 6 P.M. Tickets, 13s. each.

J. B. BRADBURY, M.D., *Honorary Secretary*.

Corpus Buildings, Cambridge, April 19th, 1873.

EAST YORK AND NORTH LINCOLN BRANCH.

THE seventeenth annual meeting of this Branch will be held at the Hull Infirmary, on Wednesday, May 28th, 1873; J. MORLEY, Esq., President, in the Chair.

The title of any paper which members may wish to read, must be forwarded to me on or before Wednesday, the 21st instant.

ROBERT H. B. NICHOLSON, *Honorary Secretary*.

21, Albion Street, Hull, May 6th, 1873.

YORKSHIRE BRANCH.

THE annual meeting of this Branch will be held at the Museum of the Yorkshire Philosophical Society, York, on Wednesday, May 28th, 1873, at 2 P.M. precisely.

The members will dine together at the Station Hotel, at 5 P.M.

Gentlemen intending to bring forward communications, or to join the dinner, are requested at once to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary*.

York, May 12th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE next meeting of the above district will be held at the Infirmary, Chichester, on Friday, June 6th; Dr. TYACKE in the Chair.

Any member or gentleman desirous of reading papers or bringing forward cases, is requested to communicate forthwith with the Honorary Secretary.

WM. J. HARRIS, *Honorary Secretary*.

13, Marine Parade, Worthing, May 5th, 1873.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting of this Branch will be held at Warrington, on Tuesday, June 24th, at One o'clock; CHARLES WHITE, Esq., President, in the Chair.

Gentlemen having papers or cases, etc., to communicate, are requested to forward the titles or particulars to the undersigned, without delay.

A. B. STEELE, *Honorary Secretary*.

54, Rodney Street, Liverpool, May 1873.

SOUTH MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the George Hotel, Northampton, on Thursday, June 5th, at 1 P.M.; Dr. BRYAN, President, in the Chair.

Dinner at the George Hotel, at 4 P.M. Charge, 5s. 6d., exclusive of wine.

Gentlemen who intend to read papers, and those who wish to dine, are particularly requested to communicate, as early as possible, with the Honorary Secretaries.

J. M. BRYAN, M.D. } *Honorary Secretaries*.
WM. MOXON. }

Northampton, May 6th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH : SPRING MEETING.

THE spring meeting of the above Branch was held in the Board Room of the Whitehaven and West Cumberland Infirmary, on Wednesday, April 23rd, 1873, at one o'clock. In the absence of the President, Dr. CLOUSTON, the chair was taken by Dr. TIFFEN, the President-elect. There were present eleven members and three visitors.

New Members.—Dr. MORROW, of Frippington, was elected a member of the Association and Branch.

Unprofessional Consultations.—The following motion was proposed by Dr. MCGREGOR of Penrith, and seconded by Dr. DICK, of Harringham: "That, in the opinion of this Branch of the British Medical Association, it is unprofessional of a legally qualified medical man to meet a bone-setter in consultation, or attend professionally the same patient, for any disease that may be the result of the injury for which the bone-setter is in attendance at the same time."

An amendment was proposed by Dr. MACLAREN of Carlisle, and seconded by Mr. P'ANSON of Whitehaven, as follows: "That in the opinion of this meeting, it is inexpedient to take any cognisance of the question of meeting in consultation bone-setters, or other irregular practitioners." On a division, there were two for the amendment, and eight for the motion, the motion was therefore carried.

Communications.—The following communications were brought before the meeting:—

1. Dr. Ablett, Whitehaven: The History of a case of Mulberry Calculus.

2. Dr. Maclaren, Carlisle: The Treatment of Fractures of the Femur.

3. Dr. Henry, Whitehaven: On a case of Fibrous Polypus of the Nose, removed by Prof. Von Langenbeck's method.

4. Dr. Shannon, Wigton: On a Cancerous Tumour of the Mamma.

5. Dr. McGregor, Penrith: Abscess in the base of the brain, resulting in sudden death, complicated by an attempt at suicide shortly before.

6. Dr. McGregor, Penrith: Accidental Choking by a mass of fried liver sticking in the oesophagus.

Discussion of an animated nature followed the reading of all the papers.

By the courtesy of the medical officers, the wards of the Infirmary were visited, and some of the more interesting cases examined. The members and their friends afterwards dined together at the Black Lion Hotel, Dr. Tiffen occupying the chair.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 25TH, 1873.

PRESCOTT HEWETT, Esq., President, in the Chair.

Scirrhus Mammæ Treated by Chloride of Zinc and Incisions.—Mr. KESTIVEN related a case of scirrhus of the breast, illustrative of the treatment expounded in a report by the surgical staff of the Middlesex Hospital in 1857, upon which plan of treatment he thought that further information was desirable. The case related was that of a lady, aged 65, from whom a large primary scirrhus of the breast was removed by the employment of the chloride of zinc and incisions. A large eschar was removed, and the surface had healed within two months. The disease had reappeared in the cicatrix two years and a half subsequently, and was treated upon the same plan as before, with the same recovery in the parts. The patient, moreover, had reached the age of seventy-three, having remained in good general health, and perfectly free from any return of the cancer.—Mr. LAWSON said that he used caustics very

little for the removal of primary growths, but very frequently after their excision by the knife, and also to parts not easily reached by the knife. In destroying secondary tumours, caustics were very useful. In malignant disease of the orbit, he had found chloride of zinc paste most valuable. The knife was used first, and then the caustic was applied. The pain was easily relieved by subcutaneous injection of morphia.—Dr. GREENHOW referred to a case in which caustic had been successfully used for secondary growth near the cicatrix.—After a few remarks by Mr. CHRISTOPHER HEATH and Dr. FARQUHARSON, Mr. BARWELL said, that he had seen cases treated according to Fell's method, in which injury had been done by the too free use of caustics. He wished to know how far they might be used. Mr. LAWSON said, that where a bony cavity existed, one could not go too far. Disease might be removed in the orbit, and the bone become necrosed, without bad results. He had seen in one case convulsions, and the brain was seen to pulsate at the back of the orbit, but the patient made a good recovery.—The PRESIDENT remarked on the value of caustics in fat patients with mammary cancer and no enlarged glands in the axilla. He related his knowledge of so called cancer-curers, most of whom used caustics, such as sulphuric acid in asbestos, the remedy of a notorious quack in London. Mr. HEATH expressed his doubts as to the desirability of interfering with some chronic cases of cancer of the breast (such as Mr. Kesteven's), and thought they might do as well if let alone.—Mr. LAWSON, however, said, that in all cases suffering was mitigated, and life prolonged.

Acute Muscular Atrophy.—Dr. GREENHOW read a case of acute muscular atrophy, which had run a much more rapid course than any case he had seen or had been able to find recorded. The patient, Ann C., was a single woman, aged 26, and she continued her work as a domestic servant until about three weeks before her death. She had enjoyed good health until her last illness, which commenced in the latter part of January 1873, with pain in the abdomen, weakness, deficiency of freedom in moving her arms and legs, and also a sense of heat and pricking in the pectoral muscles. On February 7th, she was no longer able to go about, and took to her bed. When admitted into the Middlesex Hospital on February 20th, she had the appearance of a healthy well-nourished girl; but the pectoralis major muscles appeared thinner than usual, and the muscles of the arms and legs were soft and flabby, though not definitely wasted. She could still get out of bed, and could stretch out her hand when desired, though the movement of the shoulder was imperfect. She could move her forearms and hands quite freely on the bed. She complained of pains in the shoulders, arms, and abdomen, but there was no redness, swelling, nor tenderness in the parts complained of. The urine was of a very peculiar red colour, due to the presence of uroerythrine. On the day after her admission, he (Dr. Greenhow) learned that she was sister to Mrs. P., who had died under his care last year of progressive muscular atrophy, and whose case is recorded in the last volume of the Society's *Transactions*; and, having previously observed a great similarity in the mode of moving the arms and in the colour of the urine in the two patients, he ventured, after considering all the symptoms and the history of the illness, to diagnose the case as one of acute muscular atrophy. It did, in fact, run an acute and most rapid course. The pulse remained about 140; the temperature 100 deg. to 101 deg.; there was frequent delirium, and constant sweating. The patient daily lost power in her limbs, and before her death on February 25th, she lay helplessly on her back, and could not even move her hands on the bed. Her death took place from a comparatively slight attack of bronchitis, rendered fatal by the inability to expectorate consequent on loss of power in the respiratory muscles and the diaphragm. The microscopical examination of the muscles after death revealed extensive granular degeneration of the extensors of the forearms. The pectoral and intercostal muscles, the rectus abdominus, and the muscles of the calf of the leg presented, in a more or less advanced stage, precisely the same appearances as the extensor muscles. The diaphragm and the walls of the heart also exhibited granular degeneration identical with that found in the extensors of the forearms, only with a larger proportion of healthy fibres. Dr. Greenhow remarked, with reference to the case, that the muscular atrophy was undoubtedly the primary and also the fatal disease. The patient had always enjoyed good health, and the *post mortem* examination discovered no trace of any other disease, with the exception of bronchitis, from which she suffered during the last three days of life, and which was not severe enough to have proved dangerous to any healthy person. The atrophy and consequent loss of power of the respiratory muscles and of the diaphragm were the efficient cause of death. The case differed from all the other cases of muscular atrophy he had found recorded, not only in the great rapidity of the course it ran, but in the acute symptoms it presented, and in the implication of the muscular tissue of the heart in the process of granular degeneration.

Duchenne, in the last edition of his work *De l'Electrisation Localisée*, had said that he had never seen a case of muscular atrophy attended by the slightest fever; and Dr. Roberts, in his classic treatise on *Wasting Palsies*, had expressly stated that repeated and minute researches had only proved the perfect immunity of the heart from the degenerative process.—Dr. ROBERT LIVEING remarked, that there were four cases of scarlet fever in the house from which the patient came. The case might therefore, possibly be, one of scarlet fever.—Mr. KESTEVEN said that he had not met with any parallel case.—Dr. BUZZARD related particulars of two similar cases in young women, both of whom were intemperate. Was Dr. Greenhow's patient addicted to drinking?—Dr. SOUTHEY asked if the posterior roots of the spinal nerve were examined.—Dr. GREENHOW, in reply, said that the patient presented no trace of scarlet fever, and that there was no reason to believe that there is any one lesion of the nerve-centres with which this disease is associated. The patient had taken spirits to excess only after her illness began.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, FEBRUARY 28TH, 1873.

JOHN DENHAM, M.D., Vice-President, in the Chair.

Disease of Knee-joint.—Mr. H. G. CROLY showed the right leg of a child, aged 8, which he had removed by Teale's flap operation, through the lower third of the thigh-bone, for disease of the knee-joint. The semilunar cartilages had almost disappeared, the cartilage of incrustation of the tibia was disintegrated. An abscess burrowed into the femoral condyles, and a second abscess involved the head of the tibia. The incision was carried through the femur, one inch above the condyles, and a large portion of the anterior flap was taken from the front of the limb.

Punctured Wound of Pharynx, and Injury to Spinal Cord.—Mr. CROLY detailed the case of a boy, aged 8, who was admitted to the City of Dublin Hospital on February 12th. Four days before, while playing with a steel rib of an umbrella, he fell forwards, with the end of the rod in his mouth, and the point passed through the soft part at the back. Raving and vomiting set in at night, and he was brought to hospital. There was now considerable fever, the temperature reaching 102.5 deg.; he was delirious, had double vision, with convergent strabismus, intolerance of light, knit brow, dysphagia, and a tottering gait. The boy whistled and screamed at times. A punctured wound was observed in the posterior wall of the pharynx, just below the level of the velum palati. The boy's head was shaved, leeches and ice were applied, and calomel, with James's powder, was administered. On February 14th, the temperature fell to 98 deg. In a very few days the symptoms gave way, and he was recovering. Mr. Croly, by an experiment in the dissecting-room, had found that an instrument pushed through the pharynx at a point corresponding to that of the wound in the case described, wounded the spinal cord between the first and second cervical vertebræ.

Hospital Gangrene.—Mr. ARTHUR BARKER read a paper, based on his experiences of Hospital Gangrene in the late Franco-German war. He had been on duty in a town of 22,000 inhabitants, at which more than 4000 wounded were treated within a short period, a large number of them in two "lazareths" especially, one near a railway station, and the other formerly a riding-school. A batch of patients was carried into the railway station by train from Amiens, and the wounds of many of them were in a dreadful condition when treatment was commenced, having been enclosed for about three days in plaster of Paris bandages. Under these circumstances, one patient became affected with hospital gangrene. Notwithstanding the carrying out of isolation, seven cases occurred, all in the clinique of the same surgeon. The granulating surfaces assumed an appearance like the fat of bacon, and sometimes became covered with a croupy exudation. When this was removed, the surface bled, and was of a deep purple, unhealthy tint. The connective tissue broke down, holes formed in the muscular structures, and the bones often appeared, but did not themselves partake of the morbid process. The disease assumed the creeping form in the neighbourhood of much areolar tissue, and the burrowing form in fatty structures. Pain was sometimes intense, especially when the disease had ceased. The pulse generally ran high, and became slower after the application of the actual cautery. A small quantity of pus, like curdy whey, was present. The duration of the morbid action was from four to six weeks. The treatment of this disease was described as preventive, local, and constitutional. The disease seemed due to want of cleanliness, and to contagion. The local treatment consisted in the enforcement of rigid cleanliness. Separate utensils were used with each patient, and Condy's fluid was

freely employed. Charpie and powdered charcoal were applied to the infected wounds. Among caustics, those of greatest use were chloride of zinc, acid nitrate of mercury, nitric acid, and the actual cautery. The last only was really effectual, and was always deeply applied, at a white heat. Camphor was of some use in milder cases. The constitutional treatment consisted in humouring the appetite, the free use of wine, and the administration of sulphate of quinine.—Mr. TUFNELL asked why the acid nitrate of mercury was preferred to the fuming nitric acid.—Mr. W. STOKES thought the term "hospital gangrene" a misnomer. He alluded to an outbreak at the Richmond Hospital, some years ago, and to what was almost an epidemic at Berlin, in 1863, several cases happening in Von Langenbeck's practice, and even in private houses. He (Mr. Stokes) regarded the disease as dependent, probably, on epidemic influences; and this view was held by Von Pitha of Vienna, and others. In Mr. Barker's cases, the neglected plaster of Paris bandages seemed to cause the disease. The most successful treatment was the application of fuming nitric acid, followed by irrigation, with weak chlorine water.—Mr. STAPLETON thought the indiscriminate use of the same sponges might cause or spread hospital gangrene. The application of a white heat removed the eschar at once. In malignant erysipelas, with diphtheritic exudation, he had successfully used strong nitric acid as a caustic, and then applied sulphurous acid and glycerine, in equal parts. Quinine, dissolved in tincture of the perchloride of iron, was his favourite tonic.—Mr. BARKER alluded to some interesting experiments recently carried out in Germany, which went to prove the specific nature of the virus of hospital gangrene. Nitric acid was not much used, simply because it had not answered as well as other caustics.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Tuesday, May 13th.

PUBLIC HEALTH BILL.—On the order for the resumption of the adjourned debate, Colonel Barttelot objected to going on with a Bill of such importance at that late hour of the night (quarter past twelve). After a conversation the Bill was read a second time. Committee on Monday next.

OBITUARY.

THOMAS CHARLES, F.R.C.S.

MR. THOMAS CHARLES died at Aberystwith, on April 11th, very suddenly, of disease of the heart, combined with bronchitis, in the 63rd year of his age. He studied at Bartholomew's Hospital, and practised in the metropolis, and afterwards in Wales, in the earlier part of his medical career. In 1854 he went to Australia, the climate being supposed to be more suitable to his delicate constitution, and lived in Sydney, where he successfully practised his profession, until the early part of 1871, when he returned to England. Latterly he had fixed his residence at Aberystwith, where, in the course of a few months, he gained the respect, confidence, and affection of the people, to a remarkable degree.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, May 8th, 1873.

Bredin, John Noble, Chart Sutton, Kent
Jordan, Frederick William, Plymouth Grove, Manchester
Nash, William Gunner, Farnham, Surrey
Winkworth, Frederick Sydney, Chalcot Terrace, N.W.

The following gentleman also on the same day passed his primary professional examination.

Symonds, Horatio Percy, University College

As an Assistant in compounding and dispensing medicines.
Sharrah, Richard, Hull

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 8th, 9th, and 10th of April, the following candidates obtained the License to practise Medicine.

Edward Maurice Day, Edward Ferris, James Howard, George William Joseph, William George Lemuel Law, Henry Lowndes, Archibald M'Kinlay, and Emerson J. Reynolds.

The following candidates obtained the Midwifery Diploma.

Edward Maurice Day, William George Lemuel Law, Henry Lowndes, William MacDonnell, and Archibald M'Kinlay.

APOTHECARIES' HALL, DUBLIN.—At the examinations held in April 1873, the following gentlemen obtained the licence to practise medicine and pharmacy.

Albert Edward Swayne, Charles Cullinan, Daniel Francis Buckley, Jas. Richard McInerney, Herbert Alexander Auchinlick, Edward Joseph Mulligan, John Anderson McAdam, James Shimeld, and Richard W. N. Lyon.

The following passed the examination in arts.

Vincent White, Michael Hayes, Thomas O. D. Russell, Francis J. D. Waters, John Kennelly, John White, Cecil Earl, and Humphrey Haines.

The following received the certificate authorising him to act as Assistant in compounding and dispensing medicines.
Robert James Downes

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK RURAL SANITARY DISTRICT—Medical Officer of Health: £50 per annum, and fees.
BARNLEY UNION, Yorkshire—Medical Officer for the Hoyland District: £20 per annum.
BASFORD RURAL SANITARY DISTRICT—Medical Officer of Health: £500 per annum. Applications to R. B. Spencer, Esq.
BRIDGWATER INFIRMARY—Dispenser: £40 per annum, board, lodging, and washing.
BRIGHTON AND HOVE DISPENSARY—Two Resident House-Surgeons: £100 per annum, furnished apartments, coal, gas, and attendance.
BURY (Lancashire) RURAL SANITARY DISTRICT—Medical Officer of Health: £300 per annum.
CAVAN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Arvagh Dispensary District of the Cavan Union: £85 per annum, and fees. Applications to John E. Costello, Esq., Arvagh.
CHELSEA, BROMPTON, and BELGRAVE DISPENSARY—Resident Medical Officer and Secretary.
DENBIGH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
DRIFFIELD UNION, Yorkshire—Medical Officers and Public Vaccinators for the Kilham and Wetwang Districts: £25 and £21 per ann., and fees, respectively.
DUDLEY UNION—Medical Officer for the Dudley North District: £65 per ann.
DURHAM, County of—Public Analyst: £100 per annum, and 6s. for each analysis. Applications to John Watson, Esq., North Bailey, Durham.
ELY UNION—Medical Officer for District No. 5 and the Workhouse: £51 per annum, and fees.
FEVER HOSPITAL and HOUSE OF RECOVERY, Cork Street, Dublin—Resident Medical Officer: £90 per annum, and fees, furnished apartments, etc.
FLEGG (East and West) RURAL SANITARY DISTRICT—Medical Officer of Health: £80 per annum.
GRAVESEND and MILTON INFIRMARY and DISPENSARY—Surgeon.
GREAT YARMOUTH HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
HAMBLEDON UNION, Surrey—Medical Officer of Health: £50 and fees for one year. Applications to F. Ferdinand Smallpiece, Esq., Guildford.
KINGSTON-ON-THAMES RURAL SANITARY DISTRICT—Medical Officer of Health: £150 per annum. Applications to Robert F. Bartrop, Esq.
LAMBETH—Dispenser: £90 per annum and extras.
LINCOLN UNITED FRIENDLY SOCIETIES—Dispensary Medical Officer: £150 per annum, to commence, house, gas, etc. Applications to E. Lascelles, Lincil Bank, Lincoln.
MAGHERAFELT UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bellaghy Dispensary District: £100 per annum, and fees. Applications to John Hill, Esq., the Castle, Bellaghy.
MAIDSTONE UNION, Kent—Medical Officer for District No. 6: £67 per ann.
NORTH LONDON CONSUMPTION HOSPITAL—Physician.
ROYAL GENERAL DISPENSARY, Bartholomew Close—Physician: £40 per annum.
ST. GEORGE and ST. JAMES DISPENSARY, King Street, Regent Street—Physician-Accoucheur.
SALFORD URBAN SANITARY DISTRICT—Medical Officer of Health: £400 per annum.—Public Analyst: fees or salary. Applications to E. Andrew, Esq.
SALISBURY URBAN SANITARY DISTRICT—Medical Officer of Health: £60 per annum.
STRAND DISTRICT—Public Analyst: £100 for one year. Applications to T. M. Jenkins, Esq., 5, Tavistock Street.
TIVERTON UNION—Medical Officer and Public Vaccinator for the Bradninch District: £27 per annum, and fees.
TOTNES UNION—Medical Officer for District No. 1: £45 per annum.
UNIVERSITY COLLEGE HOSPITAL—Dispenser. Applications to J. W. Taylor Goodliff, Esq.
WARRINGTON URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum.
WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per annum, board, and residence.
WESTMINSTER HOSPITAL—Assistant-Surgeon.
WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House Governor, Secretary, and Collector: £120 per ann., board and residence.
WORCESTER INFIRMARY—Resident Surgeon: £150 per annum, furnished apartments, coal, gas, and attendance.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*CULLINGWORTH, Charles J., Esq., appointed Surgeon to St. Mary's Hospital for the Diseases of Women and Children, Manchester.

*HAYNES, Frederic H., M.D., appointed Physician to the Warneford Hospital, Leamington, in the room of *R. Slack, M.D., resignad.

*RALFE, C. H., M.A., M.B., appointed Visiting Physician to the Seamen's Hospital, Greenwich.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

SAWYER—HILL.—At Cranoe, Leicestershire, on May 13th, by the Rev. J. H. D. Hill, assisted by the Rev. W. H. Marriott (brother and brother-in-law of the bride), James Sawyer, M.B., etc., Physician, Birmingham, eldest son of James Sawyer of Carlisle, to Adelaide Mary, fourth daughter of the Rev. J. H. Hill, B.A., F.S.A., Rector of Cranoe, and Vicar of Welham. No cards.

DEATH.

*ROBINSON, Thomas, Esq., Surgeon, at Cheadle, Staffordshire, aged 55, on May 13th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.
 WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
 SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Epidemiological Society, 8 P.M. Annual Meeting for the Election of Officers and Council.
 TUESDAY.—Pathological Society of London, 8 P.M. Mr. Sebastian Wilkinson: Renal Cyst from a Pig. Mr. Butlin: Recurrent Osteo-Sarcoma unconnected with Bone. Dr. Silver: Stricture of the Common Bile-Duct. Mr. Kesteven: Disease of the Brain, Spleen, and Kidneys. Dr. Greenhow: Cases of Addison's Disease. Mr. Holmes: Blood-Cyst from the Leg. Mr. Holmes: Pulsating Cancer of the Kidney. Mr. Wagstaffe: Tumour of the Jaw. Mr. Gay: Syphilitic Condylomata. Mr. Myers: Hearts of two Soldiers affected with Disease of the Aortic Valves. Dr. Dickinson: Intrathoracic Tumour compressing the Bronchus. Mr. Mac Cormac: A rare form of Tumour. Dr. Crisp: Specimens of Hearts, Livers, and Kidneys, showing the injurious Effects of Alcohol. Dr. Crisp: Atheromatous and Bony Deposits in the Lower Animals. Dr. Goodhart: Rectal Polypus. Dr. Curnow: Pancreas with numerous Calculi in the Ducts. Dr. Curnow: Tumour implicating the Phrenic Nerve. Dr. Hilton Fagge: Repaired Fracture of the Base of the Skull. Dr. John Murray: Congenital Disease of the Heart. Mr. Wagstaffe: Fibrinous Cast of the Urethra and Bladder. Mr. Wagstaffe: Loose Cartilage from the Hip-Joint.
 FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Dalby, "Five Cases of Traumatic Rupture of the Membrana Tympani"; Dr. Greenhow, "Skim-milk Treatment of Diabetes as recommended by Dr. Donkin: Cases"; Dr. Day, "Case of Foreign Body in Bronchus making its way out by Abscess through Walls of Thorax"; Mr. Croft will show a patient on whom Excision of Neck of Femur, after Sayer's method, was performed; Mr. Callender, "Two Cases of Intestinal Obstruction", one communicated by Dr. Gray.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. STEWART (Whitby).—We trust and believe that our correspondent is mistaken in his conclusion. We shall, however, make personal inquiries into the matter.

SIGMA.—Parkes's *Manual of Hygiene* (Churchill); Wanklyn on Water-Analysis (Trübner); *Manual of Public Medicine* by Michael, Corfield, and Wanklyn (Smith, Elder, and Co.—not yet published).

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE CASE OF THE EMPEROR NAPOLEON III.

SIR,—Will you kindly inform me whether a full account of the late Emperor Napoleon's last illness, and of the *post mortem* examination, has yet been published? The case is one of the greatest interest to the profession, and I think it was stated in the BRITISH MEDICAL JOURNAL of January 18th that a full report of the case would be drawn up by his late medical attendants; but I have not yet seen any notice of its publication.

I am, etc.,

May 14th, 1873.

J. M. B.

** The statement was undoubtedly made, but the pledge has not yet been fulfilled. The English medical attendants of the Emperor were prepared to publish such a statement immediately after the Emperor's decease, and jointly expressed that desire to Dr. Conneau and Baron Corvisart, in response to the opinion unanimously expressed by the French and English press that such a record should be made of the circumstances of a case, which has excited so much public interest and has been the subject of so much ignorant and excited comment. The latter physician assented, and undertook to complete this part of the task as soon as pressure of other affairs would allow. The delay rests with them; and it is understood that Baron Corvisart thinks it more prudent to delay the publication for a time.

COLLEGE FOR DAUGHTERS OF MEDICAL MEN.

SIR,—I regret that no public movement has yet been made towards educating the orphan daughters of medical men. I have no selfish feeling in that direction, as I am proud in acknowledging that my two youngest daughters are Associates of Queen's College in Harley Street, London. It has been said that the British Association are 5000 in number. If a tithe of them will send their names and addresses to you for publication in the BRITISH MEDICAL JOURNAL, promising a sum of ten guineas each, I then will open a subscription for this charitable object by giving £1000, made payable to the Treasurer of the British Medical Association before the next annual meeting, they will then enable Sir William Fergusson to announce from the chair that a solid nucleus has been received for the charitable object that all parents, brothers, and sisters should have for their orphan sisterhood. May the British Association prove themselves Britons, and not allow their kindred to become slaves for want of an education equivalent to the demands of the times we live in. Your insertion of this appeal will oblige Yours, etc.,

Cheltenham, May 7th, 1873.

WM. DALTON.

WE are requested by Dr. Forbes Winslow to state that, acting under legal advice, he postpones for a few days the publication of his remarks on two scandalous, untruthful, and libellous documents, published anonymously, without the printer's name, which have been sent to all his medical friends, relating to a case he had under his care six or seven years ago.

SIR,—I should be glad if any of your readers would be good enough to inform me what published note-books best suit a general practitioner who wishes to make methodical notes of his cases as they come before him from day to day.

I am, etc.,

MICROS.

THE BRITISH PHARMACOPŒIA.—Mr. G. Birt asks: In the list of suggested articles for the Appendix to the *British Pharmacopœia*, would it not be well to place Chlorodyne? It is recommended by Aitken in his text-book, and a definite formula for it is much needed. It might be called by another name, if necessary, in the *Pharmacopœia*.

SIR,—I write to ask that some of your readers would much oblige me, if they would, through the medium of your columns, give me the names of any county or general hospitals where a rule exists prohibiting the house-surgeons from entering on private practice in the town where the hospital is situated, for any period after their retirement from office.

I am, etc.,

ENQUIRER.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, May 10th; The Manchester Guardian, May 14th; The Aberdeen Daily Free Press, May 10th; The Bath Express, May 10th; The Birmingham Daily Post, May 14th; The Birmingham Daily Mail; The Hull Packet; The Daily Bristol Times and Mirror; The City Press; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. De Chaumont, Netley; Dr. Thorowgood, London; Mr. Dalby, London; Mr. Spencer Watson, London; Mr. Cross, London; Mr. Mowat, Brecon; Our Dublin Correspondent; Mr. A. Davies, Swansea; Dr. Forbes Winslow, London; Dr. Barter, Bath; Mr. Balding, Royston; Mr. Noakes, Torquay; Dr. George Johnson, London; Mr. G. A. Gloag, Bristol; Dr. Brunton, London; Dr. Julius Althaus, London; Dr. M'Crea, Belfast; Dr. Ferrier, London; Our Edinburgh Correspondent; Mr. Eassie, Hendon; Mr. Clegg, Epping; The Secretary of the Epidemiological Society; Dr. Wickham Legg, London; Dr. Creighton, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the of the Clinical Society; Dr. Bruce, Dingwall; Dr. Stewart, Whitby; Mr. Richard Davy, London; Mr. Poole, London; Dr. L. W. Sedgwick, London; Our Paris Correspondent; Dr. Algave, Paris; Dr. Dyce Duckworth, London; Mr. J. Warrington Haward, London; Dr. Haynes, Leamington; Our Paris Correspondent; Dr. Henry Bennet, Mentone; Dr. Procter, York; Dr. Ralfe, London; Mr. Lawson Tait, Birmingham; Mr. E. R. Morgan, Meath; Dr. Bott, Bury; Mr. G. Birt, Hungerford; Dr. Dalton, Cheltenham; Mr. Goodman, Southport; Mr. Cullingworth, Manchester; Mr. Mackenzie, Mossley; etc.

BOUDAULT'S PEPSINE.

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LECTURES ON THE PATHOLOGY, DIAGNOSIS, AND TREAT- MENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE VI.

Albuminuria not associated with what is commonly understood by Bright's Disease.—I. *Passive Congestion of the Kidney with Albuminuria, the Result of Impeded Venous Circulation.*—II. *Albuminuria and Hematuria from Embolism in the Minute Blood-Vessels of the Kidney.*—III. *Puerperal Albuminuria—Four Classes of Cases.*—IV. *Atrophy and Suppurative Inflammation of the Kidney from Retention of Urine—Symptoms and Diagnosis.*—V. *Acute Cystitis resembling Acute Bright's Disease—Symptoms, Diagnosis, and Treatment.*

BEFORE I go on to discuss the treatment of Bright's disease, which I shall do in my next lecture, I wish to direct your attention to certain cases of albuminuria resulting from various causes, but not associated with what is commonly understood as Bright's disease. My object in referring to these cases now, is to give you some hints which may assist you to distinguish them from each other and from cases of actual Bright's disease. My remarks upon these cases of albuminuria not associated with Bright's disease will have reference mainly to pathology and diagnosis, with only an occasional suggestion on the important subject of treatment.

I. *Passive Congestion of the Kidney with Albuminuria, the Result of Impeded Venous Circulation.*—There is a class of cases in which albuminuria results from passive congestion of the kidney consequent on some impediment to the return of blood through the systemic veins. The causes of this impediment are diverse. Valvular disease of the heart is one of the most frequent of them. Degeneration and consequent weakness of the muscular walls of the heart is a not uncommon cause. The impediment may originate in the lungs, as a result of emphysema with bronchitis, of extensive pneumonic consolidation, or of compression of one or both lungs by a copious liquid effusion into the pleura. Again, a dropsical effusion in the cavity of the peritoneum, the result of cirrhosis or other obstructive disease of the liver, may so compress the vena cava and impede the return of venous blood, as to cause passive renal congestion and albuminuria. In the advanced stages of pregnancy, the pressure of the uterus on the veins may cause passive renal congestion and albuminuria; but I shall presently refer more particularly to albuminuria in connexion with pregnancy. In general, the diagnosis of each of these causes of impeded circulation is not difficult. Then, as to the effect upon the urine and the kidney: the urine becomes scanty in proportion to the degree of venous congestion and the consequent tardiness of the blood-stream through the kidney. The secretion is usually high coloured, of high specific gravity, often turbid with urates, and more or less impregnated with albumen.

The mechanism of albuminuria consequent on the passive engorgement of the kidney which results from an impeded return of blood through the veins, may be illustrated by reference to Fig. 1, Lecture I. When, in consequence of an obstruction at the heart, the systemic veins become overfull, the distension of the renal vein, acting backwards through the intertubular capillaries, causes engorgement of the Malpighian capillaries, and a consequent transudation of serum through their walls. This serous transudation, mingling with the urine, renders it albuminous. Small hyaline and granular casts may be seen when the turbid urine has been cleared by warmth or by dilution with water. The Malpighian capillaries are sometimes ruptured by overdistension; the urine is then blood-tinged, and blood-casts are visible. The secondary character of the renal complication is usually apparent from the history of these cases; and the diagnosis may sometimes be confirmed by the fact that, when the circulation has been relieved by rest in bed, by hydragogues, by puncturing the legs, or by tapping the abdomen, the albumen disappears from the urine, to return, perhaps, when the circulation again becomes more embarrassed within the chest or by the reaccumulation of liquid in the peritoneum. I have seen this happen again and again during the progress of the same case. The first effect of passive congestion upon the kidney is to cause more

or less enlargement with some induration of the gland. The ultimate result of long continued congestion is atrophy and contraction, the surface of the kidney becoming uneven and finely granular as the wasting process goes on. The explanation of the phenomena is not difficult. For the due performance of its secretory function, and for the maintenance of its nutrition, it is essential that the blood move freely through the gland. An impeded return of blood through the veins involves, as a necessary consequence, a partial blood-stasis, and, as a result of this, a scanty secretion of urine, with impaired nutrition and atrophy of the gland. On microscopic examination of the kidneys, some of the tubes may be seen to be opaque with disintegrated epithelium and fibrine, some denuded, and in various stages of atrophy and contraction. When atrophy of the kidney has been a result of passive congestion consequent on a mechanical hindrance of the circulation, I have never found the muscular walls of the minute renal arteries hypertrophied.

II. *Albuminuria and Hematuria from Embolism in the Minute Blood-Vessels of the Kidney.*—There is yet another mode in which valvular disease of the heart may for a time render the urine albuminous and even bloody. You are aware that, when one of the valves of the heart has its surface roughened by inflammation or by senile degenerative changes, a very common result is a deposit of fibrine upon the roughened surface; and further, that these fibrinous deposits, having no organic union with the valve beneath, are very liable to become detached by the current of blood, and then to obstruct the vessels in any organ to which they may chance to be conveyed. One result of the mechanical plugging of blood-vessels is the formation of so-called "fibrinous deposits" in the kidney. The portion of kidney which is the seat of recent obstruction is raised above the level of the surrounding renal tissue; it is firm, anæmic, and of a yellowish white colour, with an intensely red injected margin. The older deposits are softer than the surrounding tissue, appear shrunk and depressed, and have not the red margin. In a still more advanced stage, the appearance of a deposit entirely passes away, and a depressed cicatrix is left.

On a microscopical examination of a recent fibrinous patch, the tubes in the seat of the deposit appear opaque from containing fibrinous coagula. Some tubes contain oil. Many of the intertubular capillaries contain fibrinous coagula; while others contain oil-globules, which are clustered in the form of rings surrounding the tubes. Granular coagula and oil-globules may also be seen in some of the Malpighian capillaries and the afferent arteries. The coagula in the vessels are more clearly seen after the tissues have been rendered transparent by dilute acetic acid. In the red vascular zone which surrounds the recent deposit, the Malpighian and the intertubular capillaries are seen to be injected and gorged with blood. The probable explanation of the phenomena is, that a soft fibrinous mass from a cardiac valve is arrested in a branch of a renal artery; and there it becomes disintegrated, and the fragments are carried on into the intertubular capillaries. The circulation through these vessels is arrested; there is, consequently, a backward engorgement of the Malpighian capillaries, and an albuminous and fibrinous effusion into the uriniferous tubes. The capillaries at the margin of the obstructed patch are greatly distended by the diverted current of blood, and in consequence the urine may become albuminous and even blood-tinged, hyaline and blood casts being visible under the microscope. Subsequently, the exudation into the tubes, the epithelium of the tubes, and the fibrinous coagula within the obstructed blood-vessels, undergo a fatty transformation, and all trace of the normal structure disappears. The fatty matter at length becomes absorbed, and a depressed cicatrix remains on the surface of the kidney. Two or more pale fibrinous patches of different dates may sometimes be found in the same kidney. In some instances, the fatty matter which results from the transformation of the tissues and the fibrinous coagula does not become absorbed, but remains encysted. This is the explanation of the cysts which are sometimes found filled with a thick dark liquid, composed of oil free and in cells, with which often plates of cholesterol are mingled.

The diagnosis of embolism in the renal vessels is usually uncertain. We may suspect the occurrence when, with the physical signs of aortic or mitral disease, without great impediment of the general circulation, the urine suddenly becomes albuminous or bloody. In some cases, extensive embolism in one or both kidneys has been attended with severe lumbar pains, a scanty secretion of urine, and vomiting; but, when the obstructed portions of kidney are small, there may be no symptoms to indicate the occurrence of renal embolism.

III. *Puerperal Albuminuria.*—Since the time that Dr. Lever, in the *Guy's Hospital Reports* (1843), published the fact that puerperal convulsions are in a large proportion of cases associated with albuminuria, the subject of albuminuria in connexion with pregnancy has excited much interest. Later observations have established the essential accuracy of Dr. Lever's observations; but they have also shown that the

connexion between puerperal convulsions and albuminuria is not constant. Convulsions may occur without albuminuria; and, on the other hand, albuminuria in pregnant women may be unassociated with convulsions. The few remarks which I propose to address to you on this subject will have reference mainly to the subject of puerperal albuminuria, and only incidentally to the association of puerperal convulsions with albuminuria. With reference to the subject of puerperal convulsions, I advise you to read carefully Dr. Barnes's very able and interesting Lumleian Lectures *On the Convulsive Diseases of Women*. I have seen more or less of a considerable number of cases of albuminuria associated with pregnancy; and, looking over my notes of these cases, I find that they arrange themselves in four classes, each having in some respects a different history and pathology.

1. Women known to be suffering from chronic Bright's disease may become pregnant, pass through all the stages of pregnancy and parturition, and even suckle their infants, without accident or complication. A lady whom I saw some years since with my friend Dr. S. H. Steel of Abergavenny, while suffering from chronic Bright's disease supervening upon an acute attack which resulted from exposure to cold, twice became pregnant, each time had an uncomplicated labour, and gave birth to two healthy children, each of which she suckled for about a year, not only without detriment, but apparently with benefit to her health. In 1849, I first saw with the late Dr. Tanner a woman who during her tenth pregnancy had general dropsy with albuminuria. The labour was natural; the child was healthy, and nursed for a time. After that, while the urine continued to be albuminous, she twice became pregnant, and had uncomplicated labours. She ultimately died with contracted granular fat kidneys. It is probable that the existence of albuminuria from any cause increases the risk of puerperal convulsions at the time when to the exalted reflex excitability of the nervous system in the parturient woman there is superadded the disturbing element of violent and general muscular contraction; but cases like those which I have cited show that, when there is a free secretion of urine, with absence of uræmic symptoms, labour may be unattended with any serious complication.

2. In a second class of cases, during the latter months of pregnancy, there is more or less general œdema, with headache and other nervous symptoms, not unfrequently culminating in convulsions, which may recur again and again. The urine is scanty, high coloured, often turbid with urates, of high specific gravity, and contains a large amount of albumen. On microscopic examination, it is found to contain small hyaline casts, with a few granular casts, but few or no epithelial casts. After delivery, the urine quickly becomes copious, of pale colour, of low specific gravity, and within forty-eight hours the albumen may have entirely disappeared. Such a case I saw in the year 1857 with Dr. Greenhalgh and Mr. Peter Marshall. The most probable explanation of this class of cases is, that the pressure of the gravid uterus on the vena cava causes gradually increasing passive engorgement of the kidney, albuminuria, a scanty secretion of urine, dropsy, and at length uræmic convulsions. The rapid disappearance of the albuminuria and the other symptoms after the emptying of the uterus is explicable on no other theory than that of passive renal congestion consequent on mechanical pressure. Cases of this class are more common in primiparæ, and probably for the reason that in first pregnancies the abdominal walls are less yielding; there is, therefore, greater tension and greater pressure on the large venous trunks than during subsequent pregnancies, when the abdominal walls are more flaccid.

3. There is a third class of cases, in which the theory of mechanical pressure is not admissible. I allude to those cases in which albuminuria comes on at an early period of pregnancy, before the uterus has attained sufficient size and weight to interfere mechanically with the circulation through the kidney. In these cases there is evidence of acute desquamative nephritis. The urine is not only scanty and highly albuminous, but often blood-tinged, and contains epithelial and blood casts. Such a case I have in the hospital at the present time (March 1873). When albuminuria sets in during the progress of pregnancy, it is very apt to lead on to convulsions, to retinal hæmorrhage and albuminuric retinitis, with serious defect of vision. The renal symptoms may gradually pass away after delivery; if so, they may or may not return with the next pregnancy. In other cases, the albuminuria is persistent; the urine is of pale colour, of low specific gravity, and deposits small hyaline and granular casts. Ultimately, uræmic symptoms occur; and, after death, the kidneys are found either contracted and granular or large and pale. A painful case of this kind I saw not long since with Mr. Cadge of Norwich. The most probable explanation of this class of cases is that which refers the renal disease to some previous blood-change. Obviously, pregnant women are exposed to the ordinary exciting causes of renal disease; and acute Bright's disease

originating during pregnancy may result from exposure to cold and wet, from excessive eating and drinking, or from some zymotic blood-poison. But, in addition to these more common causes of albuminuria, it is probable that, connected with the evolution of the uterus and the development and growth of the foetus, there may sometimes be associated abnormal blood-changes, resulting in renal disease with albuminuria. In addition to other indications of the occasional occurrence of morbid states of blood in pregnant women, I may refer to those cases in which puerperal chorea is associated with acute endocarditis and fibrinous deposits in the mitral or aortic valves; the chorea being, in all probability, a result of capillary embolism in the region of one or both corpora striata.

4. There is yet a fourth class of cases, of which I have seen and noted several examples. I refer now to cases in which albuminuria and other symptoms of renal disease appear for the first time soon after delivery. Within a day or two after delivery, or after an interval of several days, sometimes after imprudent exposure to cold, a rigor occurs, and is followed by febrile symptoms. The urine is soon found to be scanty, with all the characters indicative of acute desquamative nephritis. There may be general dropsy, with or without uræmic nervous symptoms, such as headache and convulsions. The renal symptoms, after a period varying from a few weeks to several months, may gradually and entirely pass away; or the disease may become chronic, and result in a large white kidney. In such cases as this, the renal symptoms may with confidence be referred to the blood-contamination consequent on the absorption of morbid materials from the interior of the uterus after parturition. These cases are pathologically allied to, and sometimes associated with, a form of septicæmic puerperal fever. An interesting case of this kind, about which I was consulted, has been published by Messrs. Melland and Windsor of Manchester in the *BRITISH MEDICAL JOURNAL* (Sept. 12th, 1857). Here, too, I would suggest the probability that, when the foetus dies and is retained *in utero* until decomposition is commenced, there may sometimes be an absorption of foul gases and liquids, which in one case may give rise to the phenomena of *ante partum* phlegmasia dolens, as in a case which we have recently had in the hospital; and, in other instances, acute desquamative nephritis may result from this source of blood-infection.

It will be obvious that the distinction between the four classes of cases of albuminuria in connexion with pregnancy, which I have here briefly indicated, is of considerable practical importance, inasmuch as upon an exact diagnosis depends, not only the prognosis, but the treatment, of each case of puerperal albuminuria.

One hint I may give you with reference to the expediency of allowing a woman suffering from albuminuria to nurse her infant. The case of Dr. Steel's patient, to which I just now referred, shows that, when there are no symptoms of blood-poisoning, the mere fact of albuminuria does not prevent a woman from being a good nurse; but, on the other hand, when albuminuria is a result of a recent blood-infection, the mother's milk may become contaminated, and act as a poison to her infant. In one case about which I was consulted, a lady had acute renal disease, resulting probably from *post partum* absorption from the interior of the uterus. She recovered after a long illness complicated with pelvic cellulitis and abscess; but her infant, after taking the breast for five weeks, became feverish, and died with symptoms of pyæmia at the age of six weeks. It seemed probable that the infant's illness was a result of infection through the milk; the infection being not uræmic, but septicæmic—a consequence of the absorption of noxious uterine discharges. In cases similar to this, the mother should not be permitted to nurse her infant.

[To be concluded.]

OBSTETRIC MEMORANDA.

REPEATED ABNORMAL PRESENTATIONS.

THE following memorandum on this topic may be deemed worthy of record. A woman died here some years ago who had seven pregnancies, of which five terminated in "cross-births", one in cephalic presentation, and the other in an abortion at three or four months. No instruments were used at any time. A midwife attended all the labours, and appears to have turned on each occasion, and said there was "a bone in the way"; she was certified, and had a wide reputation for skill. The labour with cephalic presentation lasted four days, and resulted in the birth of a female (now aged 17), whose head was "pulpy", and who was apparently dead; her intellect is good, and she has not had any fits, but she is "nervous." All the other children were still-born.

STANLEY HAYNES, M.D., Malvern.

CLINICAL LECTURE

ON

THE VARIETIES OF PHTHISIS.

BY REGINALD SOUTHEY, M.D., F.R.C.P.,
Physician to St. Bartholomew's Hospital.

THE subject of the classification of phthisis is not an easy matter, or I should not have devoted so much time to its discussion. A great deal has latterly been written upon it by earnest hard-working men, who were looking out for anatomical characteristics to guide them in separating one form of the disease from another. It became necessary for me to state their views, to show you what opinions were entertained, and whither certain doctrines must lead you if you accepted them. I was not criticising the works of the different authors who had advocated certain separate varieties, but was examining the grounds upon which they based the distinctions which they made, and was putting to you the same question I had often previously asked myself—*Cui bono?*

These varieties are various phases of one and the same complaint at different periods of its existence, or else they are distinct pathological entities, and are entitled to be called after the prevailing pathological change. Thus the same patient may at the commencement of his lung-malady have what you please to specify as an alveolar catarrhal phthisis, and then symptoms arise to make you call his illness phthisis *ab hæmoptoe*; and, after the lapse of a year or more, you will see him again, and name his complaint fibroid phthisis, or else phthisis with recurrent hæmoptysis. And then, I ask, of what clinical use has this kind of classification been to you? Has it increased your knowledge? Has it influenced your treatment? Perhaps it was difficult to tread on such delicate ground in a lecture, and not offend. I should have known that I must wound some author's prejudices.

As those of you who read the journals will have seen, some one has felt himself aggrieved by me; but this writer is in error, as he must perceive if he read through my lecture more carefully, when he states that my object was to discredit before my readers any attempt at a classification of phthisis upon a pathological basis. As to misunderstanding or misinterpreting Dr. Douglas Powell's views, how could I? He wrote a book to establish certain varieties of phthisis; and, since all his different subforms either pass or may pass one into the other, I told you, what I feel bound to repeat for your instruction, that this mode of classification is of little practical utility. Let me take this opportunity, however, of correcting one statement I made, and of which Dr. Powell has complained. I said that, in his variety of phthisis *ab hæmoptoe*, he did not specify the source of the blood. What I meant was, that he did not prove this. In his table he does particularise the blood-source to be the pulmonary capillaries, and in his text he brings what arguments by way of facts he possesses to determine this; but, if he be satisfied with these facts, I am not. There is no real evidence where the blood came from. The woman did not die then, or there is no *post mortem* examination recorded; and Dr. Powell must be a feebler reasoner than I give him credit for being, if he think he has proved the blood-source or the phthisis *ab hæmoptoe* at all, to his own or anybody's satisfaction.

I am the more warm on this point, because, as I have often told you, I do not believe in a form of consumption produced by hæmoptysis at all—whether the regurgitation, or the gravitation, or the intraction by respiration into the air-cells, of blood elsewhere effused. The facts are all insufficient, and too inconclusive to favour my acceptance of them; and it is a similar caution that I felt it my duty, as your teacher, to inculcate on you.

But let me pass on. There has been too long an interval between my lectures already.

I gave you to understand that there were three different kinds—species, if you please—of phthisis, which I had found it desirable to separate from each other, because they were or seemed, clinically as well as pathologically, distinct from each other: embolic or septicæmic, ordinary or scrofulous, and foreign-body phthisis. The first and the last forms are comparatively rare; the second is very common.

Embolic Phthisis. *Synonym: Acute Phthisis, Galloping Consumption.*—It is a rapid degeneration of the lung-structures, commencing in lobular solidifications of various sizes and strictly localised extravasations of blood. Multiple abscesses quickly form; the solidifications

soften into pus from the centre towards the periphery, with all the well known characters of pyæmic abscess. The primary lesion is apparently local arrest of the circulation, due to the plugging of the smaller twigs of the pulmonary artery, or to arterio-capillary embolism.

Here, gentlemen, is the first illustrative example of this form of disease.

On November 18th, 1872, a tall emaciated girl of eleven years, was admitted under my care in Faith Ward. Her mother, from whom we gathered the history of her illness, told us that the child had been ill for four weeks, having been feverish and much purged; but it was not till four or five days previous to her admission into the hospital that her state excited any serious apprehensions. Then, however, she became very noisily delirious, screaming out at times violently, but at others lying moaning and muttering. For four days she had recognised nobody about her, but took what food was given her, and lay in that semi-conscious state which you know to be so common in fever. Many of you saw her with me shortly after she had been put into bed, and heard what I said upon my examination of her. Her posture was a peculiarly uncomfortable one; she lay with her head thrown backwards on the pillow, and with her back bent in a manner that suggested a tetanic spasm. You see patients similarly bent by opisthotonos. She shrieked out directly I touched her. Nor was this because I had placed my hand upon any naturally highly sensitive or painful part; for, whether I touched her wrist, her face, or her belly, she resisted it equally, jerking about her limbs and twitching her muscles in a manner to suggest spinal irritation.

You will meet occasionally with equal restlessness and hyperæsthesia in typhoid fever in children, and especially in nervous children. There is a boy under my care at this moment in Radcliffe Ward, very ill and delirious in the fourth week of fever, who lies in a crouching attitude, bent forwards, and who is similarly hypersensitive. I augur ill of such cases. Not that they always die; but they pass very close to death's door, and make very tardy recoveries.

But, to revert to our case, the girl presented a high temperature—102 deg. The sordes about her lips, her dry chapped tongue, the rose-spots scattered more upon her back than over her abdomen, and, above all these, the history and duration of her illness, taken together, suggested the diagnosis of typhoid fever; but against this were to be set the following facts—that the abdomen was neither full nor gurgling, and the spleen was not noticeably enlarged. The possibility of tubercular meningitis had passed through the mind of Mr. Giffard, my very careful house-physician. But there had been no vomiting; the pulse, though feeble and very rapid, did not intermit at all; both pupils were of equal size; and I noticed the manner in which her eyeballs followed moving persons, and that she saw and watched what went on about her, although her eyelids were half-closed. When I came to examine her chest, the physical signs which I discovered rather embarrassed than assisted me to form an opinion of the nature of her malady. Her breathing was very shallow and rapid. I could discover no evidence of pleuritic effusion. Anteriorly and posteriorly, slight catarrhal sounds, crepitation, and sibilus, were to be heard all over the chest. The vesicular sounds were very unequal in corresponding parts of the two lungs; full and excessive compensative breathing occurred over the upper part of the right lung; faint distant respiratory sounds, marked by crackling crepitation, under the left clavicle. There was no lobar, no extensive dullness; but the resonance was very unequal. Patchy dullness existed, with nowhere the full tone which a chest-wall so thin ought to furnish. The scattered crepitation was of different kinds, but in parts was of that peculiar intermediate size and distinctness upon cough, that usually betokens breaking up of the lung-substance.

For treatment, I ordered fluid and stimulant nourishment at short intervals of time, and directed that the diarrhoea should be treated by small opiate enemata; but I held out a very hopeless prognosis. I never headed the board, but said I thought the case was one of acute consumption. The girl died four days after her admission. Her bowels acted twice only. She remained in much the same state, passing her urine under her, and only expressed herself the least intelligibly once the day before she died. I never ventured to examine her chest again, and the only feature further worth recording about her symptoms while alive is her temperature-chart. November 18th, (m.) 104.3, (e.) 103.2; 19th, (m.) 100, (e.) 104.3; 20th, (m.) 103, (e.) 101.6; 21st, 106 (m.); 22nd, 108.5 (m.), taken twenty minutes before death.

The *post mortem* examination conclusively proved the case to have been one of typhoid fever. The ulceration of the Peyer's patches was neither very extensive nor far advanced, except close to the ileo-cæcal valve; but the swollen softened state of the spleen and mesenteric glands Dr.

Gee considered quite pathognomonic. The lungs were good examples of the mode in which embolic phthisis begins. A great number of patches of deep congestion and well defined consolidation were scattered through both lungs, forming various-sized hepatisations, which often presented yellow centres when cut across. They varied in size from a marble to a millet-seed. They were spots of blood-stasis or stagnation in capillaries, of small lobular collapse, with extravasation of blood into the surrounding pulmonary tissue. In the upper lobe of the left lung, and on its anterior aspect, one such solid lobule, rather larger than a shilling in size, came close to the surface of the lung; it was a highly characteristic specimen, being sharply defined, and speckled throughout with tiny yellow dots. In many parts, small quite recent blood-ecchymoses were visible, which did not present yellow centres. The appearances were quite unlike tubercle, but exactly resembled those seen in the lungs of animals into whose veins during life any fine foreign material or filtered putrefying fluid has been introduced. There was an old cretified bronchial gland in a state of softening, and one or two of those ossifying cartilaginous plates often met with in the pleura. All the other organs were healthy.

You may accept the lung-state in this instance as a very early one of a peculiar form of scattered lobular consolidations, the intervening tissue being in parts congested, but crepitant or air-containing.

Those solidifications which consist of capillary blood-stasis, with some surrounding extravasation, of alveolar infarction or blocking up of air-cells with materials that are so deeply stained with the colouring matters of the blood that the normal histological elements are with difficulty recognisable, commence, I believe, in minute arterio-capillary embolisms. It is obvious that these solidified lobules must subsequently, if the patient live, pursue one of three pathological courses. The foreign altered blood-products must either admit of being totally reabsorbed, as pneumonic cell-products are, the alveoli reopening; or the tissues, the capillary walls, and the trabecular elastic frameworks of the air-cells, will suffer degeneration, softening, and separation from the parts whose circulation remains unimpaired by the ordinary process of abscess or pus-formation; or, as a third alternative, these lobules may partly obsolesce and partly cretify, their site remaining marked by permanent nodular pigmented masses, and themselves being circumscribed by some thickening of the fibrous interlobular tissue. Of the mode in which they degenerate and form abscesses, we have had a very recent good example. You will remember a dark sallow-complexioned woman of small stature, aged 28, who was sent down into my ward from that which is especially devoted to the diseases of women. She was said to be suffering from acute pneumonia, which, it was supposed, had supervened while she was in a state of great exhaustion after repeated losses of blood from one or more blood-tumours situated in the wall of her vagina. She had a subinvolted condition of uterus after parturition fifteen months previously, and had been in the hospital ten days, undergoing suitable treatment for her local malady, when on a sudden she complained of pain in her chest, her breathing became rapid, her temperature rose to 104, and her general condition excited grave apprehension. Upon examining her chest, a friction-sound was heard on the right side; the thoracic movements were painful; respiration shallow, 60 per minute; pulse 144, thready and feeble. Inspiration seemed to me comparatively prolonged; expiration short and whiffing. There was no complete dulness, such as marks the presence of pleuritic effusion or lobar pneumonia; and there was neither bronchial breathing nor bronchophony to be heard anywhere; but over both lungs, although especially over the right, I noticed great variation in the percussion-tone which I elicited. In spots within two fingers' breadth of each other, I found comparative dulness and excessive resonance; while, scattered irregularly throughout both lungs, my ear caught that fine crackling crepitation, accompanied by a little sibilus, so often heard in acute phthisis and lobular pneumonia. My diagnosis was acute phthisis and pyæmia; and the patient sank with symptoms of general peritonitis six days after I first saw her. I need not dwell upon the entire disease which the *post mortem* examination revealed. In brief, the apparent order of events was this: double ovarian cystic disease, with subinvolution of the uterus; this organ remaining, eighteen months after delivery, still of the size of a swan's egg, having walls two inches and a half thick, and presenting a diphtheritic-looking state of its mucous membrane. Abundant evidence of chronic as well as recent peritoneal inflammation existed. The right ovary had slipped into the posterior uterine pouch, and became bound down there by old adhesions. Its cystic enlargement in this situation had exercised pressure upon the pelvic system of veins, leading to an engorged and varicose condition of both uterine and vaginal veins, and the formation of blood-tumours in the wall of the vagina. Five such tumours were found, and one was in a sloughy gangrenous state; and hence, most likely, the final blood-poisoning had arisen. Embolic infarcta were found in the spleen

and kidneys, and also in both lungs, the parts to which I desire to direct your present attention especially. There was recent pleurisy upon the right side. Both lungs were much pigmented; and little abscesses, of various sizes and in every stage of development, were scattered through them, from the minutest halo of ecchymosis about a tiny yellow centre up to ragged cavities of the size of a walnut. The walls of the smaller bronchi were swelled and thickened, and patches of lobular pneumonia pervaded the upper and lower lobes of both lungs indifferently. It was impossible from a naked-eye examination to distinguish the ultimate alveoli, thus in parts blocked up with products of inflammation from what is ordinarily called phthisis. The consolidated lobules, which are the seat of lobular pneumonia, appear under the microscope stuffed with proliferating cells, and entirely coincide with what are ordinary pneumonic appearances.

Now here was phthisis of its most acute kind—small abscesses of various sizes, with interspersed lobular pneumonia. The disease existed in a later and more developed stage than in the case to which I first directed your attention. Having hardened portions of this lung, I made some fine microscopical sections, which I will show you. They show the blocking up of minute twigs of the pulmonary artery by emboli, as I believe. And such, I apprehend, is the origin of this form of rapid degeneration of the lung-tissue—necrobiosis, or death in a living coffin, as it has been named. The frequently attendant lobular pneumonia is perhaps determined by collateral blood-flux.

Let me briefly sum up, then, the characteristic symptoms during life of this form of phthisis. Foremost is its rapidity. To-day you may hear a slight friction-rub, with feeble breath-sounds; perhaps notice a little less than normal resonance. To-morrow there will be abundant crackling crepitation. On the third day, there will exist such crackling and churning sounds as signify the disintegration of pulmonary tissue. It begins with pain, high fever, rapid breathing. There is a short, frequent, almost dry, unsatisfying cough, very irritating to those who have to listen to it. Some of you may remember how the nurse complained that the other patients in the ward could get no sleep because of this poor woman. A little rusty pneumonic sputum was expectorated; but it was very scanty. Indeed, in neither of these two cases was there any expectoration to assist the diagnosis. Perhaps, even when the softening takes place, it may communicate but little with bronchi, and have no easy channel of exit.

In some instances, dark-coloured blood is, I believe, expectorated; but I have never seen such cases. Still, when we consider the amount of ecchymosis or blood-extravasation which in both these cases was discovered round about the lobular infarction, it is easy to comprehend that dark blood, as is seen in cases of pulmonary apoplexy, might be spat up.

But, you ask, why do I connect these two cases of evident pyæmic abscess in the lung with phthisis at all? It is because the history of not a few cases of pulmonary consumption is of this kind. A patient has typhoid fever, with lobular pneumonic symptoms, who has never had any lung-affection before in his life. He recovers from his fever, but has a slow and imperfect convalescence. Within a few months, he comes again into the hospital with manifest phthisis, having cavities of some size in the middle or lower parts, rather than quite at the apices of his lungs; and dies in from a few weeks to a few months after he was first taken ill.

A woman has a painful delivery, followed by pelvic cellulitis. Of this we have had more than one example within the last six weeks. Her breathing becomes oppressed; she gets a cough, with purulent expectoration; she never has hæmoptysis, but presents scattered crepitation with tubular breathing; and anon manifests cavities, pectoriloquy, hectic fever, and general wasting. How, and when, and why, did this phthisis begin? There is no hereditary predisposition to explain it. The chest-shape is not at fault. Hæmoptysis is an exceptional symptom; although occasionally, late on in the complaint, a vomica may lead to some pulmonary arterial aneurism, and large and perhaps fatal final hæmorrhage.

The first beginning, when this is watched for, has been sudden oppressed breathing, with tubular respiratory sounds, patchy dulness on percussion, followed by crackling crepitation, which either becomes larger in character and passes into gurgling and churning sounds, or else, after an uncertain interval, disappears; its site being marked, however, by persistent dulness on percussion and impaired vesicular sounds.

You are aware that materials alien to the blood, unfit for circulation and the nutrition of the tissues, are especially prone to pass into the circulation, when glands which may be regarded for the nonce as blood-filters are breaking or broken down, and when the veins themselves are diseased, varicose, or in parts the seat of thrombosis. The blood of the whole body has to pass through the lungs. Is it surprising that unassimilated

incompatible materials should suffer arrest in the fine capillary meshes of the air-cells?

All that I am pleading for are grades of pyæmia. The acute or more rapid forms, with multiple abscesses in the lungs, are, in point of causation or pathology, well understood; but wherefore withhold a like etiology—minute arterio-capillary pluggings—from those cases of phthisis which follow fever, ague, protracted cases of rheumatism complicated by bed-sores, and those other debilitated blood-states in which embolism and thrombosis are known so frequently to arise?

If you find the term embolic phthisis still too hypothetical, call this variety blood-poisoning phthisis; but remember all its principal clinical facts. The lung-symptoms are always of sudden access. They follow or occur as complications upon some other grave disease. The fever is continued, but the morning temperature is usually higher than that of the evening. Lobular pneumonic symptoms are speedily and generally extensively exhibited; but, unlike ordinary scrofulous phthisis, early bronchial catarrhal symptoms, cough, and hæmoptysis, are not forthcoming. You will find this form of disease very little amenable to treatment. I do not say it never suffers arrest, for I believe that it does, and that I have seen such cases; but they are exceptional, not to say most rare. It happens more often to dark sallow-skinned than to lymphatic persons. The treatment which I have found best adapted to the general condition is sustenance such as can be taken; stimulants, for these are requisite in lieu of food which the stomach will not support; and, as medicine, a mixture in which infusion of digitalis, nitrate of potash, and the watery extract of opium, are the potent ingredients.

ON THE ORIFICES OF THE UNIMPREGNATED UTERUS, AND THEIR SURGICAL TREATMENT.

By J. HENRY BENNET, M.D.,

Late Obstetric Physician to the Royal Free Hospital, London.

IN the throes of departure from my winter retreat at Mentone, I have hitherto failed to notice Dr. Matthews Duncan's strictures on the above subject (*BRITISH MEDICAL JOURNAL*, March 8th). An interval of repose, however, affording me the required leisure, I again revert to this important question.

Dr. Matthews Duncan's explanation of his practice in dilation of the uterine orifices forms a most necessary corollary to his "scientific" papers. The former certainly left on the reader's mind the impression that he was a much more enthusiastic "dilator" than he proves to be. Thus, he repudiates the existence of actual strictures of the uterine orifices comparable to those of the male urethra; he admits the usual permeability of the uterine canal to the bougie or sound, and rejects dilatation as a panacea for sterility; indeed, he accepts a greater degree of natural permeability of the entire uterine canal than I myself am prepared to admit. Thus, I can generally introduce, with a little firm continued pressure, a small wax bougie, warmed, bent to the natural curvature of the uterine cavities, and used with a speculum; but I also constantly find, in the same cases, the uterine sound, or a larger bougie—even a 6 or an 8, still more, a 12 or 13—arrested at the os internum, whether introduced with or without the assistance of the speculum. Dr. M. Duncan, indeed, appears all but to confine dilatation to spasmodic or pseudo-membranous dysmenorrhœa, and that all but empirically, without seeing exactly how it acts. If so, I am still at a loss to know what are the classes of cases in which the uterine sound is bent in overcoming resistance, or in which the resistance overcome is equal to a pressure of four pounds. I repeat that, in my opinion, in uterine practice such a degree of force is altogether unjustifiable, whatever the nature of the case, even experimentally. To use it, is to court disasters and catastrophes.

Satisfactory as Dr. M. Duncan's explanation of his practice appears to me, satisfactory as it is to me to learn that he mostly agrees with the doctrines I teach, I must be allowed to add that he does not explain in what respect it is that he considers the views and statements contained in the paper I read last August before the Association at Birmingham, "anatomically, physiologically, and pathologically wrong". I consider that I have a right to ask whether these words were written hastily, without deliberation, or whether they are the true expression of his sentiments. In the latter case, the questions at issue are certainly of sufficient weight and scientific importance in gynecology to demand due discussion and consideration. I would also remark that it is on these very views that my own practice and teachings are founded. I will recapitulate in a few words the opinions which I entertain and teach respecting the uterine orifices.

1. *Anatomically*, the uterine cavities are two in number; the cavity

of the uterus, triangular; the cavity of the cervical canal, infundibuliform. The cavity of the cervical canal is limited—externally, by a contraction of the os externum, usually patulous, and easily dilatable; internally, by a more decided contraction, which separates it from the uterine cavity, and is called the os internum. This internal contraction, I maintain, is formed by the circular fibres of the cervix, and constitutes a species of sphincter, although no positive sphincter, like that of the anus, is anatomically demonstrable. This double sphincter reproduces, anatomically, the sphincters which close the other large splanchnic cavities—the stomach, the intestines, the bladder.

2. *Physiologically*, these sphincters, especially the uterine one, are vital, close and open by a vital contraction; and a more or less vital contraction and closure is the usual condition during life. After death, this vital contraction ceases, as well as that of the sphincter ani, and must not, therefore, be looked for. These sphincters open for menstruation, probably for conception; and the internal one closes on the contact of a foreign body, such as the uterine sound. They are also more or less susceptible of contraction, according to individual idiosyncrasy. Thus in a perfectly healthy woman (in the interval of menstruation) having a perfectly healthy uterus, the uterine sound or a bougie (No. 8 or 10) separates the lips of the os internum with ease, passes into the infundibuliform cavity of the cervix, where lateral motion is generally possible, and reaches the os internum, one inch and a half from the os externum, there to be arrested, generally speaking, by its vital sphincter-like contraction. Sometimes slight pressure will pass it into the uterine cavity, sometimes it will not. Nothing short of unjustifiable force will succeed; although in these same cases a smaller wax bougie, warmed and bent, will generally pass.

3. *Pathologically*.—Such being the case anatomically and physiologically, the healthy os internum in the perfectly healthy uterus usually resisting the passage of the uterine sound or of a moderate sized bougie, it is a most egregious pathological error to consider this mere impediment to the entrance of the sound, apart from other morbid phenomena, a pathological condition warranting dilatation or division. So far from resistance to the sound at the os internum being a sign of disease, it is a sign of a healthy natural vital state of the parts. The free and easy passage of the sound into the uterine cavity, without pressure or force, is, on the contrary, generally an evidence of an actually morbid state of the organ. The extension of inflammation of the mucous membrane of the cervical canal to the cavity of the uterus, relaxes and paralyses the os uteri internum; so do endometritis itself, or any morbid state that enlarges the body of the uterus; metritis, acute or chronic; non-involution of the uterus after labour or abortion; or a fibrous or other growth developed in its tissues. Inflammatory hypertrophy, however, of the cervix may mechanically approximate, partly close, the entire cervical canal. The hypertrophy removed, the canal relaxes of itself.

Such are the views and statements which Dr. Matthews Duncan has stated to be *seriatim* wrong. I repeat that it is of the most vital importance that the real anatomical and physiological condition of women should be cleared up and firmly established as a basis of pathological work. If the above views be right, any healthy woman in the kingdom, casually examined, may be pronounced pathologically wrong, and treated for strictures which do not exist, dilated or divided—a really frightful state of things. Indeed, I firmly believe that hundreds are so treated every year, conscientiously, but under the influence of mistaken ideas as to the anatomy and physiology of the uterus. Indeed, many who have written and practised during the last few years seem to look on the uterine canals as comparable to the waste-pipe that carries off the water from the roof of a house, and to them nearly all uterine pathology is centered in fancied or real obstructions; just as another class of modern gynecologists have got into their heads that the uterus, the most movable organ in the economy, the "animal in animal" of the ancients, is a mere joint, like the knee- or elbow-joint, liable to dislocations, twists, and turns of every kind, and that nearly all uterine pathology lies in these fancied and exaggerated displacements.

Under the influence of these fallacies and errors, I am constantly seeing errors in practice, cases of constitutional lifelong dysmenorrhœa (or painful ovulation) divided or dilated by one, treated by pessaries left for a year or two by another, irrespectively of all constitutional considerations, and with no beneficial result whatever. The dependence of menstruation on ovulation, of ovulation on the nervous system, of the nervous system on diathesis, on hereditary and health antecedents, is often entirely ignored; and in one of the most complex branches of pathology, imperfect surgical notions are often substituted for rational treatment or non-treatment. In many of the cases thus surgically mis-treated, actual lesions, important lesions, inflammatory and nutritive, are not unfrequently overlooked and ignored.

CASE OF POISONING BY CARBOLIC ACID.*

By GEORGE J. HEARDER, M.D.,

Medical Superintendent of the Lunatic Asylum, Carmarthen.

ABOUT ten o'clock on the morning of November 27th, I was called to see a man aged 36, who had swallowed carbolic acid with suicidal intent. He said that he had "swallowed poison". About five minutes afterwards, when I first saw him, he was evidently in mortal agony. His countenance was livid, his eyeballs protruded, and he uttered a continuous subdued cry, of wild and fear-inspiring tone, which was broken only by short gasping attempts at respiration, and ineffectual endeavours to vomit. This condition was followed almost immediately by a state of profound insensibility. Olive oil was poured into his mouth while the stomach-pump was being prepared. Warm water was then injected into the stomach, and withdrawn strongly impregnated with carbolic acid. A second injection of olive oil was administered, and this likewise, when extracted, brought with it a portion of the poison. The patient died, apparently asphyxiated, about thirty minutes after taking the acid.

From the first the pulse was very rapid, and so feeble as to be scarcely perceptible; the breathing was performed only by short and infrequent gasps, and the surface of the body was of a deep livid hue; the pupils were unaffected. Great difficulty was experienced in passing the gum elastic tube into the stomach. It was necessary to keep the forefinger of the left hand at the back of the pharynx, to prevent it curling up, while persistent and somewhat forcible pressure was employed to overcome the resistance made by the firmly contracted state of the œsophageal muscle. It falls to the lot of asylum medical officers to use the stomach-pump much more frequently than their brethren in general practice, and I have employed the stomach-pump on many hundred occasions as an aid in forced alimentation. In none of these was there any difficulty in passing the tube into the stomach after its point had got beyond the muscles of the pharynx. In the case under consideration, however, there was very considerable resistance offered by the œsophagus throughout its entire length; and great care and perseverance were required to perform what is usually a very simple and easy operation.

Section Cadaveris Twenty-six Hours after Death.—The superficial veins, especially those of the upper extremities, were distended with blood. The lips and chin were slightly excoriated. The dura mater was much congested with dark venous blood. The arachnoid at the vertex was thickened by gelatinous deposit. The brain-substance was apparently healthy. The lungs, filling well their cavities, were slightly emphysematous in front, and passively congested posteriorly; there were old adhesions at both apices. The pericardial sac contained about an ounce of serum. The heart was healthy; all its cavities were full of blood, which was very dark, perfectly fluid, and without a trace of coagula. Its microscopic examination revealed nothing abnormal. The mucous membrane of the larynx, trachea, and its subdivisions, was highly congested, granular, and softened; the tubes contained small quantities of olive oil and carbolic acid. The tongue appeared shrunken, pale, and indurated. The papillæ were markedly prominent; the lenticular papillæ particularly so. The mucous membrane of the œsophagus was peculiarly white and glistening, softened, and peeling off as if scalded. The inner surface of the stomach was extensively softened and eroded, its mucous and muscular coats being reduced to a state of pulp. The parts surrounding the orifices had sustained most injury, and these portions were of a dull deep slate colour. The small intestine was similarly affected, in patches of about the size of a crown-piece, to within a few inches of the cæcum. The liver, spleen, and kidneys were healthy.

That the fatal issue was hastened by the action of the acid on the air-passages there can be no doubt; and we have, in the same cause, also an explanation of the asphyxial symptoms and the rapidly supervening state of coma. Two cases of poisoning by carbolic acid have recently been reported in the JOURNAL of the Association. The first, that of a man who drank by mistake a glass of a mixture containing between two and three drachms of carbolic acid. He immediately fell insensible and was convulsed. Eighteen minutes afterwards, when seen by Dr. Mosler, the extremities were cold, the pulse scarcely perceptible; the heart's action was irregular, the breathing stertorous; consciousness was lost, and he was in a state of intense trismus. After evacuating the stomach, finding consciousness did not return, Dr. Mosler, supposing that some of the carbolic acid had entered the blood and was acting on the brain, bled the man to the amount of a pint.

Consciousness then returned. The patient was dismissed cured on the eleventh day.

The second case is reported as one of "poisoning from the fumes of carbolic acid". When first seen by the surgeon, the patient was in violent convulsions with trismus, and blood passing from the mouth in consequence of the teeth having wounded the tongue. He was placed in a warm bath, and in forty minutes the convulsions ceased. Convalescence was uninterrupted.

The patient under my care had taken probably an ounce of the undiluted acid. He became insensible about five minutes afterwards. There was no trismus, no convulsions, no stertor, but complete paralysis of all the voluntary muscles. I did not employ venesection, and the *post mortem* examination showed it would have been useless. And, further, I cannot comprehend in what manner venesection can counteract the effects of poisoned blood acting on the brain.

A CASE OF FEMORAL ANEURISM CLOSELY SIMULATING MALIGNANT DISEASE.

By GEORGE ALEXANDER GLOAG, L.K.Q.C.P., Bristol.

EDWARD P., aged 37, of a cachectic appearance, by occupation a pedlar, came under my care on November 5th, 1872, for the treatment of a tumour which occupied the anterior and inner region of the upper half of the right thigh. It was bounded above by Poupart's ligament, and had a circumference of $27\frac{1}{2}$ inches at its centre, the circumference of the sound limb at the same part being 16 inches. The tumour had a tense elastic feel and a shiny appearance, the superficial veins were enlarged and prominent, and the disease appeared to have involved all the structures of the limb. No *bruit* or pulsation could at any time be discovered in it. It gradually increased in size, and on December 20th had attained a circumference of 30 inches. The patient suffered intense pain, which was of a paroxysmal character, and required large doses of morphia or chloral for its relief. During severe pain I found that the tumour became harder, and that it increased in circumference to the extent of half an inch, and again subsided as the pain diminished to its former dimension. The limb was œdematous below the tumour, the result of venous obstruction. Although there were no glandular enlargements nor symptoms of secondary deposit, the cachectic appearance of the patient, the intense pain he suffered, and the rapid growth of the tumour, together with the total absence of pulsation or stethoscopic sound, induced me to believe the case to be one of medullary cancer, for which operative interference was unjustifiable. About six months previously to the time when the patient came under my notice, a tumour, about the size of a small egg, appeared on the upper and inner side of the thigh, accompanied with such severe pain that the patient was unable to follow his occupation, and was obliged to remain in bed. It grew rapidly from week to week, and the pain increased in proportion. A month or so after the appearance of the tumour, he obtained admission into the Bristol General Hospital. He remained there six weeks, during which time the tumour increased considerably in size, and was then discharged as an incurable case, the tumour being considered of a malignant nature. The patient remained at home about a month, at the termination of which time he was admitted a patient of the Bristol Royal Infirmary. His case being considered one for which nothing could be done, he was removed to his own home in about a fortnight. The patient had usually enjoyed good health, and his family history was good; but he had suffered from constitutional syphilis, and was discharged from the army in consequence of defective vision, the result of specific iritis. There were no evidences of heart-disease.

The patient died on December 28th, and on the following day Dr. Norton, Mr. Dobson, and myself made an examination of the body. The knee was bent, the thigh everted, and free movement existed at the hip-joint. An incision was made from the anterior superior spine of the ilium to the symphysis pubis, and another from the centre of Poupart's ligament down the front of the thigh. The latter was afterwards prolonged across the inner aspect of the knee, so as to expose the upper part of the popliteal space. On making the longitudinal incision, the parts gaped widely, and a thin layer of muscular tissue was exposed. On dividing this the length of the thigh, a mass of clot presenting various shades of colour appeared. Some of it was partly laminated and of a firm consistence, and needed the assistance of the knife for its removal. Nearly fourteen pounds weight of clot was turned out of the cavity, which was bounded anteriorly and to its sides by the skin, a small amount of subcutaneous fat, and a thin layer of muscular tissue; above by Poupart's ligament; below by the quadriceps extensor tendon; and behind by the eroded femur,

* Read before the South Wales and Monmouthshire Branch.

the adductors, and vastus externus muscles, in a partially disorganised state. The integument showed no symptoms of thinning in any part. The anterior crural nerve was found deeply imbedded in the clot, and was the only recognisable structure in the tumour. An incision was made from the middle of Poupart's ligament to the umbilicus, and thence to the sternum. The kidneys were in a healthy condition; the liver was enlarged, and showed appearances of waxy degeneration. On cutting across the aorta, and dissecting the external iliac artery downwards, it was found that an aneurism existed on the right superficial femoral artery. The femoral artery was then dissected upwards from the popliteal, as well as possible, to the tumour, and the mass removed for preservation. It consisted of a quantity of laminated fibrine, situated in Scarpa's triangle, where it appears to have burst, and this, I believe, took place before the patient applied for medical relief, at which time the tumour was localised, and about the size of two fists. The epigastric and circumflex ilii arteries were considerably enlarged. The upper part of the femoral artery leading into the tumour was pervious; that immediately below it and leading from it was impervious.

This case of diffused aneurism is, I think, worthy of record, on account of the close resemblance of its symptoms to those of malignant disease. If the nature of the tumour had been discovered during its early stage, an effort to cure it might perhaps have been made. This case clearly shows that cachexia, rapid growth, and severe pain must not be accepted as sufficient evidences of cancer. In reviewing the history of this case, there are some points which should have suggested its non-malignant character; namely, the absence of lymphatic enlargements, or symptoms of secondary deposit, and of any tendency to ulceration of the skin over the tumour; the favourable family history; and the fact that the tumour was definitely bounded superiorly by Poupart's ligament.

ON SOME CASES OF IDIOPATHIC NEURITIS.

By JOHN M'CREA, M.A., M.D.,

Senior Medical Officer to the Belfast Dispensary.

THE recorded cases in which distinct evidence of idiopathic neuritis of spinal nerves has been obtained are not numerous. Among them are three or four cases of herpes, described by Bärensprung and others, in which, death having occurred from other causes, *post mortem* examination revealed serious lesions of the nerves supplying the herpetic parts. Bärensprung's theory is that the herpes depends on irritation of trophic fibres which start from the ganglia on the posterior roots. He does not, however, consider that grave disorganisation of the nerves is necessary to explain all his cases, for he cites some as examples of the results of peripheral irritation. Similarly, Dr. Lockhart Clarke does not look on neuritis as the only nerve-disorder which causes herpetic eruptions, for he speaks of these as resulting from neuritis and neuralgia. And, indeed, the general retention of the terms, herpes zoster and unilateral herpes, shews that no very settled opinion is held as to the nature of the change in the nerve. I have endeavoured to gain some information on this point, by examining carefully some cases of the disease in a more advanced stage than that in which they ordinarily come under notice, that is to say, after the healing of the skin. Many observers have remarked the occasional occurrence of annoying sequelæ, such as numbness, tingling, pain, hyperæsthesia, and anæsthesia. But I think a mistake has been committed in considering these as occasional, passing, and non-essential. In all advanced cases that I have seen local nervous derangement, more especially anæsthesia, has supervened at some period and persisted.

I have seen during the last two years twenty cases of herpes following the course of nerves. Of these, one is still recent; one is in a child from whom I have not been able to obtain satisfactory information; and seven others I have lost sight of and been unable to trace. The eleven remaining I have been about to examine in their advanced stages. In none has the cutaneous affection appeared to be the beginning, the end, or the most important part of the morbid process. Herpes zoster and unilateral herpes are quite inadequate expressions, not to speak of the special inaccuracy conveyed in the terms "zoster" and "unilateral." The necessity for a new name for the disease becomes more evident from the consideration that herpes is not the only cutaneous phenomenon known to be associated with local nerve-affections; for lichen, acne, pemphigus, urticaria, and, as I have myself seen, erythema, have at times a similar association.

After the healing of the skin, the general condition of the part may be described as presenting hyperæmia, pigmentation, and hyperæsthesia. Then the vascularity diminishes, there are depigmentation and anæ-

thesia. These two sets of conditions may be found mixed in different proportions according to the stage which the disease has reached.

CASE I.—A woman, aged 30, was first seen on December 18, 1872. A zone of skin entirely destitute of pigment extended around the body immediately above the umbilicus. It completely surrounded the body, except a handbreadth at the spine. The upper and lower edges of the zone, which were almost straight lines, were not darker than the neighbouring healthy skin, as sometimes is the case in leucoderma. Every part of the zone was completely insensible to pricking and pinching. She said that seven years ago she was seized with an acute pain in this region, that a "red flush" appeared on the site of the present whiteness. That then an eruption "like pox" came all over it, that this eruption never extended farther, and that it faded away slowly, and was followed by anæsthesia and blanching.

CASE II.—A girl, aged 17, was seen on December 14, 1872, for amenorrhœa. I noticed on the right side of the chest and below the level of the axilla a characteristic series of herpetic marks, extending from the spine to the middle line in front. Some of these were pits, but most were merely blanched spots. The point of a pin when pressed with considerable force excited almost no sensation in some of them, and in all the sensibility was far below that of the surrounding skin. The disease commenced six years ago, when she was told by her medical attendant that she had "shingles." She had quite recently complained of numbness of the right leg. A year before the appearance of the eruption I treated her for chorea of the right side. Mr. Hutchinson, in the second series of cases of shingles attributed by him to arsenic (*Medical Times and Gazette*, 1869, vol. i, case 14), mentions, without, however, tracing any connection between the two diseases, an instance in which chorea and shingles occurred in the same person. Dr. Borelli, of Turin (quoted in Dr. Brown-Séquard's article in Holmes's *System of Surgery*), records a case in which neuroma and chorea were intimately associated. I saw lately a case of dental neuralgia in which each recurrence of the neuralgic fit (it was quotidian) was accompanied by violent involuntary rhythmical movements of the arm and leg of one side. Hence the connection hinted at above between the shingles and the chorea is not so fanciful as at first sight it looks.

CASE III.—A boy, aged 8, was brought to the dispensary on April 22, 1872. The right side of his neck was covered with an eruption of herpes. The cutaneous branches of the upper cervical nerves, especially the superficialis colli, the auricularis magnus, the occipitalis minor, the acromial and clavicular branches, had their course and distribution sketched out by ramifying groups of vesicles. On December 23, I examined him. A multitude of white marks were seen on the site of the herpes. Portions of the original eruption have left no vestiges, and no nervous grouping can now be traced. Some of the spots are quite insensitive; all are much more so than the surrounding skin. This is a comparatively recent case, in which it would be rash to infer that the changes are complete.

CASE IV.—A girl, aged 9, came to the dispensary with a zonular herpes, on May 30, 1872. The eruption, preceded by a few hours of severe pain, had appeared the day before. It surrounded the body, except a hand-breadth at the middle line in front. The lower edge of the zone was two fingers'-breadth above the umbilicus. In the hand-breadth above its upper edge, on the right side, was a half zone of white spots evidently representing an old herpes. I again examined the child on January 2, 1873. In the white spots of the old herpes, sensation was very much deadened. The new one was red and very sensitive, except a few spots here and there over it, which were less sensitive than natural.

CASE V.—A man, aged 60, was first seen on June 7, 1872. A severe pain in the right side ushered in a dorso-intercostal herpes of the same side. On December 26, the only traces left of the eruption were a few white spots, and these were quite insensible. He had considerable pain in a zone immediately above the herpes.

CASE VI.—A girl, aged 4, was seen on January 7, 1873. Her mother stated that eight months ago the child had had shingles. She had when I saw her a dark-coloured half zone, with irregular edges, passing round the body and slightly downwards from the spine to the sternum, crossing the inferior angle of the scapula, and passing below the nipple. The dark zone was thickly mottled with white spots. Some of them are pits, but the majority appeared only as patches of whitened skin. Although the point of a pin was firmly pressed against the white spots, the child never winced. When the pin was pressed with much less force on the healthy skin, the child instantly cried out. The dark skin was in several places unduly sensitive.

CASE VII.—A woman, aged 45, was seen on May 5, 1872. She had a right herpes commencing at the spine, passing round the body slightly downwards, below the mamma and on to the middle line

She has had uneasy sensations in the side ever since. She was again seen on December 24. The half zone showed extensive white spotting on the dark ground of her natural complexion. The insensibility of the spots was great everywhere, but more so in front.

CASE VIII.—A woman, aged 40, was first seen on October 7, 1872. After a night of severe pain there appeared a half-zone of herpes, reaching from the lower dorsal vertebræ, around the left side, downwards and forwards towards the umbilicus. There was sharp fever. On December 24, the eruption had faded, leaving a half-zone of marks, those in front white, those behind red. The white ones had lost sensation; the red ones were little different from the surrounding skin. Marked tenderness on deep pressure at the spinal end of the herpes persisted.

CASE IX.—A woman, aged 40, had been treated by me for syphilis, in the beginning of 1872. I again saw her in September. She then had a series of herpetic crusts commencing on the right side near the lower lumbar spines, passing across the right iliac crest in a slightly curved direction to the great trochanter, and throwing out a few crusts even below the trochanter. There were also a few crusts above and in front of the anterior superior spine of the ilium, and a few nearer the middle line as well as on a lower level than the last. It was undoubtedly unilateral herpes. At the same time there was incipient paralysis of the right lower extremity, and numbness of the left. There was acute pain referred to the external iliac region; this I considered to be the herpetic pain. Iodide of potassium was prescribed. I then lost sight of her for a considerable time. I afterwards found that she had become unable to attend the dispensary. After a difficult search for her, she came to me on January 16. I found that after leaving me she had first almost completely lost the powers of sensation and motion in the lower extremities, and that then under the use of iodide of potassium she had improved. At the last-mentioned date, there was no general anæsthesia or paralysis of the limbs. The herpes had left much fewer traces than usual. These were whitish spots that could barely be distinguished from the surrounding skin. In a few of these sensibility was dull, but in the majority I could detect no difference from the sensibility of the region. Points of interest in this case are that the herpes was associated with a grave neurosis; that it appeared not on the side of dulled sensation but on that of acute pain; and that it underwent a much more favourable course than usual, this result happening, be it remarked, in a syphilitic patient taking iodide of potassium.

CASE X.—A boy, aged 13, was seen on January 13, 1873. Two years ago he had a unilateral lumbar herpes, preceded by severe pain. The affected skin remained red for a long time. At the date of examination, the white marks were large and numerous beyond the common. The insensibility was greatest in the anterior spots, and existed in many places between the spots. There was no spinal tenderness.

CASE XI.—A man, aged 60, was first seen for herpetic abscess in November last. He had been jaundiced for a year. He called my attention to a loss of power in the left upper arm. He could flex the elbow, and carry the arm across the chest; he could not raise the arm from the side, draw it backwards, or extend the elbow. The muscles of the shoulder and arm were much wasted, especially the deltoid. There was a severe pain referred to the point of the shoulder. An almost linear herpes reached from the interspinous space below the vertebra prominens, across the spine of the left scapula. It continued in the same linear form down the back of the arm and the outer side of the forearm to the wrist. On January 18, the eruption had almost disappeared. The wasting of the arm had progressed. There was hardly a vestige of the deltoid left. The general malnutrition of the arm made it difficult to obtain evidence as to whether the anæsthesia in the track of the herpes was greater than in the surrounding skin. At no period in the case did the patient's keeping his eyes fixed on the arm facilitate movement. Nor did faradisation appear to have the least effect on the deltoid or triceps. This case runs counter to Bärensprung's statement that herpes is not associated with paralysis.

On the foregoing cases I may make the following remarks.

1. In all there was evidence of disorganisation of the nerves of the affected part.
2. In some cases there was an association with general nervous disorders. In connection with this, it is curious to remark, though the observation may not have much scientific value, that Schwartz (*Diss. de Zona Serpiginosa*, Halæ 1745, p. 7) says he saw in three instances herpes zoster follow violent fits of passion, and that Plenck affirms that he saw it occur twice after violent anger and a copious potation of beer (*De Morb. Cut.*, p. 28).
3. There may occur paralysis of the muscles supplied by the same nerve-trunk as that which supplies the herpetic part.

Those who wish to study the literature of the subject will find full

information in Dr. Lockhart Clarke's article on Diseases and Injuries of Nerves in Holmes's *System of Surgery*, and in the recently published edition of Dr. Tilbury Fox's work on Skin-Diseases.

CLINICAL MEMORANDA.

REMARKS ON AN UNUSUAL COMPLICATION OF PARACENTESIS ABDOMINIS.

Dr. HUNTER of Matlock asks to have some light thrown on a case in which an unusual impediment occurred in the escape of the fluid after tapping an ascitic belly. A somewhat similar circumstance occurring in my practice a few months ago, led me to seek an explanation of it; and such illumination as I have been able to obtain, I beg to place at his service. My case was that of a child, seven years of age, suffering from a severe form of mitral regurgitant disease, with congestive bronchitis, the result of an attack of scarlet fever. At the time tapping was performed, the child was suffering from very distressing dyspnoea, contributed to, to a great extent, by pressure on the diaphragm from a considerable dropsy of the peritoneal cavity. It was to relieve this dyspnoea, and at the urgent desire of the parents, that the operation was performed. Mr. Duncan, our house-surgeon at King's College Hospital, was kind enough to perform paracentesis for me, in the usual way, through the linea alba, about three inches above the pubis. On the withdrawal of the trocar, we were much disappointed at seeing only a little pinkish serosity drain away through the tube; and on passing a probe along the cannula, a spurt of a few ounces of fluid took place, and there was again a block. On withdrawing the cannula, a portion of toughish membrane protruded through the opening; this we drew out and cut away, and again introduced the trocar and cannula. Several times we had to do this, and with much difficulty drew off about three pints of fluid, to the great relief of the dyspnoea, but still leaving a considerable quantity of fluid in the abdominal cavity. The fluid was a deep pink, and contained much more of the solid constituents of blood than is common in dropsical effusions. I imagine that, in a case of this kind, there is a deposit of loose and toughish layers or curtains of fibrinous material on the inner surface of the abdominal wall, only slightly adherent to it; that the trocar and cannula, unless they are unusually long, simply push these layers before them, and when the trocar is withdrawn, there is just a slight escape of fluid, and then the orifice is blocked by layers of fibrinous membrane. In the course of my inquiries, I heard of a similar accident occurring in the practice of my friend, Dr. Bowles of Folkestone, who, with his usual skill and ingenuity, suggested an appliance which overcame the difficulty; this was the introduction through the cannula of a long wire, bent like a hair-pin (I am not sure it was not a hair-pin itself), which would, of course, push the fibrinous curtains away from the orifice of the cannula. Another expedient which occurred to me was the introduction of a small catheter-tube through the cannula, but we had nothing of the kind with us. I shall be careful to see that such a tube is at hand when I again advise paracentesis abdominis.

J. BURNEY YEO, M.B., M.R.C.P., Assistant-Physician to King's College and the Brompton Hospitals.

THERAPEUTIC MEMORANDA.

DIET IN HEALTH AND DISEASE.

A MOST important passage occurs in Dr. Radcliffe's valuable Lecture on Cerebral Exhaustion, in the JOURNAL for April 12th, where the author speaks of diet, and says, perhaps not unfairly, that in pushing full diet upon invalids we are apt unduly to exalt the nitrogenous elements, and to neglect the hydrocarbonaceous. Indeed, in his reasoning, if not in his practice, he reverses the matter, and exalts the hydrocarbons at the expense of the nitrogenous; for he says, among other things, the strapping gillie, fed on oatmeal and a little milk, will walk his master down on a hard day with perfect ease, etc. Now my only reason for venturing to question this is, that for some years I have been hard at work upon this very question of dietary in training, and on the other conditions of hard exercise; and I think, although the old trainers went to absurd and irrational extremes in forcing meat diet, that nevertheless, a diet rich in nitrogen is of immense value to those engaged in rapid and severe muscular work. The easy decomposition, or what I may even refer to as the explosive nature of nitrogenous compounds, may render them peculiarly fitted to quick work. For monotonous labour, such say as

the inferior kinds of agricultural work, much nitrogen may not be needed. But it is not on theoretical grounds that I would oppose Dr. Radcliffe's views. I disbelieve in his gillie to a great extent, or if he speak from personal observation, I should rather suggest that some fallacy underlies his observations. I have walked, and my friends have walked, with shepherds, gillies, and local guides, at home and abroad, for many years, and under all sorts of circumstances, and my experience is, that a well-made and well-fed Englishman, in fair training, walks a gillie to pieces, when said gillie is working on a "little milk," only supplemented by hydrocarbons. Remember, the gillie is as hard as a nail, and in perfect training, and he is especially skilled in treading his own ground; but with all that, I repeat, an English gentleman, if active, and fed as gentlemen are, can beat him. But for how long? for a week, say, at farthest; probably only for three or four days, for the gillie soon brings his extra wages to bear, and feeds better; moreover, he has the remains of the pigeon pie, the legs of the ducks, and the other disjointed members of lunch, every day, and the gentleman soon finds, that although he also gains in training, the gillie gains at a far more rapid rate, and at the week's end the gentleman is nowhere.

May I take this opportunity of saying, that time and place are often neglected in taking food? A man will walk fourteen or twenty hours in Switzerland, on scrappy food, and then dine or sup heavily, at eight o'clock, or later in the evening, taking, perhaps, a lot of light wine also. Let him, instead, take a large basin of really good bouillon, and then tumble into bed. The broth will gently flow into his veins at no further cost to his own forces, and he will be astonished to find that he awakes betimes in the morning, fresh, hungry, and "game" for another day.

T. CLIFFORD ALLEBUTT, M.D., Leeds.

PAPER AS A DRESSING FOR GRANULATING WOUNDS.

HAVING seen paper employed as a surgical dressing in several cases lately, it occurred to me, that some of the members of the Association, having large parish or club practices, might find it a cheap and useful substitute for lint. The best paper for the purpose is the unglazed and unbleached (whitey-brown), such as is used by drapers and others for wrapping up goods. It should first be greased, and then may be applied in strips, in the same way as lint. Of course it becomes somewhat softened by the discharge from the wound; but it forms an adequate protection for at least twenty-four hours. It does not stick like rag, and is very comfortable. I have under my care, at the present time, a deep and extensive burn of the back and arm, which has been dressed, almost from the first, with zinc ointment spread on paper, and it is now rapidly cicatrising. I lay no claim to originality, as I have seen paper used in a somewhat similar manner at the Leamington Hospital for Diseases of the Skin, five years ago.

GEORGE BIRT, M.B.Lond.

PROPYLAMINE IN ACUTE RHEUMATISM.

THE therapeutic action of propylamine being still *sub judice*, perhaps the relation of a case in which it seemed to be of use may prove sufficiently interesting for insertion in your valuable JOURNAL. I was requested on March 31st to visit a young woman, unmarried, aged 20, whom, on my arrival, I found labouring under a well marked attack of acute rheumatism. It had commenced a couple of days previously in the right ankle, from which it had now partially disappeared, only, however, to settle in the right knee, which was swollen, red, and exquisitely tender. She had profuse perspiration; pulse 120; tongue coated, etc. I ordered her a mixture consisting of propylamine, $\text{m} 100$; essence of cloves, $\text{m} 1xx$; almond emulsion, $\mathfrak{z}v$; water to $\mathfrak{z}x$. Of this she was to take one ounce thrice daily. On visiting her next day, she expressed herself as decidedly relieved; pain and tenderness of joints greatly diminished; had slept during greater part of night, which she ascribed to the medicine, as she had slept scarcely any during the first two nights. On April 2nd, there was a still more decided improvement. On April 4th, she informed me that she had had no pain whatever from the previous evening, and only complained of being weak. On the 6th, there had been no return of pain since the 3rd. About six years ago, she was laid up with an attack of acute rheumatism for five weeks. While she was taking the propylamine, the perspiration diminished; but, coincidentally with its disappearance, there was an immense increase in the urinary deposit.

ROBERT GRAY, L.K. & Q.C.P.I., Medical Officer of Armagh Dispensary District.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

CASES UNDER THE CARE OF DR. MURCHISON.

[Continued from page 560 of last number.]

Aortic Regurgitation of Twenty-five Years' Duration: no Constitutional Symptoms.—This patient was a stout, well built man, aged 42. He was an inmate of the old St. Thomas's Hospital sixteen years ago, and it was then noted on his bed-card that he was the subject of marked aortic regurgitation. Ten years before that, he had been laid up with a fever, had pain in his joints, and an attack of fainting, for which leeches were applied over the sternum, the marks of which were still visible; so that there is every probability that he had aortic incompetency for twenty-six years. He had a loud diastolic murmur at the base of the heart, and the characteristic "Corrigan" pulse; yet he had not only been able to follow the laborious trade of a lithographic pressman, constantly working a heavy press-lever and lifting weights, but walked regularly eight miles a day to and from his work, and occasionally for pleasure thirty or forty miles a day without the least inconvenience. Last winter he unfortunately got a slight attack of bronchitis, followed by severe lumbago, which pulled him down somewhat; but when we saw him, he was convalescent and about to return to his business. There was a moderate amount of cardiac hypertrophy.

Uræmia with Scanty Uresis Treated with Milk.—The patient, a middle-aged woman, had suffered for six months from renal dropsy, and had now apparently large white kidney. She had been admitted on January 25th with anasarca, hydrothorax, ascites, and extreme anæmia. On several occasions, she became the subject of almost complete suppression of urine. The urgent symptoms were relieved by hot air-baths and dry cupping to the loins, but still the dropsy was not greatly diminished. Purgatives, diuretics, diaphoretics, and latterly liquor ferri pernitrat in decoction of broom-tops, were prescribed, but with little effect. She had also been allowed a small quantity of gin. The urine was always rather scanty—never amounting to two pints in the twenty-four hours, and it always contained abundant blood and fat casts with much albumen. The last few days the patient had been given four pints of milk daily, and all her medicine and other food had been stopped. The quantity of urine since passed had been quite as great as before, and the urine had assumed a clearer aspect, although it still presented a copious deposit.

Contracted Kidneys with painful Arterial Pulsation.—The subject of this affection was a woman, aged 55, who had been admitted for dyspnoea on exertion, palpitation, and hypertrophied left ventricle, with occasional slight albuminuria, but no trace of dropsy. The urine was pale and of low specific gravity, and usually exceeded three pints in the day. There was a history of acute rheumatism, but no murmur. When admitted, she suffered from severe pain in the left eye, and the same side of the head, which was afterwards found to be due to glaucoma of the left eye; the sight of the right eye had been lost some years previously from the same affection. She declined any operative interference to relieve her left eye. The chief cause of her suffering now was, however, a constant pulsation along the arteries. Digitalis internally and a plaster of belladonna to the præcordia had relieved the cardiac pulsation, but the arterial pulsation remained as before. To complete her long list of ailments, her limbs were now the seat of numerous erythematous patches.

With regard to the relief of the pain in the eye and head, Dr. Murchison remarked that the presence of albuminuria influenced in one most important respect the treatment which might be adopted. For a patient the subject of contracted kidney, as she evidently was, it would be in the highest degree injurious, and even dangerous, to give opium. It was the first remedy that would naturally be thought of, but it was about the last that should be given. The patient had, however, derived great benefit from chloral.

ST. MARY'S HOSPITAL.

OPERATIONS, WEDNESDAY, APRIL 30TH.

Chopart's Operation.—Mr. James Lane removed part of a boy's foot by Chopart's operation. The wheel of a truck on the Great Western Railway had gone over it a few hours before. All the toes were crushed; the skin on the dorsum of the foot was much bruised, and

that of the sole torn away from the plantar fascia to a considerable extent. Owing to the damaged state of the flap from the sole, Mr. Lane was obliged to perform the mid-tarsal operation, instead of amputating through the tarso-metatarsal articulations. He tied the bleeding vessels with carbolised catgut, and used the same material for the sutures. After the stump had been dressed with lint, Mr. Lane banded the leg to prevent, as far as possible, the dragging on the heel by the muscles of the calf, which commonly occurs after these operations.

Malignant Tumour in the Perinæum of a Child Twenty-two Months Old.—Among the other cases operated on, one brought forward by Mr. Edmund Owen was very interesting from its rarity. Though cancer is not very rare in young children, it is the internal organs, especially the kidneys, which are most often affected; and it would certainly be the last thing thought of in diagnosing the nature of an external tumour on an infant. The patient was a tolerably healthy-looking boy, a year and ten months old. His mother stated that, about three months before, she first noticed a nodule about the size of a pea under the skin of the perinæum, just to the left of the raphe. When the child was first brought to the hospital two months subsequently, the tumour was about the size of a small filbert; it was firm, distinctly lobulated, freely movable under the skin, and not particularly tender. Both testicles were in place. While under observation, the tumour grew rapidly; and at the time of operation was quite as large as a pigeon's egg, and the skin over it was becoming discoloured and adherent. Mr. Owen stated that at first he had thought it to be fatty, or possibly fibrous; but owing to its rapid increase in size during the last ten days, he was then more doubtful of its nature; it had trebled in size in three weeks. After removal, it was carefully examined, and proved to be encephaloid. The child has since done well.

Anæsthetics.—Though ether and bichloride of methylene have been tried experimentally at this hospital, the Registrar and Chloroformist, Mr. S. Knott, has returned to the use of chloroform administered through Clover's apparatus.

WOLVERHAMPTON AND STAFFORDSHIRE HOSPITAL.

IMPASSABLE STRICTURE OF THE ŒSOPHAGUS: GASTROTOMY.

(Under the care of Dr. TOTHERICK, Physician to the Hospital, and Mr. VINCENT JACKSON, Senior Surgeon to the Hospital.)

JOSEPH DANES, aged 56, widower, was admitted December 5th, 1872, under the care of Dr. Totherick. He was by occupation a farm-labourer. His family history was good, and, so far as he knew, none of his relatives had died of cancer or phthisis. Personally, he had always (excepting his present illness) enjoyed uninterrupted health. He never contracted gonorrhœa nor syphilis, neither had he ever swallowed any caustic fluids. His habits had varied; occasionally he had drunk excessively of beer, but never of wine nor of spirits. Twelve months since he first perceived some difficulty in swallowing solids; they seemed to "stick in his chest." Then he would drink, and at last would feel the obstruction give way, and he would be able to take more. He was compelled to eat slowly; and, as the obstruction only gave way occasionally, he used to carry his food about and eat when he could. This condition of things went on until about a month previously to admission, when swallowing of food was impracticable, the masticated morsel being returned again into the mouth almost as taken, neither blood nor pus coming with it. He said that he had fallen away of late, and that he was only half the man he was. The patient, although of middle size, was a large framed man; but it was clearly evident, from the way in which his clothes hung upon him, that he had suffered rapid emaciation. His countenance and complexion were healthy, as were the cerebral, thoracic, and abdominal organs. The groins, penis, and body generally were free from cicatrices. His voice was good and strong. The secretions of the bowels and kidneys were healthy.

A small quantity of milk being swallowed, it was returned uncurded and untinged in three minutes; he fixed the obstruction as corresponding to a point situated upon a level with the centre of the sternum. The microscopic examination of the returned fluid yielded no pathological information. Upon inspecting the pharynx, nothing foreign was seen, and its thorough exploration by the right forefinger yielded a negative result. A middle-sized œsophageal bougie was carefully guided through the pharynx into the gullet and slowly pushed downward until it was arrested eight and a half inches from the free edge of the lower incisor teeth; when withdrawn, no discharge of any kind was visible upon its point. Smaller, and at last very small, bougies were used, but ineffectually, nothing even entering the stricture. The man was ordered to keep his bed, and to take nothing by the mouth excepting a little ice to suck, and to be nourished by enemata of beef-tea, milk, and egg.

December 10th. This treatment had been steadily maintained. His health and spirits kept up, but emaciation was advancing. Bougies were again used, but without any success. At his request, he was allowed to swallow a little milk or beef-tea occasionally.

December 14th. All the milk and beef-tea taken by the mouth had been returned. The stricture was still found to be impenetrable to bougies.

December 16th. In consultation, it was resolved by the majority that the stomach should be opened through the epigastrium.

December 21st. The patient having consented, gastrotomy was performed by Mr. Vincent Jackson at 3 P.M. After the patient had been etherised, an incision three inches long was made from the outer edge of the rectus muscle parallel with the margins of the ribs, but one inch internal to them. The structures were severally divided down to the peritoneum; and, as there was little or no bleeding, this membrane was slit up upon a director to the full length of the wound. The great omentum was at once apparent; this conducted the fingers to the stomach which, being seized, was drawn down and a ligature passed through its front wall. The external incision was now lengthened by cutting through the rectus abdominis for one inch. The stomach was opened over the thread, and the lips of the cut united to the edges of the skin by the quilled suture. Points of interrupted suture closed the skin-wound, which was covered by oiled lint and cotton wool, and the operation was then completed. The patient was ordered to be fed by nutritive enemata alone.

December 22nd, 9 A.M. He had had a restless night; and complained of abdominal pain and thirst. A considerable quantity of catarrhal secretion had escaped through the gastric fistula. Temperature, 102.4; pulse, 90; respirations, 24. He had passed twelve ounces of urine. At 10 P.M., temperature, 101; pulse, 100; respirations, 28. He had passed six ounces of urine.

December 23rd, 9 A.M. He had a very restless night. The thirst was increased. Tongue dry. Peritonitis was established. Temperature, 101.6; pulse, 124; respirations, 32. He passed eleven ounces of urine. At 11 A.M., in consultation with Dr. Totherick, it was agreed, as the stomach appeared united to the edges of the skin-wound, to commence feeding through its fistulous opening. It was directed that two ounces of milk and two drachms of brandy should be administered every three hours by an India-rubber bottle. The enemata were continued. At 11 P.M. the patient was sinking.

December 24th, 8 A.M. He died, fifty-six hours after the performance of gastrotomy.

Post mortem examination twelve hours after death. The organs of the various cavities were healthy. The œsophagus, five inches from the cricoid cartilage, was seen to be bulged for the distance of two inches; to the feel, this portion was indurated and thickened; there was no pouching of the gullet above it. On being cut into from below and behind, the stricture was found to be tortuous; the mucous membrane dark coloured, puckered, and contracted, as though formed of cicatricial tissue; there was no ulceration, nor lesion of tissue. The stricture was formed of fibrous tissue, the contraction of the œsophagus being secondary to ulcerative action at some time or other.

REMARKS BY MR. JACKSON.—Gastrotomy is an operation of somewhat ancient date; for it appears to have been first practised in 1635, for the removal of a knife, six and a half inches long, which had been retained about six weeks; this operation, as well as six others which at various periods followed it, and all of them practised for the removal of foreign bodies (knives, a silver fork, a tea-spoon, and a bar of lead) was successful.

Sédillot, and later on, in our own country, Dr. Habershon, saw no reason why in impenetrable intracœsophageal obstructions an attempt should not be made to accomplish the formation of a gastric fistula through which the patient might receive food and a renewal of life. In 1849 Sédillot performed his first operation, repeating it again in 1853, but both were unsuccessful.

Since the publication in Holmes's *System of Surgery* of Mr. Durham's table of nine cases, there have been in England six additional ones, viz., by Bryant, Le Gros Clark, Mac Cormac, T. Smith, F. Mason, and myself, making the total number of operations fifteen, every one of which has succumbed. The longest liver after operation was a patient of Mr. Sydney Jones, who survived till the thirteenth day, dying, it is said, of broncho-pneumonia.

Is gastrotomy for impassable obstruction of the œsophagus a justifiable operation? is a question which may well be asked. For my own part, I do not think at present the operation has been fairly dealt with. It has generally been resorted to as a *dernier ressort*, a last chance, a forlorn hope. The physician or practitioner after exhausting, in trying the principles and practice of physic, all his skill, asks the surgeon to give the *coup de grace* by opening the stomach and stitching it to

the abdominal wall. If the operation is ever to be successful, it must be undertaken before the patient has one foot in the grave; when his powers are not weakened by emaciation consequent upon starvation, when he is, humanly speaking, not likely to sink at once from exhaustion, and not in a condition favourable to chest complications.

In analysing the fifteen gastrotomies, I find the cause of death to be in seven, peritonitis; in six, exhaustion; in one, broncho-pneumonia; and in one "the operation had nothing to do with the death;" so that more than half died of causes quite independent of peritoneal inflammation, a condition of hope that a more careful selection of cases, and an earlier submission to the operation, may in the future give us success, and so the efforts of the enterprising surgeon may not go unrewarded.

Yet, there can be no doubt in this operation the surgeon starts heavily weighted, for he has not, as in ovariectomy, to deal with a peritoneum which by contact and friction has become altered, thickened, accustomed to pressure, and with its sensibility blunted, but with a membrane in the full glow, as it were, of its pristine sensitiveness ready to burst forth into an inflammatory blaze, which ceases not to kindle until it is put out by death.

The problem is not yet solved, for the contest is still going on. Pathology up to now has conquered surgery; and we have yet to learn whether surgery can overpower pathology.

REVIEWS AND NOTICES.

PRINCIPLES OF ANIMAL MECHANICS. By the REV. SAMUEL HAUGHTON, M.D. Dubl., D.C.L. Oxon., F.R.S., Fellow of Trinity College, Dublin. London: Longmans and Co. 1873.

THE critic who attempted to review this remarkable book would require to possess various knowledge such as we cannot pretend to have. It is a monument of varied erudition and research, full of original results which enrich science and do honour to English physiology. Briefly, we may state, this book is an attempt to complete the work commenced by Borelli in his book *De Motu Animalium* (1680), and to reduce the actions of the muscles and limbs of animals to strict mathematical and mechanical principles.

The book contains a brief description of the nature of muscular fibres and of their contraction; and a discussion of the statical and dynamical work done by muscles, followed by an estimate of muscular force in absolute measure per unit of cross section. This is followed by a digression on the comparative anatomy of the tendons of the flexor muscles in the hand and foot and their mechanical uses; and by an investigation of the mechanical work done by the human heart, and by the muscles employed in parturition.

The principal section of the book contains the classification of muscles, according to the arrangement of their fibres; and the mathematical discussion of their various modes of doing work, illustrated by numerous examples from the comparative anatomy of the muscles of vertebrate animals. This discussion leads to many interesting results, among which may be mentioned the theory of ellipsoidal muscles, the axes of maximum instability and minimum stability in the wings of birds, and the theory of quadrilateral and skew muscles, illustrated by an application of Ptolemy's theorem, and the proof that skew muscles are "supplemental contrivances" to produce a line of force between two points outside the muscle, and already occupied by other structures.

Having fully discussed the classification of muscles and their mode of action, the author discusses the problem of the hip-joint in detail, and shows that the centre of the acetabulum is so placed as to allow each single muscle in the combination to do the maximum of work. This and similar facts are considered by the author as proofs of his teleological postulate, which is as follows.

"The Framer of the Universe has constructed all muscles on the principle that each shall perform the maximum of work possible for it under the given external conditions."

The book concludes with three applications of the general principles of animal mechanics, viz.: 1. The theory of muscular type; 2. The arrangement of the fibres of the heart; 3. Economic applications of the laws of muscular action.

The theory of muscular types is illustrated by the dissections of many rare animals, including the Gorilla, Chimpanzee, "Master Mac-Grath", the great Carnivores, the Struthionidæ, Swimming and Flying animals, including some rare Bats.

The arrangement of the fibres of the heart forms a distinct problem; and it is shown to be such as to produce the maximum of work for a given weight of muscle.

The economic applications of the science of animal mechanics are summed up in four laws, viz.: 1. Borelli's Laws; 2. Law of Constancy of Work; 3. Law of Fatigue; 4. Law of Refreshment. These laws are demonstrated from the experiments of Borelli, Stanley Jevons, Nipher, and those made by the author with the assistance of Professor Macalister and other friends.

EXERCISE AND TRAINING: THEIR EFFECTS UPON HEALTH. By R. J. LEE, M.D. London: Smith, Elder, and Co.

THE absence of any scientific work on exercise and training for the guidance of athletes is to us no matter of surprise. Experience has built up a system of training which, although in some respects, so far as diet is concerned, open to improvement by the application of scientific knowledge, is on the whole probably much more correct than would be the programme recommended by the whole body of our savants in Council. When, however, we come to the effects of training and exercise on the health of the body, we are at a loss to point to a work which in any but the most meagre way deals with the question. The barrenness of medical literature on the subject is singular, and the imperfectness of our knowledge of the various questions involved was well exemplified at the recent discussion at the Clinical Society on Over-strain of the Heart and Aorta. In the small work before us Dr. LEE does not attempt to present exhaustively a scientific method of training, or to show in any detail the evil effects of exercise. He limits himself very shortly in the first chapter to the consideration of exercise physiologically considered and its practical benefits; he points out the general character of the injuries resulting from over-exertion, and avails himself in discussing the latter question of the experience of several of the most distinguished speakers at the discussion already referred to. In the second chapter he offers a few remarks on the mode of training, on diet, sleep, air, bathing, clothing, and on medical treatment. A general system for the guidance of those training is given at the end of the book. But it is to be understood that the author's programme is intended only "to suit five o'clock hall." Dr. Lee appears fully to represent that amusing character—the typical "Varsity" man—who is possessed of a definite and fixed idea that Oxford and Cambridge are the undisputed centres of the universe, for it is only on second thoughts that it occurs to him that any other men beyond these universities are in the habit of engaging in athletic pursuits. But, although Dr. Lee's book is thus particularly impregnated in some of the minor details with the requirements of athletes at Oxford and Cambridge, and the author is a little unsound in the application of hot and cold baths in training, he has succeeded in producing a very useful and interesting little work, which we can confidently recommend athletic men to peruse. He has collected in a general way many of the important and hitherto scattered physiological and pathological truths bearing on athletics, and has thus placed in our hands a very intelligible and useful guide, which forms, we hope, a preliminary to more exhaustive future works of a similar kind.

SELECTIONS FROM JOURNALS.

SURGERY.

LIGATURE OF THE MIDDLE MENINGEAL ARTERY.—Vogt, in an article in the *Deutsche Zeitschrift für Chirurgie* (1872, vol. ii), proposes, in cases where there are indications of wound of the middle meningeal artery, in the form of symptoms of cerebral compression coming on rapidly after injury of the part, to trephine over the course of the vessel and apply a ligature to it. Hüter has performed this operation in one case; but the man died in six hours.—*Centralblatt für die Med. Wissensch.*, April 26th.

INJECTION OF ALCOHOL INTO TUMOURS.—C. Schwalbe, who has already advocated the treatment of bronchocele by the injection of tincture of iodine and of alcohol into the areolar tissue, describes in Virchow's *Archiv*, vol. lvi, part 3, a case of lipoma successfully treated by the same plan. In the course of eleven weeks, he made eighteen injections of alcohol into the tumour. The result was, that it became reduced to one-half of its original size, and hardened. Finally, Schwalbe induced suppuration by injecting caustic potash with the alcohol. On this, however, the patient ceased attendance. He concludes that atrophy of lipomata may be produced by cicatricial contraction, although more slowly, and perhaps less constantly, than in strumous swellings; and he suggests that, in cases of large and very vascular lipoma, the injection of alcohol may be employed as a means of reducing the size of the tumour and diminishing the risk of hæmorrhage.

when an operation is performed for its removal. The good effects that have been ascribed to the injection of ergotin in cases of aneurism and varix he believes to be due not so much to any action of the ergotin, as to the contraction of the cicatricial tissue resulting from the inflammation; and hence, he believes, alcohol is a more efficient remedy in such cases than ergotin.—*Wiener Medizin. Wochenschr.*, April 19th.

INJURY OF A NERVE: EPILEPSY.—In an account of the reserve-lazareth at Düsseldorf during the war in 1870-71, Dr. E. Graf gives the history of a case in which a gun-shot wound of the soft parts an inch and a half above the right elbow was followed by anæsthesia and paresis of the first three fingers. The wound was very painful, and the patient had symptoms of traumatic delirium (without fever) and formication in the injured limb. The cicatrix remained tender. Fourteen days after the healing of the wound, the patient suddenly had a paroxysm of epilepsy, and soon afterwards another. The attacks returned several times daily for several days, and were accompanied with violent pain passing from the cicatrix to the neck. The median nerve, which was involved in the cicatrix, was laid bare, and a very indurated portion, an inch and a half long, was excised. After this, the pain and epileptic attacks altogether and permanently ceased. The thumb had some power of motion, and its sensibility was not quite lost. The index and middle fingers remained without motion or sensation.—*Wiener Medizin. Wochenschrift*, April 19th.

TREATMENT OF PARAPHIMOSIS.—Dr. Mauriac, in an interesting monograph on Paraphimosis lately published, arrives at the following conclusions. 1. In cases of paraphimosis not complicated with simple chancres, reduction should always be attempted, whatever may be the degree and the period of the accident. 2. Division by a long median and superior incision is only indicated in cases of paraphimosis when the tightness of the constriction coincides with shortness of the prepuce. 4. When the paraphimosis is complicated with auto-inoculable chancres, any operation with a cutting instrument must be strictly avoided. If reduction be possible, it should only be performed after the virulence of the chancres has been destroyed by energetic caustics, such as the chloride of zinc. 4. Blenorrhagia, primitive syphilitic ulcerations, simple balanoposthitis, and mucous papules, do not contraindicate either reduction or operations with a cutting instrument. 5. If adhesions, gangrene, phlegmonous inflammation of the prepuce and sheath, phlebitis, abscesses, etc., render reduction impossible, paraphimosis must be left to its natural course—always taking care, by the aid of appropriate means, to combat the complications, to hasten the resolution of the preputial swelling, and the cicatrization of the solution of continuity produced by the strangulation. 6. In irreducible paraphimosis complicated with chancres, the treatment of the former should be delayed until the cure of the latter. 7. Paraphimosis unreduced almost always leaves behind it a subpreputial tumour, constituted by hypertrophy and chronic œdema of the lower half of the prepuce. 8. This tumour must be removed by means of an inferior demi-circumcision, to complete the superior demi-circumcision produced by the ulceration of the strangulation. 9. Complete circumcision, performed behind the glans, in irreducible paraphimosis, is only applicable to cases where the prepuce is very long. It should only be done in the phase of resolution and of the ulceration of the strangulation, and if the ulceration of the strangulation has only produced an insufficient superior demi-circumcision.

PLUGGING THE TRACHEA IN OPERATIONS ON THE MOUTH AND THROAT.—The method proposed by Dr. Trendelenburg, of opening the trachea and plugging the larynx in operations on the mouth and throat, has been followed in ten operations in Langenbeck's practice; viz., seven cases of resection of the upper jaw (one osteoplastic), one case of extirpation of a tumour from the mouth, one attempted extirpation of a tumour of the pharynx with osteoplastic resection of the lower jaw, and one case of laryngeal fissure. Three of the patients died. In one, there was suppuration of the areolar tissue of the neck along the course of the trachea and œsophagus; it originated at the operation-wound, and could not, Dr. Trendelenburg says, be attributed to the tracheotomy. The same occurred in a second case. In the third, there was suppurative inflammation of the connective tissue around the wound in the trachea, reaching to the mediastinum; and also purulent deposits in the neighbourhood of the operation-wound. In performing the operations, tracheotomy was performed during anæsthesia, immediately above the thyroid body; and then, the wound being held open, the patient was again anæsthetised through it, the cannula and plug were introduced, the latter inflated, and the principal operation performed. It is necessary to induce anæsthesia before the introduction of the plug, on account of the irritation to which this latter

proceeding gives rise; this is a disadvantage of the proceeding. The plug is removed when the patient has recovered from the anæsthesia; any blood that has collected above it is then coughed up. In a case where Trendelenburg's plan was employed prior to the removal of growths from the larynx, the operation was proceeded with without interruption; it was, however, necessary to close the glottis with a sponge to prevent the entrance of saliva. Trendelenburg advises that the opening in the trachea should not be closed immediately, but that a cannula should be worn for some time. He believes that thus the frequency of attempts at swallowing is diminished.—*Archiv für Klin. Chirurgie*, vol. xv; and *Wiener Med. Wochenschrift*, May 3rd.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

REFLEX ACTION PAD FOR UMBILICAL HERNIA.

This ingenious invention, which has been registered by Messrs. Matthews Brothers, of Portugal Street, Lincoln's Inn, attached to a suitable belt, is intended for the relief of umbilical hernia.* It consists of two distinct pads, the outer of which, in the shape of a ring, communicates with the inner. The outer pad, being both thicker and higher than the inner one, when *in situ*, reflects the action of the abdominal muscles on to the inner or middle pad by its compensating



action; the principal pressure being applied, on Mr. Wood's principle, round the margin of the opening, and the centre part being only slightly in action during any movement of the abdominal walls. A glance at the illustration will at once illustrate the important feature of the pad, the great advantage of which is that it is perfectly self-acting. The invention has been in use some little time, and has been found perfectly effective in cases of obesity complicated with umbilical rupture, as well as in simple and infantile cases. The pads are filled with water or air.

THE AUTOMATIC SUPPLY OF NITROUS OXIDE.

In the *Transactions of the Odontological Society of London*, an apparatus is described and figured, with tabulated results obtained by its employment. The ingenious inventor is Mr. Warwick Hele, of Carlisle. Mr. Palmer, in a previous number of the same journal, describes a method of administering nitrous oxide so as to produce what is equivalent to an atmosphere of the anæsthetic. Mr. Hele's improved system is founded upon that described by Mr. Palmer. The action and contrivance of the coal-gas governor is to convert pressure into steady and uniform delivery. The purpose of the nitrous oxide governor is to convert pressure into varying pressure, and to provide a rapid "shut off." The action of the governor is as follows. When the amount of gas driven over from the large gasometer exceeds the quantity inhaled by the patient, it raises the bell of the governor, and in so doing gradually closes and finally shuts the inlet tube by means of the sextant levers and stop-cock thereby revolved, thus preventing waste. But the quantity of gas within the bell of the governor being exhausted by the next inspiration, the way is again opened by the depression of the bell reversing the stop-cock. In this manner, the acts of respiration and the patient's breathing capacity regulate the supply according to need. As with the bag-regulator, so here; the patient has two free sources of supply, viz., the gas accumulated in the bell of the governor, and that flowing along the pipes. These supply the gas at a proper expansion, the core or head of the three-wayed tube being of such an increased diameter as to allow for this purpose. The automatic supply of nitrous oxide is thus insured. Additional details regarding the action and construction of the governor are

* The inventors reserve the right of adapting this pad for other forms of hernia, etc.

given. Mr. Hele further proposes to attach the governor, by means of a box-lute having a valve-trap, to bottles of compressed or liquid gas, to ensure the continuous escape of nitrous oxide from the bottle during inhalation at a required pressure; the valve-trap allowing, by its chest capacity, the storage of sufficient gas to convert speed into volume, and preventing the escape of too much gas.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 24TH, 1873.

THE INFECTIVE PRODUCT OF INFLAMMATION.

SINCE the researches of Pasteur, it has become a tolerably familiar idea that the putrefaction of dead animal matter is a process due to the agency of certain minute living organisms. More recent investigations have established many facts to show that the same agents of putrefaction are at work in certain well-known morbid processes within the living body; and we have even been brought to encounter the paradox that a living body may occasionally be more exposed to this putrefactive agency than the dead cadaver itself. In the campaign of the severe winter of 1870-71, says M. Chauveau, it was not unusual to see dead bodies on the field of battle untouched by the putrefactive process, while the wounded readily became the subjects of it. Corpses exposed to the intense cold, and having a temperature no higher than that of the surrounding medium, presented an unfavourable field for the activity of microzymes; while the bodies of the wounded, with their wounds as so many points of attack, afforded all the conditions for the support and multiplication of these organisms. That is, no doubt, a picture of the fancy so far as its form is concerned, but its substance is strictly in accordance with facts that might be put together from recent experiments. In so far as we understand the nature of putrid infection, we owe our knowledge to the well planned and diligently pursued researches of experimental pathologists; and if those researches have assumed the uninviting shape of a more or less incomplete natural history of the process, it cannot, at the same time, be too clearly kept in mind that the isolated efforts of observational pathologists could not readily have acquired for us the same array of facts nor the same foreshadowings of principles.

The question, as it at present stands, is one that, fortunately or unfortunately, cannot be presented in a nutshell. Not only are the researches necessarily of an incomplete character, dropping the thread of explanation at one point to take it up again at another, but it is an additional source of complexity that the various observers have approached the subject from different sides and have crossed each other in their lines of investigation. As being in a sense preliminary to, and illustrative of, the work done in this country, certain recent investigations of M. Chauveau of Lyons deserve to be noticed here. M. Chauveau undertakes the investigation of the "general physiology of virus," presenting, under this title, a study of the virulent inflammatory processes as compared with the processes of simple inflammation. The elements of this comparison are furnished by a series of experiments testing the septic properties of healthy pus, and by another series with putrid pus. It is found that healthy pus—the product of simple inflammation of a certain intensity—when injected in sufficient quantity into the subcutaneous cellular tissue, occasions the production of an abscess in four to six days, thus proving that non-putrid pus has the property of exciting inflammation in the connective tissue to which it is applied. By means of the usual variations of the experimental method, it is proved that this property of exciting inflammation resides in the corpuscular elements of the pus; that the irritant is not mechanical, but special, and inherent in the protoplasmic matter of the corpuscles; and, lastly, that the intensity of this property in the test-pus stands in a direct ratio to the intensity of the inflammation which produced it, and that its intensity is also increased in proportion to its age. The action of putrid pus—pus containing the elements proper of

the fluid, together with "the agents and products of putrefaction"—was tested in like manner as regards the effects on the subcutaneous connective tissue. The injection (in the horse) of a quantity of putrid pus equal to that used in the experiment with healthy pus, produces a phlegmonous swelling of enormous extent, intense fever, and death in a few days. The swelling was gangrenous, and accompanied with gelatiniform infiltration, thrombosis, etc., along with multiplication of the microzymes that were present in the putrid fluid, and the development of the products of putrefaction. By diminishing the quantity of pus injected, effects of less intensity were produced, through all degrees down to the simple abscess or transient swelling formerly found to be due to the action of healthy pus. M. Chauveau concludes that putrid pus is endowed with a property of inducing inflammation, not different from the property inherent in healthy pus, but several times more active. He finds also that, as in healthy pus, the property resides in the corpuscular elements, and that the superior intensity of putrid pus is due, to an extent not accurately determined, to those elements that distinguish it, in composition, from healthy pus, viz., the agents of putrefaction or microzymes.

It will thus appear that M. Chauveau, restricting the test-area of his experiments to the primary local results of infection, has arrived at conclusions that confirm or amplify, and in no case seriously oppose, the conclusions of Dr. Sanderson, who has made his study of infection partly with reference to the general fever, but chiefly as regards the secondary and remote results in the artificial production. The latter observer, aided in his recent researches by his accomplished *collaborateur* Dr. Klein, has dealt no less with the nature of the infective agent than with the course of the infection and the anatomical characters of the product. Starting in 1867 with the pregnant observation, that the same irritant might, under different conditions, produce either tuberculosis or pyæmia, he has reduced both those processes to the category of "secondary inflammations", and has presented us from time to time with studies of them from this point of view. The latest of these, of which our columns to-day present an abstract, will be found to be based on a very striking series of experiments on acute infective inflammation, showing, with more or less precision, the nature of the infective agent, and some of the conditions on which depend the various degrees of intensity in its action.

PUBLIC MEDICAL INTERESTS.

IN accordance with resolutions passed at the meeting of the Parliamentary Bills Committee of the Association on Friday last, communications have been addressed by the Chairman of the Committee to the Secretary of State for War, asking his attention to the views entertained as to the necessity for a modification of some of the obnoxious provisions of the late Army Medical Warrant; and to the President of the Local Government Board, asking him to provide that adequate remuneration shall be afforded to Poor-law medical officers for any services which they may be called upon to render under the Public Health Act, or under the Public Health Bill of Sir Charles Adderley which is now before Parliament, and which is receiving, it is understood, the support of the Government. Copies of petitions relating to the thirteenth clause of that Bill, printed in another column, in our report of the proceedings of the Committee, have been forwarded to the Branch Secretaries, who will no doubt assist in bringing the influence of the Branches to bear in favour of our Poor-law medical brethren.

The usefulness of the Association is never better demonstrated than when it is employed in uniting the great but scattered influence of the medical profession in combined efforts to defend the interests of the profession threatened by official or individual action, and in protecting the great public interests which are concerned in a faithful, just, and generous administration of the public medical services. The efforts of the Association have never failed to be successful in the end in such a cause. The army and navy medical officers remember with gratitude that the last warrant which materially advanced the pay and promo-

tion of officers of those services, was due to the energetic initiative of the Association, guided in the matter by Dr. Markham and Dr. Stewart. They were aided then generously and warmly by the co-operation of the Colleges of Physicians and Surgeons. We shall trust to receive the same aid, if necessary, now; and we shall not doubt of similar success.

THE GENERAL MEDICAL COUNCIL.

AT the last meeting of the Executive Committee of the General Medical Council, it was resolved to carry out arrangements for the visitation of the examinations conducted by the following bodies; viz., the Apothecaries' Society of London, the University of London, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, the University of Glasgow, the Royal College of Surgeons of Ireland, and the Queen's University in Ireland. It was left to a Subcommittee—consisting of Dr. Burrows, the President, Dr. Quain and Dr. Risdon Bennett, the Treasurers—to arrange a plan for the visitations prior to the next meeting of the Committee. Arrangements were made for the publication of the Addendum to the *British Pharmacopæia*. A contemporary, distinguished for its ingenuous simplicity and highmindedness, finds it strange that the Executive Committee did not arrange to visit these bodies secretly and without notice, lest they should cook their examinations beforehand, for the purpose of deceiving the visitors. It is impossible to praise too highly the acuteness of this delicate and high-minded suggestion.

THE King of Bavaria has contributed a thousand florins towards the erection of a monument in memory of Liebig. His Majesty's name is first in the list of subscribers.

SIR WILLIAM GULL has been presented by the Empress Eugenie with a costly gold box, bearing the Imperial cipher in diamonds, and containing a pair of sleeve-links worn by the late Emperor Napoleon.

PROFESSOR BENTLEY commences to-day his annual course of Practical Demonstrations on Plants and Systematic Botany, at the Royal Botanic Society's Gardens, Regent's Park.

THE Sultan of Turkey retains the exclusive services of a lady-physician—a New Hampshire lady, who graduated in Philadelphia—to attend the females and children of his household.

THE House of Commons resolved on Wednesday by a majority of 251 against 128 not to read a second time Mr. Fowler's Bill for repealing the Contagious Diseases Acts. The opponents of the Acts will, however, continue their mischievous agitation against them.

WE learn with pleasure that Dr. Arthur Gamgee, F.R.S., Lecturer on Physiology at Surgeons' Hall, Edinburgh, and Examiner in Forensic Medicine in the University of London, has been appointed Brackenbury Professor of Practical Physiology and Histology in Owen's College, Manchester.

WE learn with pleasure that during the forthcoming annual meeting of the British Medical Association, Lord Westminster and the Duke of Sutherland will arrange to allow the galleries of Grosvenor House and Stafford House to be thrown open to inspection. An excursion to to Cleifden, Lord Westminster's beautiful seat at Maidenhead, will also be arranged for the day after the meeting.

DR. POLLOCK, Dr. Symes Thompson, Dr. C. Theodore Williams, and Dr. R. Douglas Powell will deliver a course of lectures at the Hospital for Consumption, Brompton, on Wednesdays during the session. The first will be delivered by Dr. C. Theodore Williams on June 4th, the subject being Spasmodic Asthma. These lectures are free to practitioners and students.

THE Academy of Sciences in Cracow, founded by the Emperor of Austria, was opened on the 7th instant by the Archduke Karl Ludwig.

M. THIERS.

OUR special correspondent in Paris writes to us as follows:—Every one is talking of a conspiracy against the life of the President of the French Republic, which turns out to have been concocted by a madman, as has been proved by the medico-legal advisers to Government. The conspiracy would not have been the less dangerous to M. Thiers's life, but fortunately it was discovered before the poor wretch could put it into execution. M. Thiers is looking very fatigued and careworn—and who would not be, with a people like the French? but he is otherwise in excellent health.

THE VIENNA MEDICAL SOCIETY AND FOREIGN PRACTITIONERS.

AT a recent meeting of the Medical Society of Vienna, it was unanimously resolved, on the proposal of Dr. Jurié, as an expression of hospitable feeling, that foreign medical practitioners, visiting Vienna during the exhibition, should be invited to attend the meetings of the Society.

PROFESSOR OWEN.

A SURELY very tardy and not very dazzling recognition of the life-long services to science of our distinguished fellow-surgeon and anatomist, the illustrious Richard Owen, has been conferred by the Crown in the nomination of the Professor to the Civil Companionship of the Bath. The honour is one which is so freely bestowed for other classes of service of a much less distinguished character, that it can hardly be a matter for much congratulation to a man who has already achieved a permanent and world-wide reputation as one of the creators of a new science. It is, however, right to say that any shortcomings in recognition of such services must be set down to the practice of the State and the observance of an ancient tradition of our country and government, and not to slowness on the part of the Crown to recognise personal merit of the kind. The late Prince Consort and her Majesty the Queen have repeatedly honoured Professor Owen by marks of their personal esteem and friendship; and many years since, by a gracious act of personal kindness, Professor Owen was offered and accepted a residence in the gift of the Crown within the precincts of Richmond Park, in which many years of his life have been passed, and which, with his congenial and sympathetic and cultivated wife, whose irreparable loss he has had lately to deplore, became a centre of graceful hospitality, which will be pleasantly remembered by many foreign *savans*, as well as by cultivated Englishmen of all classes.

WATER-ANALYSIS IN THE UNITED STATES.

WE referred last week to the excellent reports of the Massachusetts Board of Health, of which we have received a copy for the past year. A chemical correspondent calls our attention to the fact, that the examinations of water—several hundred in number—appear to have been made, and well made, by a lady, Miss Ellen H. Swallow, M.B. They were done by Wanklyn, Chapman, and Smith's ammonia process. This process is so simple and light in its mode of operation that it is an eminently suitable process for the most delicate hands; but, indeed, the work of chemical analysis is one which in most of its branches would seem by no means inaccessible to ladies.

A SIMPLE FORM OF LIFE INSURANCE.

THE history of the great saving of life now effected in the transport of government convicts and of emigrants is so striking and so simple, that it cannot be too often recalled to mind. It was graphically told last week by Mr. Chadwick. At the commencement of the transport service of convicts, and, indeed, of emigrant passengers, the loss of life was terrible; an epidemic broke out, and a third, and in one instance, nearly half were thrown overboard before arrival. And yet there was nobody to punish. The skippers did not perhaps intend to kill the passengers, but they wanted room for cargo, they did not think of the results, and so there was overcrowding—sanitary science and ventila-

tion being then unknown. At last some unknown civil servant got an alteration made—only one—in the terms of the contract, from payment per head on the number embarked to payment per head on the number landed alive. Under this condition the whole state of things was changed. The skippers of their own motion got medical officers, and paid them for results. Sanitary science gleamed on these voyages. Ventilation was practised, overcrowding and filth were avoided, and the health maintained during these voyages was better than that obtained by the same classes on shore. The skippers listened eagerly, and adopted zealously any suggestions made for improvement. They were their own inspectors, and they wanted no regulations. The work of benevolence was done without benevolence. For every poor lone passenger who happened to die during the voyage, one sincere mourner at the least was secured! The application of this beneficent principle for the protection of the common seamen, as well as passengers, should be demanded.

TRANSFUSION OF BLOOD.

THE operation of transfusion of blood has been performed quite recently in London in two patients, both with a certain measure of success. The first case was one of leukaemia, under the care of Dr. Andrews, at St. Bartholomew's Hospital; the second operation was performed on a purpuric girl, a patient of Dr. West, at the Hospital for Sick Children, who was dying from loss of blood. The operation, performed by Mr. Callender, in the first patient was successful, and will probably be repeated once, at least, in the course of the next month or two; while in the other case, although terminating fatally a few hours after the operation, which was performed by Mr. Thomas Smith, the patient was still undoubtedly temporarily, and almost against hope, relieved by the adopted means.

M. JULES SIMON.

OUR special correspondent writes to us from Paris:—You will have seen by the daily papers of the changes that have just taken place in the French Ministry, among which are the resignation of M. Jules Simon, and the appointment of M. Waddington as his successor. However these changes may be regarded by the political world, the educational part of it, and particularly the Section of Medicine, will regret the departure of Jules Simon, who was unquestionably one of the most energetic and independent ministers of public instruction that France has had for a long time. He had effected great changes in the medical department, of which he is a member, and has improved materially the status and resources of the different Faculties throughout the country; and among the latest of his reformatory measures, I may mention the nomination of a member of the profession in the Superior Council of Public Instruction, to be selected from the Academy of Medicine. The appointment was put to the vote, and, at the last meeting of that learned body, M. Barth was elected by a great majority. M. Waddington, the newly appointed Minister, is of English origin, and was born in Paris. If his politics are different, it is to be hoped that, as far as concerns public instruction at least, he will walk in the footsteps of his predecessor. M. Waddington is in every sense of the word a savant. He is well known as a great numismatologist and Hellenist or Greek scholar. He is a member of the Academy of Sciences, and in 1865, before he was quite forty, he became Member of the Institute, the highest scientific and literary honour obtainable in France.

A "TEMPERANCE HOSPITAL" FOR LONDON.

OUR advertising columns contain the novel announcement that a gentleman is required for a new institution called the "London Temperance Hospital," to perform the usual duties of house-surgeon, and to act under the directions of the visiting medical officers. We presume that the promoters of this institution intend to enforce on their patients total abstinence, a very different thing in the treatment of disease from temperance. The candidate is required to state the length of time during which he has been a total abstainer.

LADY STUDENTS AT MICHIGAN UNIVERSITY.

WHEN the prize-lists of the University of Michigan were published at the close of the late winter session, it appeared that the most distinguished medical graduate of the year was a lady—Miss Emma Call, a pupil of Dr. Lucy Sewall, of Boston.

THE PATHOLOGICAL SOCIETY.

A MOST useful session—eventful, as one in which a formal and exhaustive debate on a pathological subject formed a feature of the proceedings—was brought to a close on Tuesday evening. There was a large and unusually interesting number of specimens presented. The meeting was accordingly somewhat prolonged beyond the usual hour of separation.

ST. GEORGE'S HOSPITAL.

WE are sorry to hear that the patient with thoracic aneurism whom Mr. Holmes treated last week by means of galvano-puncture did not derive the benefit which was hoped for from the operation; it has not, therefore, been repeated. In the same ward is another interesting case of the same disease, in which the tumour projects upwards, displacing the left clavicle; it probably arises from the arch of the aorta near the origin of the carotid and subclavian arteries. A consultation of the surgical staff will be held on Wednesday to discuss the possibility of operative treatment.

AN UNGRATEFUL BEAR.

THE generosity of an Irish labourer was met in a most grasping manner a few days ago by one of the brown bears in the Zoological Gardens. The foolish fellow passed his arms through the bars of the cage and offered the animal a biscuit. Bruin, being not unmindful of the fact that he belonged to the Carnivora, preferred the upper extremity of the man to the biscuit which he presented, and accordingly proceeded to avail himself of the rare opportunity. It was with the greatest difficulty, and after the severest punishment of the bear with an iron rod, that the man could be extricated from his dangerous position. The poor fellow was at once taken to the Middlesex Hospital, when his arm was found to be terribly mutilated. He is, however, we are informed by Mr. Lewis, senior house-surgeon, doing well, and is not likely to lose his arm.

AN EGYPTIAN MEDICAL PAPYRUS.

FROM the *Allgemeine Medizinische Central-Zeitung*, we learn that Professor Ebers of Leipzig, during a recent visit to Egypt, has obtained possession of an ancient papyrus, written in the oldest hieratic character, and believed to be above 3,400 years old. Notwithstanding its great age, not a single letter is wanting in the hundred and ten leaves of which it consists. It is a complete treatise of ancient Egyptian medicine, in which the diseases of the several parts of the body and their treatment are described. Nine leaves are devoted to diseases of the eyes—a subject in which the Egyptians were in advance of all other nations of antiquity. It is said that the King of Saxony has obtained possession of the papyrus for the library of the University of Leipsic.

GERMAN PREPARATION FOR CHOLERA.

IN pursuance of the recommendations of Dr. Hirsch and Dr. von Pettenkofer, the German Federal Council agreed to the following resolutions, at a meeting held on April 29th. 1. For the purpose of an uniform and systematic inquiry into the spread of cholera and the means of arresting it, a special committee of experts will be formed, consisting of five members to be chosen by the federal council. They will receive notice of their election from the imperial chancery, through which source, also, the committee will be summoned and the president nominated. When employed in places distant from their ordinary habitations, they will receive travelling expenses and twenty marks (about twenty-five shillings) a day. 2. The duties of the committee shall be: *a.* to form an uniform plan of investigation in case of the appearance of cholera in Germany; *b.* to collect and elaborate the results of their

inquiries, and to report on the measures serviceable for combatting cholera; c. to undertake or institute special local researches during the prevalence of cholera. 3. The costs of the labours of the Committee will be borne by the State, provided that the charges are first approved by the imperial chancery. Any labours carried out independently by district medical officers and physicians in the individual states, in furtherance of the general plan, will not be paid for out of the imperial funds. 4. The various authorities of the *Bund* are desired to communicate to their district medical officers and physicians the plan as approved by the imperial chancery, and to send to the chancery the reports, etc., which they may obtain, that they may be communicated to the committee.

THE LONDON HOSPITAL

AT a meeting held this week at the Beaumont Hall in support of efforts to raise £100,000 for the construction of an additional wing to the London Hospital, Mr. Frederick Young pointed out that 60,000 outdoor cases were relieved at the London Hospital last year, and if only every one of that number would contribute a penny, and get a friend to give a penny, a week, £10,000 would be realised in one year.

CASUALTIES AND THE LICENSING ACT.

A STRIKING illustration of the benefits of the new Licensing Act is afforded by referring to the pages of the casualty books of the metropolitan hospitals. The facilities afforded to the lower classes of dissipation by the inordinate supply of money at the end of the week's labour, and the knowledge that the morrow might be spent in idleness, made the crowded parts of the metropolis, on Saturday evenings especially, the scenes of intoxication and street-rows. The house-surgeon of the neighbouring hospital was amongst the sufferers, and rarely ventured to go to bed before two in the morning, when the broken and drunken heads of the neighbourhood had been patched up. By the early closing movement, however, the temptations are greatly diminished, and the returns of our hospitals at once make this clear. Mr. Hammond Smith, House-Surgeon at the Middlesex Hospital, has forwarded to us a statement of the number of accidents attended to at that institution after twelve o'clock on Saturday nights during the first three months of 1872 and 1873. From this we find that in 1872, during the period named, the cases of injury and intoxication were 59; and in the corresponding period of 1873 the number did not exceed 8.

OVARIOTOMY IN LONDON HOSPITALS.

It is sometimes easier to get accurate information of home affairs from writers in foreign journals than from home sources. At the request of M. Demarquay, acting as reporter of the Académie de Médecine of Paris, we published lately an appeal for the statistics of recent experiences in ovariectomy at all our London hospitals. The response was very meagre. Dr. Cleever, writing in the *Boston Medical and Surgical Journal* concerning ovariectomy at London hospitals, says that during 1871, 56 operations of ovariectomy were performed at the Samaritan Hospital. Ovariectomy had been very fatal in the other London hospitals, thus: at St. Bartholomew's, 12 cases, 8 deaths; Middlesex, 8 cases, 7 deaths; King's College, 7 cases, 6 deaths; St. George's, 7 cases, 5 deaths; University College, 5 cases, 4 deaths; Guy's, 44 cases, 21 deaths—total, 83 cases, 51 deaths. At the Samaritan Hospital, 106 operations, 30 deaths. In other words—in five large hospitals, mortality, 76 per cent.; Guy's Hospital, mortality, 47 per cent.; Samaritan Hospital, mortality, 27 per cent. These results show what can be done in smaller hospitals in comparison with the larger ones.

DETECTION OF ADULTERATION OF MILK.

DR. WHITMORE, Food Analyst and Medical Officer of Marylebone, writes to us as follows on this subject.

An article having appeared in your last week's JOURNAL, which not only criticises very unsparingly my report on milk adulteration in St. Marylebone, but directly impugns the correctness of my analyses, I have to ask of your impartiality the opportunity of replying to it, since it appears to myself, and may possibly do so to others, to call in question my fitness for the office I hold as analyst to this great and important

parish. I have no wish to comment upon the style in which that article is written, but simply to maintain the strict accuracy of all the analyses in my report, and to show your readers, as I think I can do, in a very few words, that such terms as "quite at sea" and "absurd" apply rather to my critic than to myself. First, as to my estimate of the quantities of water added to the various adulterated samples. It is generally admitted that pure milk contains from 86 to 88 per cent. of water. My own investigations have found the mean to be 87.3; I have, therefore, taken that as the standard for my calculations, and, having first ascertained how much water in excess of this any given sample of milk contains, it becomes a matter of simple arithmetical calculation to determine the actual percentage of water added. Tested in this way, and it is the only reliable one, I defy the writer to show that any one of the results given in my table is wrong. Next, as regards the amount of curd: here the writer of the article is evidently himself at sea; he supposes that curd and caseine are the same thing. I say they are not, and in that opinion am supported by such authorities as Miller, Hassall, and others. Curd consists of all those constituents of milk which are separated from the whey by rennet or acetic acid, and which contain not only caseine, but fat also, together with the insoluble salts. Of course, if my results had reference to caseine only, they are wrong; but as they refer to dried curd, they are correct. Why I have not published the names of the fraudulent milk dealers, several reasons might be urged; but one will suffice—I am not permitted to do so.

We can but regret that Dr. Whitmore's reply to the criticism is not so triumphant as he seems to think it. The above letter has been handed to Mr. Wanklyn, who is the first European authority on the subject of milk-analysis, and the following is his note upon it.

"It is a mistake to assert that the percentage of water found in a sample of milk is in itself a sufficient datum for ascertaining how much water has been added to the milk. Granting that the original milk was perfectly normal, and nothing whatsoever had been done to it except the two common kinds of sophistication—viz., skimming and watering—the percentage of water found in the sample is an insufficient datum for the forming of a judgment how much water had been added. This will be obvious when it is borne in mind that by skimming, as well as by watering, the percentage of water in milk is raised. If a specimen of genuine milk (which consists of 87.5 parts of water, and 12.5 parts of milk-solids) be skimmed, the percentage of water in the skimmed milk will be found to be about 89.5. (I am writing from experience.) Therefore, when 89.5 per cent. of water is found in a specimen of milk, that milk may be either absolutely unwatered, or it may contain 16 parts of extra water in 100 parts of the sample. The data required for an estimation of the water added are "percentage of water (or its complement percentage of solids) and percentage of fat." Knowing these, we are in a position to say how much water has been added—on the assumption, of course, that nothing else except skimming and watering has been practised. In the book which is about to issue, this is fully explained. Touching the 'curd,' Dr. Whitmore is not very fortunate in his explanation. He says, in effect, that by curd he did not mean caseine, but the caseine, phosphate of lime, and fat altogether. Putting this construction on the doctor's analysis, it is still as startling as it was when we construed curd to mean caseine. That the sum of caseine, phosphate of lime, and fat in genuine milk varies from 8.5 to 4.7, is quite as impossible as that the caseine should vary between these limits. The explanation of the differences is not that the composition was different, but that in some instances the operator contrived to weigh nearly all the fat along with the caseine and phosphate of lime; and, in other instances, he contrived to deprive the caseine and phosphate of lime of the fat."

CONSUMPTION OF LIQUORS IN WORKHOUSES.

WE find in *Public Opinion* the following statement on the return relating to the consumption of liquors in workhouses which has just been presented to Parliament, and which, it observes, will not be perused without pain by Sir Wilfrid Lawson and his friends. In Middlesex, during the year ended Michaelmas, 1871, the indoor paupers drank 3,028,864½ pints of ale, 38,218½ pints of wine, and 54,489½ pints of spirits, at a cost of £15,881:9:10¼ for the ale, £2,315:17 for the wine, and £5,318:4:8 for the spirits. During the same period, the outdoor paupers consumed 13,632 pints of ale, 13,958½ pints of wine, and 8,100¼ pints of spirits; the ale costing £119:2:7, the wine £956:7:7¼, and the spirits £947:8:11¼. Nor were the workhouse officials condemned altogether to total abstinence, for in the same year 749 of them drank 431,492½ pints of ale, 473¼ pints of wine, and 223¼

pints of spirits; their ale costing £2,375 : 4 : 1, their wine £23 : 12 : 4½, and their spirits £22 : 10 : 0½. The amount of beer, etc., consumed by workhouse paupers and officials in other counties is also given to a spoonful, and will be read with varied feelings. For our own part, we believe that a very large amount of this consumption is unnecessary, if not mischievous.

PRIZE DISTRIBUTION AT UNIVERSITY COLLEGE.

ON Wednesday afternoon, Lord Napier and Ettrick presented the prizes and certificates to the successful students in the Faculty of Medicine. The Dean, Professor Marshall, F.R.S., read the report, which stated that the utility and prosperity of the College continued to increase. In the aggregate, there were 315 pupils who had prosecuted their studies in medicine at the College. That number, though showing a slight diminution in comparison with last year, sufficed to maintain the high position of the College among the medical schools of the metropolis. The educational work had been laborious, though not severe, and the results had been satisfactory. No change had occurred in the professorial department, but four new appointments had been made in the hospital. The report also mentioned that the year was the first of the presentation of the Cluff Memorial Prize, and stated that Mr. A. Grote had presented to the Natural History Museum about 300 zoological specimens. Mr. Marshall then read out the names of the successful students, who were called up to receive the prizes. *Surgery*: Gold medal, W. B. Houghton; first silver, E. G. Whittle; second silver, A. P. Gould. *Anatomy and Physiology*: Gold medal, L. G. Hobson; first silver, J. F. Trafford; second, F. J. Davis. *Anatomy*: Gold medal, A. J. Pepper; first silver, L. S. Jameson; second, D. Ewart. *Chemistry*: Gold medal, J. V. Jones; first silver, J. Todd; second, J. Ryley. *Medicine*: Gold medal, D. N. Parable; first silver (equal), C. W. Harvey and J. Appleyard. *Comparative Anatomy*: Gold medal, A. J. Pepper. *Practical Physiology*: Gold medal (equal), G. A. George and T. Roger. *Clinical Medicine*: Fellowes medal, gold, H. R. Crocker; first silver, H. Davis; second, H. Eales. The Bruce Medal, for proficiency in surgery and pathology, was taken by H. Colgate; and the Cluff Memorial Prize, for proficiency in anatomy, physiology, and chemistry, by A. J. Pepper.

CHLOROFORM DEATH.

ACCORDING to our recent statistics of the frequency of chloroform deaths, obtained by the courtesy of correspondents, who concur with us that all such cases should be published, "another chloroform death" is rather overdue. We are indebted to the courtesy of Dr. Orange, Medical Superintendent of Broadmoor Asylum for Lunatics, for the following notes of a case which has occurred there.

Francis Breton, aged 60, tried at York in July 1847, for murder, and found insane, was admitted into Broadmoor from Fisherton House Asylum on February 13th, 1865. He was in generally good bodily health, but demented and incoherent, restless in his habits, and addicted to climbing and jumping over tables, forms, and other articles of furniture. On May 14th, at half-past nine A.M., whilst stepping from a table upon the rail of an iron fireguard, he missed his footing, and fell, first upon the perinæum, with a leg on each side of the iron rail, and then upon the floor of the room, immediately afterwards getting up and walking away. Considerable hæmorrhage from the urethra followed the injury. On the next morning, blood still issued from the urethra, and some blood had also been extravasated into the fascia of the perinæum and into the scrotum, and no urine had been passed during the night. An attempt was then made to introduce a catheter, but the resistance and the struggles of the patient were so persistent, that it was deemed inadvisable to continue the attempt without chloroform. The patient was, therefore, removed to the infirmary dormitory, a large and ventilated room, when chloroform was administered, with Clover's apparatus—the bag containing at the time 11,000 cubic inches of air, with the proportion of 25 minims of chloroform to each 1,000 cubic inches. At 4 P.M., when the administration commenced, the patient's pulse was fairly good, and he resisted with vigour at first. He appeared to quickly become insensible, and the inhaler was removed; but as he commenced to struggle upon the introduction of the catheter, and to be apparently recovering consciousness very rapidly, the inhaler was again applied. After about seven

minutes from the time of commencing to administer the anæsthetic—the valve for the admission of air being for the most part open a little, and the inhaler frequently removed—and while the patient was still rigid, the pulse suddenly flickered and stopped, the patient's face became livid, and his head dropped. He was immediately turned on his left side, and artificial respiration, by Silvester's method, was performed continuously for more than half-an-hour; the region of the phrenic nerve in the neck and the diaphragm were galvanised, and friction was applied to the extremities, but all without avail. After the discontinuance of attempts at resuscitation, the bag was examined, and then found to be rather more than half full. At the necropsy, twenty and a half hours after death, the lungs were found deeply congested, but otherwise healthy; the right side of the heart was flaccid, and full of fluid blood; the left side was empty and contracted; the valves were normal. The arteries of the brain, and generally throughout the body, were atheromatous. The urethra was contused and lacerated to the extent of half an inch near the triangular ligament, only a small band preserving continuity of its upper wall; and blood was found infiltrated into the cellular tissue of the perinæum and scrotum. An inquest was held on the 16th instant, and the following verdict returned—"That death arose from chloroform, but that the same was carefully and judiciously administered." Dr. Orange, Dr. Cassidy, and Dr. Buck were present at the administration of chloroform.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

Dr. HUMPHRY will resume his lectures on June 2nd. The subject will be the Varieties in the Muscles of Man. Three lectures will be given on the 2nd, 4th, and 6th proximo. Mr. Holmes will deliver six lectures on the Surgical Treatment of Aneurism, in continuation of last year's course, on Mondays, Wednesdays, and Fridays; commencing on June 9th.

PROFESSIONAL PRUDENCE.

WE have to note the recent occurrence of a fatal accident to Mr. R. H. Parminter of Poole, who was thrown out of his carriage whilst pursuing his professional avocations, and died of the injuries. A fact communicated to us by one of his professional friends in connexion with the accident serves to impress upon members of the profession the advisability of effecting insurances in a good and substantial office, in order to protect their families (or themselves, if only partially injured) from the serious loss and inconvenience occasioned by accidents. We believe the family of the deceased gentleman will receive at once £1000 from the Norwich and London Accident and Casualty Office. Our correspondent adds, and it is difficult not to agree with him—"Surely it is wise and prudent for gentlemen on whose individual exertions so many families have to depend, to secure, by a small annual payment, compensation for temporary disability, or a substantial sum for their families should they unfortunately lose their lives by one of those numerous and serious casualties which they can neither foresee nor, by the greatest care on their own part, prevent."

SCOTLAND.

A SITE for a hospital to afford accommodation for Crieff and surrounding district has been selected in an acre of land at Clickmore, and it is proposed to raise funds by private subscription for its erection.

DR. CLOUSTON, who has just been appointed to the superintendence of the Morningside Asylum, has been selected to deliver the Morrisonian lectures on Insanity during the current year.

ROYAL EDINBURGH ASYLUM FOR THE INSANE.

WE hear with pleasure that Dr. Clouston, Medical Superintendent of the Cumberland and Westmorland Asylum, has been appointed to fill the vacancy caused by the death of Dr. Skae. There were originally a considerable number of candidates, all of whom, with four exceptions, withdrew.

IRELAND.

ROYAL COLLEGE OF SURGEONS.

THE annual election to the Council of this body will take place early in June, and for a considerable number of years never was the competition so close and the number of candidates so numerous as at present. The following gentlemen have signified their intention of competing for a seat on the Council of the College, viz.: Messrs. M'Clintock, Barton, Hamilton, Jacob, Croly, Mapother, and Mason. Of these seven, Dr. Jacob was lately on the Council, but resigned his seat to compete for the Chair of Ophthalmic Surgery, in which he was unsuccessful. We believe Messrs. M'Clintock, Barton, and Mapother have the best chance of succeeding; but at present the result must be dubious, as it should be borne in mind that there are no vacancies, and that, should any of the above mentioned be selected, they must displace an equal number of those already on the Board.

THE NEW ARMY MEDICAL WARRANT.

THE Council of the Irish Medical Association have prepared a memorial to Mr. Cardwell, Secretary of State for War, in reference to the New Army Medical Warrant. The memorial states that, so far from improving the position and prospects of the medical officers of the army, it will have an injurious effect upon their interests, by disturbing their status and relative rank, and depriving them of many important concessions made to them by former warrants; and prays that the warrant may be withdrawn, or amended in such manner that the grievances may be removed.

THE NEWCASTLE BOARD OF GUARDIANS.

THE Board of Guardians of the Newcastle (Limerick) Union met last week to discuss whether an increase of salary should be given to one of the medical officers of the district. The increase was refused by a large majority, and a motion was passed to the effect that the Board would not entertain the sanction of an increase in any medical officer's salary until such officer first resign his position. Such narrow-minded economy is sure, sooner or later, to have a prejudicial effect on the medical officers of this union; and the Guardians, by this ill-timed resolution, have implied that, should a vacancy arise, the candidate will succeed who consents to act for the lowest tender, and that the merit of any applicant is of no importance.

THE ARMY MEDICAL WARRANT.

THE following correspondence between the Right Hon. E. Cardwell, Secretary of War, and Dr. Lyon Playfair, M.P., on the Medical Warrant, has been handed to us for publication by Dr. Playfair.

Dr. Lyon Playfair addressed to Mr. Cardwell a letter pointing out certain hardships which the new Warrant inflicted. In answer to this, Mr. Cardwell sent the following reply.

War Office, May 2nd, 1873.

My dear Playfair,—I owe you my thanks for the letter you kindly wrote me about the medical grievances, and have had it examined, and now enclose you a memorandum upon it from the Director-General of the Army Medical Department.

Very truly yours,
EDWARD CARDWELL.

MEMORANDUM.

1. *Withdrawal of the Rate of 17s. 6d. a day after Fifteen Years' Service in the Junior Rank.*—It has been decided that the establishment of senior officers shall not so largely depend, as hitherto, upon the number of regiments and brigades in the service, but that it shall be annually so constituted as to secure, on an average, promotion after fifteen years to the juniors. The result of this arrangement will be, that many officers will receive their promotion and 17s. 6d. a day after less than fifteen years' service, and on completion of fifteen years they will receive 20s. a day. There may be a very few men each year who will wait a few weeks on the rate of 15s. a day, but they will receive 20s. a day immediately upon their promotion, which will take place only a short time after completing fifteen years' service.

2. *Forage Allowance.*—An alteration has been made in the rules for the issue of forage, but only in the direction which is contemplated for all departmental officers serving with the army. This was more especially needed in the Medical Department, as the number of officers of senior rank was being so largely increased, without reference to the duties they were called upon to perform. I may add, that the medical officers are not placed in an exceptionally disadvantageous position in this respect, as compared with other departments. Moreover, it is not necessary that an officer should be the possessor of a horse, but that he should make arrangements to have one always available.

3. *Promotion by Selection.*—The promotion will not be chiefly by selection. The rule which applies to promotion in the so-called seniority corps—the Artillery and Engineers—will apply to the Medical Department. This rule is not intended to make any large change in the mode of promotion, but is designed to attach just so much of uncertainty to the principle of promotion as to prevent the growth of a system of bonus giving to induce officers to retire. The exceptions to the seniority principle are sure to be very rare.

4. *Removal of Regimental Surgeons from their Regiments.*—The only means by which the improvement in the position of the Medical Service could have been secured was the removal of the officers from the regimental establishment, as explained in the note on the first point. This has been done in a manner which will cause the least difficulty to them, and has relieved those medical officers who may be serving with, but not specially attached to, regiments under the terms of the Warrant, from all contributions to bands in future. The mode adopted was that in which all reductions of establishment are effected.

5. *Medical Officers Junior to their Rank.*—Before the Medical Warrant was issued, her Majesty signed the Warrant regulating the tenure of the rank of field-officer in a regiment. This period is fixed at five years, with power of reappointment. The position, therefore, of the medical officers is much the same as that of the regimental field-officer, with, if anything, an advantage to the medical officer.

6. *Increase of Establishment and the Promotion of Surgeons.*—The *Gazette*, promoting a large number of surgeons to be surgeons-major, was issued on Tuesday evening. This, of course, confers the greatest advantage upon those officers who are promoted, and they are those who will complete fifteen years' service before October 1st next. But the larger increase of the establishment of the senior rank gives to those officers who are below the line which is drawn a much improved chance of promotion, even before completing fifteen years' service. These promotions have been submitted to her Majesty in fulfilment of the statement which Mr. Cardwell made in bringing in the estimates, "That a surgeon should be enabled to look confidently forward to becoming a surgeon-major after fifteen years' service". In an arrangement of this kind it is impossible to give the same advantages to all, but there is no junior officer who does not reap considerable benefit.

(Signed)

T. G. LOGAN, D.G.,
Army Medical Department.

May 2nd, 1873.

On the above memorandum of the Director-General of the Army Medical Department, we have to make the following comments.

1. As there is nothing in the Warrant to show that promotion is necessarily to be given after fifteen years' service, it seems a pity to have withdrawn the extra 2s. 6d. *per diem*, which, it is admitted, might occasionally be enjoyed for a few months even under the present arrangement.

2. No doubt considerable saving will be effected by the new forage regulations; but it is also no less evident that medical officers of field rank are thus deprived of the privilege formerly enjoyed of keeping a horse under all circumstances, and the difficulty remains of the uncertain nature of their duties rendering it less easy to define their rights in this respect. To have a well-trained charger always available, as suggested, will be at many stations difficult, if not impossible.

3. No doubt some possible power of selection is desirable. As to the bonus system, is not something of that sort found necessary in the Artillery to get rid of seniors?

4. It is hard to see how more difficulty could have been imposed on the medical officer by any other form of removal than that recently adopted. No hint is given of any possible compensation for pecuniary loss, disappointment, and inconvenience; nor is it stated whether the medical officer is or is not to be an honorary member of the mess of the regiment to which he is attached.

The remarks in the fifth and sixth paragraphs seem to us to be satisfactory, and to call for no special comment.

This memorandum of the Director-General leaves untouched several of the points raised in the memorandum which is incorporated in our report of the proceedings of the Parliamentary Bills Committee.

MEDICAL ACT (1858) AMENDMENT BILL.

DEPUTATION TO THE MARQUIS OF RIPON.

A DEPUTATION from the British Medical Association waited upon the Right Hon. the Marquis of Ripon, Lord President of the Council, at his official residence in Downing Street, on Friday, May 15th. There were present, Sir Henry Selwin Ibbetson, Bart., M.P.; R. A. Macfie, Esq., M.P.; G. Southam, Esq. (Manchester), President of the Council of the Association; Dr. Waters, (Chester), Chairman of the Medical Reform Committee; Dr. Macnamara (Dublin); Lord Richard Grosvenor, M.P.; H. C. Raikes, Esq., M.P.; T. Heckstall Smith, Esq. (St. Mary's Cray); Ernest Hart, Esq. (London); Dr. Webster (Dulwich); Dr. Shrimpton (London); Dr. Davey (Bristol); Dr. Ramsay (London); Dr. Begley (London); Dr. A. P. Stewart, (London); Dr. Wood, Mr. John Simon, Mr. Fowke, Secretary of the British Medical Association; etc.

Mr. HEADLAM, M.P., who introduced the deputation, said:—My Lord Ripon, you are so well conversant with the subject upon which we have the honour of waiting upon you to-day, that it is not necessary for me, in introducing this deputation, to give you any explanation of it. We have nothing to say of the Bill of 1870, which removed many things of which we complained; but there is a strong feeling among the medical profession generally, that there should be some direct representatives of the profession upon the Medical Council. Under these circumstances, what we are desirous of doing is, to see if we cannot get the matter settled. The Bill which I have brought into the House of Commons contains one clause providing for direct representation, and on this matter we are anxious to have a statement from the Government as to whether they will adopt our views on the subject.

Dr. E. WATERS: My Lord,—I have, in the first place, to thank you for having accorded us this interview. It is a matter of great satisfaction to the members of the profession, with regard to these proceedings, that we are addressing one who is so conversant with all that is connected with medical legislation as yourself. I will not weary you with details with which you are already familiar from the part you took in carrying the Bill of 1870 through the House of Lords; but as regards this Association, I may say, that it comprises five thousand members of the profession, properly elected. Many of them reside in the country; all are legally qualified practitioners, and many hold responsible positions in the localities from which they come. The Association has appointed several committees, whose duty it is to pay regard to special subjects. It is composed of men scattered throughout the provinces: men of large experience and general knowledge; and by its meetings in different localities it has connected us with most of the leading members of the profession in the provinces. We are not a Medical Reform Association, but ours is the British Medical Association, and our object is to promote science, education, and good will, among the general body of the profession. We are not bound together with the special object of securing reform, but we comprise various sections—sections connected specially with different branches of medical science, and amongst others with state medicine, embracing subjects and matters connected with the public health. A committee of this Association gave a great deal of time and attention to the Public Health Bill, which passed through Parliament last session. With regard to medical reform, our Association takes up a decided position. It is now approaching fifty years of its existence, and in the second year of its existence it was the opinion of the profession that it was essential that something should be done in view of improving the anomalous state of things which then prevailed. Before the Act of 1858 was passed, Mr. Headlam, in the session of 1857, carried the second reading of his Bill through the House of Commons. There was scant promise of success, as Sir James Graham, Lord Russell, Mr. Hawes, and some members of the Government, with several members of Parliament, had taken up the subject; but difficulties arose owing to the conflicting interests of the Corporations, and each abandoned their attempts in despair. Mr. Headlam, as an independent member, however, to the surprise of the Government, supported by the Association, carried the second reading of his Bill in 1857, by a majority of one hundred and twenty-seven members. The Government then took it up, and the measure became law in the ensuing session of 1858. Having before us the advantage of the Bill intro-

duced in 1858 by Mr. Headlam, who is now a man of riper years than he was at that time, and who now occupies a prominent position in the House, which gives us a natural pride in having him to introduce us, we have a guarantee that the present subject will be ably dealt with, and that it is not likely, from his habits and position, that he would take up a question which was not worthy of his great and ripe experience. On the other side of the House of Commons we are very cordially supported by Sir Henry Selwin-Ibbetson; so I may say, that on each side of the house there are members who have taken up this question, so that it is removed altogether from the category of party. I would further say, that we have the advantage of taking the question out of the category of what is called class legislation, for this matter is as important to the public as to the profession, for whatever is for the benefit of the profession is of advantage to the public also. I have said there have been numerous committees formed by this Association for special objects. There was one committee on the subject of medical reform. Ever since the Act of 1858, there has been a feeling that it was, to a certain extent, a temporary measure, and that it was one that was capable of amendment. Mr. Southam, the President of the Council of the Association, was aware of the fact, that when the Act was passed it was an understood thing that there should be some direct representation of the profession on the General Medical Council. At that time, however, it was impossible to secure this object, because there was then no register of the profession kept, so that at that period there was nothing to show who were really entitled to vote in such an election. But since that time we have been successful in getting a registration of the profession, so that now, as may be seen from the details of the Bill now before the House of Commons, it would be very easy to elect direct representatives of the profession on the General Medical Council. The Association represented to the General Medical Council the almost unanimous desire of the profession in favour of direct representation, and asked them to urge the Government on the matter, in order to see what could be done. They considered the matter in 1869, but owing to the conflicting opinions which prevailed, they were unable to suggest any measure to the Government which we could accept. All the efforts of the Council to reform themselves were unavailing, and all their efforts to reform the Medical Act were equally unavailing. They dwelt on small details, such as really did not deserve the serious attention of the Government, the profession, or the nation. They set your Lordship to take up the subject, and to bring forward a measure which was acceptable to the profession, so far as it went, and which the profession was glad to accept. At that time the Committee of the British Medical Association, of which I am Chairman, agreed to accept the Bill of the Government, but also to decline it unless direct representation of the profession in the Council were concurred in. The profession was almost unanimous on this point. In the town of Chester, every gentleman in the profession signed a petition in favour of direct representation, and the same thing was done in Leeds, Liverpool, Bristol, Bradford, and other large towns of the kingdom. On the occasion of the withdrawal of the Bill in 1870, by the Government, owing to the representations of the Committee, the House of Commons was filled with petitions, embracing from 10,000 to 12,000 signatures, in favour of this demand, and consequently it is assumed that the profession agreed not to accept any measure of reform which ignored this demand. Subsequently to the withdrawal of the Bill, on the occasion of the annual meeting at Newcastle, a discussion took place on this subject. There were some members of the Council there, of great weight in the profession, who thought that the Association had done wrong in not accepting the Bill of the Government. But the question was fully and fairly discussed at the meeting, and with but the exception of those members, only two hands were held up against the action of the Association. The general feeling of the whole medical body is that the Association had acted wisely in not supporting any scheme in which no provision was made for direct representation. The result of all this was, that in 1871 the British Medical Association brought forward the present Bill, which Mr. Headlam was prepared to take charge of. At this time there was another Bill before the House, which was presented by Dr. Lush, Mr. Mundella, and others. That Bill was a far more radical measure than anything the Association proposed. It cut down the Council to twelve members, four of whom were to be elected by the Universities or Corporations, four by the Government, and four by the medical profession, but still holding by the principle of direct representation. It died a natural death, but it showed and went far to prove the importance of direct representation. Now, as to the objections which are urged to this request for direct representation, it is said that we are already represented through the members on the Council. That really cannot be the case with the great body of the profession to which I belong. I am myself a fellow of two colleges and a graduate of medicine of the University of Edinburgh, which are united in interest, but which have no

voice in the election of either of the gentlemen who represent those bodies in the General Medical Council, and I may say that most of the gentlemen now present have no voice in the election. Then, again, one of the advantages of direct representation would be that the Council would improve its knowledge of the requirements of men throughout the provinces. We have large schools of medicine at Manchester, Bristol, Leeds, Liverpool, and other places, all of which are great educational institutions, in which a complete professional education can be obtained, and in which the education of men who pass their examination is completed. There is a large school at Newcastle, but its interests are left to Durham. The school at Newcastle is represented through the University of Durham. But, with respect to the University of Durham, it has recently returned a fresh representative to the Council, and, what is a singular fact is, that gentleman was not elected by the medical element, but by the clerical element. Now, there is no doubt that clergymen entertain peculiar views on many points. They might believe in mesmerism or clairvoyance, and then it would not be impossible that a very remarkable person would be put on the Council. This fact, I think, shows that the Association is justified in asking for direct representation. The opposition to this Bill comes chiefly from those who are without the profession. In looking over the names of those gentlemen who have petitioned against the Bill, I find that those gentlemen who have M.D. affixed to their names are neither registered or in the Directory, and the natural presumption is that they are persons enjoying an immunity under the present system, and are thus able to practise on the credulity of the public. I do not wish, my lord, to weary you with details, and will, therefore, content myself by saying that I trust you will look upon ours as a reasonable demand, and that you will concur in thinking with the great body of the profession that it should have some voice in the election of the Council, the expenses of which are entirely defrayed by the members of the profession, and not one farthing by the rich Universities and Corporations which are represented there.

Mr. SOUTHAM (Manchester): My Lord,—I have just one observation to make with reference to what passed at the time of the passing of the Act of 1858. At that time we were met in our claim, that a certain number of the Council should be elected by the general body of the profession, with the statement that there was great difficulty in the way of carrying this out, owing to there being no register kept of duly qualified medical men. I do not object that the Government should have the option or right of electing six members of the Medical Council, but then even these gentlemen should hold independent positions between the Corporations and the general body of the profession. Now, the objection, so far as the register is concerned, is, as your lordship has heard, done away with; but I shall now, with regard to another objection, show that the six members elected by Government do not represent the profession. Of the first six elected, four of them held offices in connection with some of the Universities, and only two could be said to represent the profession generally, but, on the retirement of Mr. Teale, of Leeds, only Mr. Rumsey was left who could be said to represent us; and, on his retirement some few years ago, instead of selecting anyone for his place from the provinces, the profession, I may say, ceased to be represented. Now, what is the position at present? why, that out of six medical gentlemen on the Council, five of them are either interested in, or connected with Corporations or the Government. There is only one gentleman who is looked upon as occupying an independent position—that is Dr. Sharpey. Everyone respects him, but he has never practised his profession, and therefore neither knows its wants or the wants of the public, nor the details necessary to lay before the Council, nor the principles which should guide them. I therefore say that, so far as the representatives appointed by Government are concerned, you have failed in this respect, and that we are, therefore, justified in coming here to-day. One of the results of direct representation would be dealing with the question of medical education, which I hope will be taken up soon, both for the sake of the profession and of the public. For, whatever is, in this respect, good for the profession is good also for the public. At present the functions of the Council appear to be of a limited character. I do not find that Mr. Headlam's Bill proposes to extend the sphere of these functions. Of course, to a great deal of Mr. Headlam's Bill there is not the slightest objection, this portion relating to the proposed direct representation being principally objected to. It is most important that the profession should have some control over the subject of medical examination, and that the present system should be improved. The Medical Council have completely failed to do anything in this respect, owing to the conflicting interests which exist at the Board. What is the case now? Why, that some men may get a license to practise for half-a-guinea, while it may cost others one hundred times as much. A man may pass his examination in one branch of the profession—say in surgery or that of medicine,

and owing to that one single qualification he may be allowed to practise in all branches of the profession. It matters not whether he has a general qualification, or whether it is confined to only one subject; he is admitted to practise, he is placed on the *Medical Register* and allowed to practise generally. Now, the British Medical Association think that is a state of things which it is most important for the public interest should be altered. The public, as a rule, are very poor judges of what a duly qualified medical man is, and they know little of how a man enters the profession. What we desire is, that there should be an uniform system of examination throughout the country; and, in order to carry this out, it is needful that a Bill should be passed through Parliament in order to remedy this evil of which we complain. We have now only a voluntary system, but the general feeling is that compulsion must be resorted to. We would place Scotland on precisely the same footing; so that we should no longer have men rushing over the border to get the qualification in Scotland instead of in England. It is solely owing to the many conflicting interests of the Medical Council that they are absolutely powerless in doing anything in the way of medical education. At present no fewer than seventeen members of the Council represent the interests of Corporations. I do not deny that many of these men are of high character and of position, but they are sent there by those Corporations, and naturally they look upon the interests of the bodies they represent. They may have the interests of the profession at heart, but they cannot help first regarding the interests of these Corporations; and we, therefore, now ask the House of Commons to pass a measure which will enable the profession to be directly represented. What we propose is, that the law for England should also be the law for Ireland and Scotland, and we contend that by the Bill of Mr. Headlam the confidence of the general body of the profession in the Medical Council would be greatly enhanced if we had direct representation.

The Marquis of RIPON: What I understand is, that you want the Council to have power to do that compulsorily which they now have not the power to do. I should like to know what functions you propose to give the Council which it has not now.

Mr. HEADLAM, M.P.: There is not the least doubt, my lord, that the Medical Act of 1858 was not stringent enough. I believe it was a compromise. There was a general feeling that something should be done, and gentlemen gave up their peculiar ideas for the purpose of getting some measure passed. It has not proved a very successful Act, and the Council have not done nearly what was expected of them, but they have done some good in raising the standard of medical education. But, looking forward to the future, we believe that much more may be done by the appointment of a more valuable body, who would have the confidence of the profession and of the public. It is true, representation of the profession and the compulsory powers we ask for all can alone obtain the confidence of the profession. The Bill which I have introduced stands for a second reading on Monday next, and I cannot get the Bill through unless I get the support of the Government. It is quite out of the question my attempting to do it on my own account, for I might as well attempt to accomplish an impossibility. I spoke to Dr. Lush the other day, and I do not think he would be unreasonable. I think he is prepared to withdraw his notice of opposition to the Bill; and it might pass the second reading without opposition, supposing the Government were to give us some sort of support, and say that they wished it to go forward. Then comes the question, Would you put it on the notice paper, in order that it might be carried forward and become an Act of Parliament this session? If such a course be adopted, I am quite prepared to go on with the Bill; but unless I can get the support of the Government, all I can say is, that I shall have done my part in bringing the Bill into the house, and that I must wash my hands of it. If we get the slight support we ask for, something in the way of practical legislation may be accomplished this session.

Dr. STEWART said the profession took an intelligent interest in this matter of medical education, as they contended that they had a right to be heard. There are many men in the provinces connected with medical schools whose voice ought to be heard in the Council. At present, none of these schools are represented. That is one reason why we concur in thinking that this measure ought to be adopted.

The Marquis of RIPON said: Of course it will be my duty to state to my colleagues to-morrow your views on this subject. There is a deputation from the Corporations coming here to-morrow on the other side, whose views will also have to be laid before the Cabinet. I am afraid, from what I gather with regard to that portion of the bill relating to an uniform education, that you will be met with a formidable opposition from Scotland. I am told that opinion in Scotland has gone back in this matter, and that they are now unanimous in opposing compulsion.

Mr. HEADLAM, M.P.: Dr. Lyon Playfair is quite in favour of an alteration, but I am not very clear as to what he wants.

The Marquis of RIPON: There are two things in the Bill, in addition to the direct representation principle, with which you have to deal if you got rid of that opposition. I merely mention this for your consideration.

Mr. HEADLAM: We are prepared to give up some portions of the Bill.

The Marquis of RIPON: Do you think you will get the second reading?

Mr. HEADLAM: Yes, if the Government intimate that it is desirable that the Bill should be read a second time.

The Marquis of RIPON: You do not think it will be opposed?

Mr. HEADLAM: I do not think there will be much opposition from Dr. Lush.

Mr. Headlam then thanked his lordship for having granted the interview, and the deputation withdrew.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the offices of the Association on Friday, May 18th; ERNEST HART, Esq., Chairman.

Army Medical Warrant.—Statements and communications from army medical officers and others interested in the subject were read, relating to the unsatisfactory provisions of the recent Army Medical Warrant, and the feeling of dissatisfaction which it had aroused in the service and in the medical profession generally. The various subjects were discussed by gentlemen experienced in the service, and the following memorandum as adopted.

Memorandum on the Points objected to in the recent Medical Warrant and in Army Circular 6th March, 1873.

WARRANT.

3. The ranks and rates of (daily) pay of the officers of the Army Medical Department shall be as follows. Surgeon-general, £2; after twenty-five years' service, £2 5s.; after thirty years' service, £2 7s.; after thirty-five years' service, £2 10s. Deputy surgeon-general, £1 10s.; after twenty-five years' service, £1 12s.; after thirty years' service, £1 15s.; after thirty-five years' service, £1 17s. Surgeon-major, 17s. 6d.; after fifteen years' service, £1; after twenty years' service, £1 4s.; after twenty-five years' service, £1 7s. Surgeon, on appointment, 10s.; after five years' service, 12s. 6d.; after ten years' service, 15s. *Charge Pay.* The principal medical officer of an army in the field, consisting of 10,000 men and upwards, £1 daily; of 5,000 men and upwards, 15s. daily; of less than 5,000, 10s. daily. Or the principal medical officer of a colony where the number of commissioned officers and enlisted men is 1,500 and upwards, 5s. daily.

5. The relative rank of these officers shall regulate choice of quarters, rates of lodging money, servants, fuel and light, or allowances in their stead, detention and prize-money, as well as allowances granted on account of wounds or injuries received in action, and pensions and allowances to widows and families; except that, in the case of medical officers attached to regiments, their choice of quarters shall be according to their regimental seniority.

6. Forage shall be granted to officers of the Army Medical Department for such number of horses

REMARKS.

3. It is admitted that, if the proposed changes be carried out (all vacancies being filled up as they occur, besides special promotion of seventy surgeons in 1874 and fifty in 1875), promotion from the rank of surgeon will for the future be very much more rapid than it has hitherto been. Nevertheless it might happen at some future period that medical officers might be found serving as surgeons with over fifteen years' full-pay service; and, in view of this, it will give much satisfaction if the former ruling were still to be carried out—surgeons of fifteen years' full-pay service receiving an extra 2s. 6d. per day.

5. The omission of the word precedence as one of the advantages of relative rank is highly objectionable. Its omission is all the more marked, in view of the fact that it was one of the advantages distinctly inserted in a former warrant. The question of choice of quarters according to seniority in each rank should be clearly laid down.

6. The omission from this paragraph of the usual forage allowance as one of the advantages to

as are necessarily kept by them for duty.

12. A vacancy in the rank of surgeon-major, occasioned by death or promotion, shall, unless it be expedient that it be otherwise filled, be given to the senior qualified surgeon of the department. If a vacancy shall arise from any other cause, it shall be filled by a qualified surgeon, who shall be recommended to us by our Commander-in-Chief, with the approval of our Secretary of State.

13. In cases of distinguished service, a surgeon, if qualified, may be promoted to the rank of surgeon-major without reference to seniority; and in such cases the recommendation detailing the services for which the officer is proposed for promotion shall be published in the General Orders of the Army, and in the *Gazette* in which such promotion shall appear.

15. The medical officer attached to a regiment or battalion shall remain with it, as a rule, for five years.

20. Medical officers shall have a right to retire on half-pay after twenty years' service. Medical officers of the rank of surgeon-major or surgeon shall be placed on the retired list at the age of fifty-five, and all surgeons-general and deputy surgeons-general at the age of sixty-five years; unless in any special case it would be for the good of our service that the officer should continue in employment.

28. A medical officer placed on half-pay by reduction of establish-

which officers above the rank of surgeon are entitled, is most strongly to be objected to. Medical officers are by this ruling liable at any moment to be deprived of an allowance which is essential to a proper maintenance of their position, and which has been an appanage of the ranks in question ever since the department has existed. It may be answered, that a similar rule is to be applied to combatant officers. But the duties of combatant officers are so much more clearly defined than those of medical officers, that no difficulty will arise with them; while a medical officer does duty under circumstances so variable, that he is liable to considerable loss by the operation of a rule which depends, not upon his rank and position, but upon those circumstances; and virtually the privilege would be inoperative.

12. Although doubtless promotion is likely to be carried out with a view to the general well-being of the department, the omission of the Director-General's name in this paragraph is keenly felt to be an unnecessary slur on the department.

13. A strong feeling prevails that all that is necessary to meet the requirements of this paragraph is to give medical officers whom it is proposed to reward for distinguished service, brevet rank; such brevet rank carrying with it the pay and allowances of the superior grade. Rewards of a substantial character could thus be bestowed on officers deemed deserving of the same, without detriment to the interests of their less fortunate brethren.

15. Great hardship has thus been inflicted on those medical officers, many of whom have paid considerable sums to obtain those appointments from which they have suddenly and in a summary manner been removed. The officers are made to suffer, whilst the service gains nothing, by the rapidity and abruptness with which changes have been made. Special cases in all ranks should be specially considered.

20—32. The arrangements as regards retirement are inadequate to secure a healthy run of promotion in the higher departmental ranks. The changes suggested are as follows.

(a). All surgeons-general who have completed thirty-two years' full-pay service, and five years in that rank, to be placed on the retired list, excepting in peculiar cases, when the exigencies of the service require that they should continue longer in active employment.

ment, or on the report of a medical board in consequence of wounds or ill health, caused in and by the discharge of his duties, or on account of age (under Article 20), shall be entitled to half-pay in accordance with the following scale (daily). Surgeon-general, after thirty years' service, £1 17s. 6d.; after twenty-five years' service, £1 13s. 6d.; after twenty years' service, £1 10s. Deputy surgeon-general, after thirty years' service, £1 5s. 6d.; after twenty-five years' service, £1 2s. 6d.; after twenty years' service, £1 1s. Surgeon-major, after twenty-five years' service, £1; after twenty years' service, 16s. 6d.; after fifteen years' service, 13s. 6d.; after ten years' service, 11s. Surgeon, after ten years' service, 10s.; after five years' service, 8s.; under five years' service, 6s.

29. The rate of half-pay awarded to officers retiring for their own convenience, after twenty years' service on full pay, under Article 20, shall not exceed one-half of their full pay at the time of retirement.

30. Every medical officer who shall retire after a service upon full pay of twenty-five years, shall be granted a rate of half-pay equal to seven-tenths of the daily pay he may have been in receipt of when thus retiring on half-pay, provided he shall have served three years in his rank, or shall have served abroad for ten years in all ranks, or for five years with an army in the field. An officer of twenty-five years' full-pay service, whose service falls within neither of these conditions, shall be entitled to only seven-tenths of the daily pay he was in receipt of prior to his last promotion.

31. A medical officer placed on half-pay from any other cause shall be allowed only a temporary rate of half-pay (not exceeding the rates specified in Article 28) for such period and at such rate as our Secretary of State for War shall decide with reference to the services rendered to the public by such officer.

32. Medical officers of twenty years' full-pay service, placed temporarily on half-pay on account of ill health, may, however, be allowed to retire on permanent half-pay, at the rate fixed by Article 28, if, after one year on half-pay, they shall be reported by a medical board to be permanently unfit for further service.

CIRCULAR.

Duties in connexion with Hospitals.

6. The Medical Department will be responsible for the following, in addition to their present duties.

(a) For making requisitions for repairs to buildings, roads, fences, and grounds, for whitewashing, and such other services as are to be performed by the Royal Engineer

(b). All deputy surgeons-general who have completed thirty-two years' full-pay service, and seven in that rank, to be placed on the retired list, excepting as in paragraph (a), last clause.

N.B. Any of the retired officers under (a) and (b) to be eligible to the selection of appointment to Director-General.

(c). A better retiring allowance of surgeons-major of twenty years' service on full pay.

Department. (b) For the charge of all equipment in use, including tents and tent-equipage when required for hospital purposes, and for whatever further equipment it may be necessary to keep in order to meet the varying wants of the hospital by the daily increase or decrease of patients. (c) For keeping gardens and grounds in order. (d) For the cleanliness of kitchens, ablution-rooms, etc., and such outbuildings as are necessarily connected with the working of the interior economy of the hospital. (e) For ordering the due removal of latrine, cesspool, and other refuse, and for certifying that these and other sanitary services, whether performed by contractors or otherwise, together with the sweeping of chimneys, have been duly performed. (f) For making timely requisition for fuel, light, provisions, medical comforts, cleaning-articles, and all requisite supplies, equipment, and stationery, and for the custody of all such supplies on delivery at the hospital. (g) For the cooking and expenditure of diets, and medical comforts, and for the expenditure of water, fuel, gas, and other light, cleaning-articles, and all stores, and for making timely representation to the proper authorities of any defect in quality or deficiency in quantity of such stores. (h) For such abstracts and vouchers of the expenditure of stores and supplies as may be directed by regulation. (i) For the preparation of stoppage accounts for men treated in hospital. (k) For the custody of men's kits and personal effects while in hospital. (l) For the custody of books in hospital, library, or reading-room, and for their issue to patients. (m) For preparing the wills of patients when requested to do so. (n) For the requisitions for exchange of foul for clean linen, bedding, clothing, and such other stores as the medical officer may require; and, where washing is sent direct to the contractors by desire of the Control Department, for certifying to the service having been performed. (o) For making timely requisition for transport.

On the motion of Dr. FARQUHARSON, seconded by Mr. ROYAL, the Chairman was requested to bring this document under the notice of the Colleges of Surgeons and Physicians of England, and to ascertain whether the Secretary of State at War would be willing to receive a deputation on the subject.

Public Health Bill.—Dr. JOSEPH ROGERS, President of the Council of the Poor-law Medical Officers' Association, called the attention of the Committee to the thirteenth clause of the Public Health Bill now before Parliament, which runs thus.

“The Local Government Board may from time to time require from all medical officers of health, and from all medical officers appointed under the laws for the relief of the poor, such reports of particulars respecting sickness within their respective districts as the Local Government Board may think fit. It shall be the duty of all medical officers of health within their districts, and under the directions of the Local Government Board, to make returns as to sickness under treatment in or in connexion with any institution within their respective districts

REMARKS.

As regards special Circular dated 6th March, 1873: *a.* In general, in other hospitals, the medical department should have nothing to do directly with the charge of anything but medical and surgical stores and appliances, including medical comforts. All other hos-

pital stores and supplies should be under the care of the Control, or of a special officer appointed for the purpose. *b.* The Medical Department should have nothing to do directly with the arrangements for cooking and dieting of patients, further than to report any deficiencies and defects in the same, and endeavour to have them remedied. *c.* The arrangements as to the washing and cleaning of hospital bedding and clothing should be under the Control Department. N.B. While all non-medical stores should be under charge of the Control (or a special officer), it seems fair that articles actually issued for use in wards should, after issue, be considered as under charge of the Medical Department and hospital corps non-commissioned officers; but something should be distinctly laid down as to who is responsible for breakage and damage in wards. *d.* The Control or Engineer Department should be responsible for the general cleanliness of latrines, outhouses, and garden-grounds of hospital; the Medical Department being responsible for the general condition of hospital wards inside, and to report external defects.

established for the treatment of the sick, and maintained wholly or partly by voluntary subscriptions, or by endowments, or grants from the consolidated fund, or by local rates; and the trustees, governors, managers, and officers of any such institutions, shall furnish to such medical officers of health all reasonable and needful assistance in the preparation of such returns."

He moved the adoption of a petition against it, copies of which should be forwarded to Local Secretaries of Branches.

Mr. HECKSTALL SMITH seconded the motion, which was carried.

The CHAIRMAN stated that, on the occasion of a recent deputation to the President of the Local Government Board from the South-Eastern Branch of the Association, the justice of remunerating Poor-law medical officers for any services which they might be called upon to render under the Public Health Act had been especially brought under the notice of Mr. Stansfeld; and that he had recognised the justice of the claim, and stated that he would bring it under the notice of the Cabinet, and would consider with his colleagues how best such claims might be satisfied.

The Chairman was requested to communicate with Mr. Stansfeld on the subject.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 13TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

ON THE INFECTIVE PRODUCT OF INFLAMMATION. BY J. BURDON SANDERSON, M.D., F.R.S.

THE paper contained the results of researches made, for the most part, during the early months of 1872, for the purpose of elucidating the pathology of secondary inflammations. It was divided into three parts.

In the first, the nature of the process of inflammation was treated of, with special reference to the question how a primary inflammation gives rise, on the one hand, to general constitutional disturbance, and, on the other, to the establishment of new foci of inflammation in parts remote from the original seat of irritation or injury. To distinguish those inflammations which exhibit the tendency to produce these effects, the author used the adjective "infective", understanding it to express two sets of characteristics, one relating to what occurs at the original seat of inflammation, the other to the induced effects manifesting themselves elsewhere. Of the two groups of phenomena, those remote from the seat of primary action claimed most attention in relation to the present inquiry. They were described as consisting, partly in the springing up of new foci of irritation or inflammation along the course of the infected channels, partly in the occurrence of changes in the blood itself (not yet investigated) of such a nature as to show that it is impregnated with an infective poison. In investigations made by the author in 1867-68, it was found that, when in the lower animals, particularly in guinea-pigs, local inflammations are produced, either in the skin or peritoneum, by the introduction of irritant substances, two distinct sets of consequences manifest themselves, viz., the production of a chronic disease affecting all the internal organs, having the characters of a chronic interstitial inflammation (*i.e.* irritative germination of the interstitial tissues of the lung, liver, spleen, etc.) resulting in slow caseous or fibrous degenerations, and destroying life by gradual wasting; and an acute process, in which the same organs and tissues are affected much more rapidly, and in which two additional elements are met with, viz., fever and the formation of abscesses in the irritated tissues. To both these processes the author applied the word "infective." In certain cases both appear to spring from an infection derived from the same source, *i.e.*, from the same primary inflammation and progress in the same animal at the same time.

The second and third parts of the paper were entirely occupied with a summary of the experimental results. After a short account of the work of previous years, the author gave a detailed description of the more recent experiments on which his conclusions, so far as related to acute secondary inflammation, were founded. These were divided into two series. In those comprised in the first series the liquids of acute inflammations of great intensity were used, and the induced disease exhibited the characters expressed by the word septicæmia. The results of these experiments, twenty-seven in number (which were shown to the Society in a table), were as follows. Of the twenty-seven experiments, serous liquids were employed in eighteen; liquids of subcutaneous suppuration in four; liquids from softened infective nodules and lymphatic glands in three; and in two others, the contents of an inflamed uterus. The table also exhibited an experiment in which blood

of an infected animal was used. All these liquids were employed immediately after their removal from the living body of the diseased animal, and contained at the time bacteria. The animals observed were guinea-pigs, dogs, or cats. In four cases the liquid was injected into the jugular vein; in the rest, into the peritoneum. The quantities used varied from three minims to twenty-four minims. Although the liquids were all products of rapidly progressing infective inflammations, the induced results were not all of equal intensity. In twenty out of the twenty-eight experiments tabulated, death took place within twenty-four hours. Of these, all, excepting three, received the excitant in the peritoneum. Peritonitis existed in every case; and it was no less intense in those cases in which the liquid was injected into the jugular vein than in the others. After injection into the peritoneum, the pleura and pericardium were often as intensely inflamed as the peritoneum itself. In all the very rapid cases, the peritoneal exudation was viscid, and coagulated imperfectly. It contained pus corpuscles in small numbers; and the liquor puris often exhibited, when examined with high powers, a tremulous movement, due to the presence of extremely minute rods. In almost all the experiments tabulated the blood exhibited striking and unequivocal microscopical appearances. The liquor sanguinis contained rod-like particles, and possessed in some instances a peculiar viscosity, the nature of which must form the subject of future investigation. In the larger animals death was preceded by phenomena, which resemble those of putrid infection. This was shewn in the paper by a careful comparison of the symptoms with those described by Bergmann as resulting from the injection of putrid liquids into the veins. But the quantity of a putrid liquid required for the production of the same effect is incomparably larger than that employed in the present experiments. In the course of the experiments, it was repeatedly observed that highly infective inflammations, yielding exudation products rich in septic microzymes, may be induced by the introduction of chemical irritants, either into the subcutaneous tissue or into one of the great serous cavities, even when the liquids used are themselves destructive to the life of these minute organisms, or have been subjected to prolonged ebullition immediately before—all other precautions being at the same time adopted to guard against the possibility of septic contamination from without.

In the experiments of the second series, the infecting liquids used were not products of what might be called virulent inflammation, but of more slowly progressing inflammatory processes, chiefly characterised by softening or unhealthy suppuration, either of nodules or previously consolidated or infiltrated tissues. In the examples given, the material was derived from the diseased lungs of human beings or animals affected with chronic pulmonary tuberculosis in the stage of softening. The lesions were substantially the same in all; the serous cavities were inflamed, and contained variable quantities of exudation liquid charged with bacteria, and in most cases there were extensive adhesions and false membranes. In all, the viscera contained "infection-nodules", which were hard and firm externally, with purulent centres.

In the concluding paragraph of the paper, the author cautiously expressed the inferences which he thought justified by the experimental results. He thought that it had been shown that the condition expressed by the word septicæmia (including not only septic fever, but also the intense mucous and serous inflammations by which it is accompanied) may be produced independently of the entrance of septic matter from without, by the introduction into the serous cavities, or into the circulation, of liquids derived directly from living tissues in certain stages of inflammation; and that the process by which infective abscesses are formed in various organs and tissues, at a distance from some primary focus of inflammation, is of similar origin—both being due to the existence in the circulating blood of an infective agent, which, although of purely intrinsic origin, yet possesses all the characters of a septic poison.

The question of the origin of the infective agent itself, Dr. Sanderson regarded as entirely distinct from that of the intrinsic or extrinsic origin of the minute organisms by which its presence is declared, for "it does not at all follow because these organisms come in from outside that they bring contagium along with them; it may be readily admitted that they may serve as carriers of infection from diseased to healthy parts, or from diseased to healthy individuals, and yet be utterly devoid of any power of themselves originating the contagium they convey."

Dr. SANDERSON, being invited by the President to add any explanatory remarks, said that the term infection was used to express the power possessed by all inflammatory liquids, when introduced into the tissues, of exciting inflammation; it was the same as the phlogogenic property of Chauveau or the pyrogenic of others. The term secondary inflammation was one the use of which was compelled by the facts observed. It was applied to the process characterised by germination of interstitial tissue, and distinguished into chronic and acute according to its rapidity.

—Dr. DICKINSON asked how far the distribution of pyæmic abscesses was dependent on the lymphatics or on the arteries. It might be clearly maintained that pyæmia was essentially a condition of embolism in which the embola had pernicious properties. He had been able to trace collections of pus-corpuscles along the course of the arteries of the kidney, where the vessels of the cones were obliterated by embola.—Dr. SANSOM remarked that Dr. Sanderson had said that bacteria might be the carrier of poison, though they were not actually the poison itself; while in his former researches he had shewn that the poison of infecting liquids was particulate, and not soluble. If it were not soluble, he (Dr. Sansom) did not understand how bacteria could be the carriers of it and not themselves be the infecting bodies. It might be that the properties of bacteria varied according to their cultivation. Another question of difficulty arose from the production of conditions resembling those following the injection of animal fluids, by the injection of inorganic matters into the pleura and peritoneum. The source of the bacteria here was a question of great interest. He would not like to come to the conclusion that spontaneous generation was concerned in the matter.—Mr. SAVORY failed to see in what direction Dr. Sanderson's paper carried our knowledge of infection. He understood that fluids not the result of inflammation, when introduced into the circulation, might induce changes similar to those met with in pyæmia or septicæmia. But it was already a familiar fact that inflammatory fever was one means of inducing pyæmia. Might not the organic fragments—bacteria, etc.—instead of being the causes of the disease, be rather coincidences?—Dr. PAYNE asked whether there were any means of distinguishing the bacteria of infective fluids from those arising from simple putrefaction, or whether there were any means of distinguishing between the bacteria met with in different diseases. He had found in *post mortem* examinations of cases of pyæmia, collections of yellow matter containing scarcely anything that could be called pus, with very few cells, but with a large amount of granular or amorphous matter. Had Dr. Sanderson come to any conclusion as to the period during which the infective power was retained after death?—Mr. HULKE asked how far the researches described threw any light on the frequency with which secondary abscesses occurred in the joints in pyæmia.—Dr. SANDERSON, in reply, said that his paper was not to be regarded as an attempt to settle the question of pyæmia, inflammation, etc., but as a contribution towards the natural history of the subject. In his communication to the Pathological Society, he had endeavoured to show that the fever arising from secondary abscess was identical with that of septicæmia; it was not dependent on the introduction of matter from without, but on the products of inflammation. With regard to what might be called the reflex influence of the septic poison on other processes going on at the time, he remarked that the introduction of septic poison caused acute changes to occur in any part which might be the seat of chronic disease. Again, the same injury which had no effect on a sound animal, would give rise to destructive inflammatory changes in one already diseased. He had lately seen an experiment of M. Chauveau of Lyons, in which inflammation and gangrene was induced by the preliminary injection of septic fluids, in the testes of horses subjected to the operation of passing the organ under the skin of the groin—the manner in which castration is done in France, and which ordinarily is followed by simple atrophy. The property of microzymes as carriers of infection depended on the circumstances in which they were placed. The activity of infective fluids was greatest immediately after death, after which it diminished. In conclusion, he acknowledged the assistance which he had received from Dr. Klein in his researches.—Dr. KLEIN said that Dr. Sanderson's researches showed that infective matter was carried by the lymphatics; but, after having passed from there into the blood-system, it might be carried on by this.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held on Friday, the 30th instant, at the Office of the Association, 37, Great Queen Street, London, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, May 15th, 1873.

EAST YORK AND NORTH LINCOLN BRANCH.

THE seventeenth annual meeting of this Branch will be held at the Hull Infirmary, on Wednesday, May 28th, 1873; J. MORLEY, Esq., President, in the Chair.

The title of any paper which members may wish to read, must be forwarded to me on or before Wednesday, the 21st instant.

ROBERT H. B. NICHOLSON, *Honorary Secretary*.

YORKSHIRE BRANCH.

THE annual meeting of this Branch will be held at the Museum of the Yorkshire Philosophical Society, York, on Wednesday, May 28th, 1873, at 2 P.M. precisely.

The members will dine together at the Station Hotel, at 5 P.M.

Gentlemen intending to bring forward communications, or to join the dinner, are requested at once to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary*.

York, May 12th, 1873.

SOUTH MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Council Chamber at the Town Hall, Northampton, on Thursday, June 5th, at 1 P.M.; Dr. BRYAN, President, in the Chair.

Dinner at the George Hotel, at 4 P.M. Charge, 5s. 6d., exclusive of wine.

Gentlemen who intend to read papers, and those who wish to dine, are particularly requested to communicate, as early as possible, with the Honorary Secretaries.

J. M. BRYAN, M.D. } *Honorary Secretaries*.
WM. MOXON. }

Northampton, May 6th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE next meeting of the above district will be held at the Board Room of the Infirmary, Chichester, on Friday, June 6th, at 2.45 P.M. precisely; Dr. TYACKE in the Chair.

The dinner will take place at the Dolphin Hotel, at 4.45 P.M. Charge, 5s., exclusive of wine.

All members of the South-Eastern Branch are entitled to attend, and to introduce friends.

Papers have been promised by Dr. Fussell of Brighton and Dr. Paxton of Chichester.

Any other member desirous of reading papers or bringing forward cases, is requested to communicate forthwith with the Honorary Secretary.

WM. J. HARRIS, *Honorary Secretary*.

13, Marine Parade, Worthing, May 19th, 1873.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES.

THE combined annual meeting of the above Branches will be held at the Town Hall, Great Yarmouth, on Friday, June 20th, at 2 P.M.; J. C. SMITH, Esq., President, in the Chair.

Dinner at the Royal Hotel, Great Yarmouth, at 5.30 P.M. Tickets, 12s. 6d. each.

Members wishing to read papers, or to join the dinner, are requested to communicate, as early as possible, with one of the Honorary Secretaries.

B. CHEVALLIER, M.D., Ipswich.

J. B. BRADBURY, M.D., Cambridge. } *Honorary Secretaries*.

J. B. PITT, M.D., Norwich.

May 19th, 1873.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting of this Branch will be held at Warrington, on Tuesday, June 24th, at One o'clock; CHARLES WHITE, Esq., President, in the Chair.

Gentlemen having papers or cases, etc., to communicate, are requested to forward the titles or particulars to the undersigned, without delay.

A. B. STEELE, *Honorary Secretary*.

54, Rodney Street, Liverpool, May 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Great Western Hotel, Birmingham, on Tuesday, June 24th, at 3 P.M.

An address will be delivered by the President, FURNEAUX JORDAN, Esq., F.R.C.S.

The annual dinner will be held at 5 P.M., for the convenience of country members.

Dinner tickets, including waiters and dessert, 7s. 6d. each.

Members intending to be present at the dinner, are requested to communicate with the Honorary Secretaries on or before June 20th, in order that suitable arrangements may be made.

T. H. BARTLEET, F.R.C.S. } *Honorary Secretaries*.

BALTHAZAR W. FOSTER, M.D. }

Birmingham, May 20th, 1873.

MEDICAL NEWS.

ANNIVERSARY OF THE PHARMACEUTICAL SOCIETY.

THE annual meeting of this Society was held on Wednesday the 21st, at the Society's house, 17, Bloomsbury Square. The proceedings were opened by an address from Mr. Haselden, the President, who, after congratulating the members on the steady prosperous condition the Society had maintained and upon the esteem in which it was held abroad, went on to speak of the examinations, the conduct of which now constitutes one of the most important functions of the Society. His remarks in several respects suggested the desirability of making this more exclusively its business, and of leaving the practical work of education to other hands.

In the Report of the Council, satisfaction was expressed at the advantages of the more representative constitution of the executive body and of reporting its proceedings. The financial condition of the Society was referred to as exhibiting an advance, and it was shewn that the members of the Society had largely increased. Among the other incidents of the past year, the rectification of the *Register* and the increase in the Benevolent Fund were referred to.

The subjects which chiefly occupied the attention of the meeting were the question as to the admission of women into the Society, and an alteration of the Society's bye-laws affecting the conditions under which candidates were to be admissible to the examinations requisite for obtaining legal qualification to carry on the business of chemist and druggist.

As regards the former subject, Mr. Hampson, a member of the Council of the Society, had given notice of a motion to the effect that the refusal to admit into the Society female persons who conformed to the legal tests of the examiners, was contrary to the plain intention of the statutes.

After a long discussion, it was decided to take a vote on an amendment, proposing that the further discussion of the subject should be adjourned *sine die*, which was carried.

The changes proposed by the Council to be made in the regulations applying to the Society's examinations, were intended to give greater security that persons admitted to registration, and thereby certified as being fit to carry on, on their own account, and to practise pharmacy, should have had practical experience of their business. The amendments of the regulations were originally suggested by the Board of Examiners; they provided that no person should be admitted to the examination who had not attained the full age of twenty-one years, and that no person should be allowed to pass the examination who had not been for three years either registered as a student, or otherwise practically engaged in the translation and dispensing of prescriptions.

In the discussion which took place on the proposition that these amendments should be adopted, several speakers addressed the meeting on both sides of the question, but eventually they were carried by a large majority. It now only remains for the Privy Council to confirm these new regulations, as provided by the Pharmacy Acts (1852 and 1868).

MEDICAL VACANCIES.

THE following vacancies are announced:—

- ALNWICK RURAL SANITARY DISTRICT—Medical Officer of Health: £50 per annum, and fees.
- BILLERICAY, CHELMSFORD, and MALDON RURAL SANITARY DISTRICTS, combined—Medical Officer of Health: £800 per annum. Applications to W. W. Duffield, Esq., Chelmsford.
- BILLESDON, BLABY, HINCKLEY, and LUTTERWORTH Rural Sanitary Districts, and Melton Mowbray Urban Sanitary District, combined—Medical Officer of Health: £450 per annum; to be increased, if other districts join: maximum, £800.
- BRIGHTON AND HOVE DISPENSARY—Two Resident House-Surgeons: £100 per annum, furnished apartments, coal, gas, and attendance.
- COUNTY DOWN INFIRMARY—Resident Registrar and Assistant-Surgeon: 60 guineas per annum, board, apartments, and washing.
- COUNTY OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles.
- DENBIGH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
- DONCASTER UNION—Medical Officer for the Doncaster East District: £35 per annum.
- DRIFFIELD UNION, Yorkshire—Medical Officers and Public Vaccinators for the Kilham and Wetwang Districts: £25 and £21 per ann., and fees, respectively.
- DURHAM, County of—Public Analyst: £100 per annum, and 6s. for each analysis. Applications to John Watson, Esq., North Bailey, Durham.
- ELY UNION—Medical Officer for District No. 5 and the Workhouse: £51 per annum, and fees.
- FYLDE UNION—Medical Officer of Health: £500 per annum, to include travelling and all other expenses.

- GRANARD UNION, co. Longford—Medical Officer for the Street Dispensary District: £100 per annum. Applications to John Kenny, Esq., Lissanure, Edgeworthstown.
- GRAVESEND and MILTON INFIRMARY and DISPENSARY—Surgeon.
- GREAT YARMOUTH HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
- HAMBLEDON UNION, Surrey—Medical Officer of Health: £50 and fees for one year. Applications to F. Ferdinand Smallpiece, Esq., Guildford.
- HUDDERSFIELD INFIRMARY—House-Surgeon and Assistant House-Surgeon: £80, increasing to £100, and £40 per annum, board, lodging, and washing, respectively.
- INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
- KELLS UNION, co. Meath—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Moynalty Dispensary District: £120 per annum, and fees. Applications to John Keating, Esq., Moynalty.
- KING'S COLLEGE, London—Professor of Anatomy.
- LAMBETH—Dispenser: £90 per annum and extras.
- LINCOLN UNITED FRIENDLY SOCIETIES DISPENSARY—Medical Officer: £150 per annum, to commence, house, gas, etc. Applications to E. Lascelles, Lincil Bank, Lincoln.
- LONDON TEMPERANCE HOSPITAL—House-Surgeon: £70 per annum, apartments, and board.
- MAGHERAFELT UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bellaghy Dispensary District: £100 per annum, and fees. Applications to John Hill, Esq., the Castle, Bellaghy.
- METROPOLITAN ASYLUM DISTRICT ASYLUM FOR IMBECILES AND HARMLESS LUNATICS, Haverstock Hill—Resident Medical Superintendent.
- MIDDLESBROUGH URBAN SANITARY DISTRICT—Medical Officer of Health: £150 per annum.
- NORTH LONDON CONSUMPTION HOSPITAL—Physician.
- NORWICH DISPENSARY—Resident Medical Officer: £120 per annum, £12 for coal, etc., and residence. Applications to Robert Chamberlin, Esq., Catton House, Norwich.
- SALISBURY URBAN SANITARY DISTRICT—Medical Officer of Health: £60 per annum.
- SHEFFIELD GENERAL INFIRMARY—House-Surgeon: £140 per annum, board, lodging, and washing.
- SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Physician.
- SPENNYMOOR URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year.
- WESTMINSTER HOSPITAL—Assistant-Surgeon.
- WHITEHAVEN UNION—Medical Officer for the Harrington District: £45 per annum.
- WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL—House Governor, Secretary, and Collector: £120 per ann., board and residence.
- WORCESTER INFIRMARY—Resident Surgeon, Dispenser and Secretary: £150 per annum, furnished apartments, coal, gas, and attendance.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- *MCLEAN, Allan, M.B., appointed Medical Officer and Public Vaccinator for the Portland District of the Weymouth Union; Admiralty Surgeon and Agent; Surgeon to the Royal Portland Dispensary; Surgeon to the Dorset County Club; and Surgeon to the Foresters' and Odd Fellows' Clubs.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

- THOMPSON.—On the morning of May 20th, at Glyndon House, Cradley, near Brierley Hill, the wife of Wesley H. Thompson, L.R.C.P.Ed. & L.R.S. Ed., of a son.

MARRIAGE.

- BODINGTON—BELL.—On May 5th, at South Place Chapel, Finsbury, by Moncure D. Conway, Esq., Minister, *G. F. Bodington, M.D., M.R.C.P., of Ashwood House, Kingswinford, Staffordshire, to Mrs. Bell, eldest daughter of F. C. Brooke, Esq., of Ufford, Suffolk, and granddaughter of the late Charles Allix, Esq., of Willoughby, Lincolnshire.

DEATHS.

- ALLOTT, James R. L., Esq., Surgeon, of Hoyland Nether, aged 54, on May 6th.
- DINGLEY, Thomas Kerslake, Esq., Surgeon, at Winkleigh, Devon, on April 24th.
- FALKNER, Alfred, A.B.T.C.D., L.R.C.P.Ed., at Longford Terrace, Kingstown, Dublin, aged 33, on May 8th.
- HODSON, Thomas, Esq., Surgeon, late of Deva Villa, Clifton Road East, at Brighton, aged 54, on May 8th.
- KNIGHT, Gustavus Irwin, Esq., Surgeon, at Dorking, on May 11th.

DR. FRANCIS T. BOND.—At the meeting of the Committee of the Hartley Institution, Southampton, last week, the following resolution was passed: "That this Committee, on the retirement of Dr. Bond, desires to place on record the high sense they entertain of the great services which Dr. Bond has rendered to the Hartley Institution as its Principal; and, while they offer him their cordial congratulations on his appointment to a position of great trust and responsibility, regret that the institution over which they preside should lose the services of one who bears so high a reputation as a man of science, a thorough man of business, and a private gentleman, and who has done so much to advance the interests and reputation of the Hartley Institution." Dr. Bond was present, and returned thanks.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAYSt. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Greenhow, "Case of Abdominal Aneurism successfully treated by Proximal Pressure of the Aorta"; Dr. George Johnson, "On the Etiology of Albuminuria"; Dr. Wilson Fox, "On Temperature, Pulse, and Respiration, in Phthisis and Acute Tuberculosis of the Lungs."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. G. ASHTON's letter has been forwarded to Mr. Eassie.

THE Reports on Sanitary Engineering have not been republished. The JOURNALS in which they are published can be obtained on application to the General Manager, Mr. Fowke, at the office.

MR. F. LOWNDES (Liverpool).—We do not file the *Ohio Clinic*, and have not retained the number of December 28th, referred to in our notice. It could probably be obtained by writing direct to the publisher, Cincinnati, U.S.A., or by order through Trübner and Co., Paternoster Row, London.

GOOD MORALS BUT BAD ENGLISH.

WE have received from Mr. Acton, some "Moral Reasons which may influence public opinion in preventing the repeal of the Contagious Diseases Acts," which is apparently a broadsheet intended for general circulation. Its object is good, and its statements are not without force. We are sorry to observe that it is written in a very illiterate fashion, and that very few of its sentences parse. Either Mr. Acton did not write this discreditable jumble of bad English, or some one else must have written his books, which are for the most part couched in clear and vigorous language, and are in places remarkable for picturesque effect. The members of a learned profession ought to be able to write with tolerable correctness their native language; and a document such as this exposes its author to ridicule, and discredits the educational status of the profession to which he belongs. Ludicrous blunders of meaning, style, form, and parsing occur in every paragraph and almost every line, and we must protest against a gentleman who thus offends constituting himself the literary champion of a good cause. Mr. Acton does not, like Mr. Bryant, effect the marvels of plucking "cotton-wool from the sheep," or cutting off two legs at once, or only occasionally passing his own urine; but grammatically construed, his language would habitually convey a meaning directly opposite to that which he intends to convey, and we should have to admire "sanitary and moral consequences" of prostitution, to admit that it has "beneficial sanitary results," and that the action of the Contagious Diseases Acts, as a deterrent is "to immorality"—that since the passing of the Act the prostitute has become immortal, for society will not "let her die," and now usually disease follows "death." We give Mr. Acton credit for excellent intentions; but he is hardly likely to achieve any good object by so absurd an utterance. If the document is to have an extensive circulation, a second and revised edition is desirable. These are grand results, and if communicated to the House of Commons in time, might have altered the views of some of those who voted last night; but it is difficult to suppose that Mr. Acton really meant to set them forth.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MIDWIFERY ORDERS.

A CORRESPONDENT writes:—I am one of the Medical Officers of the Clun Union, and in September last, I received an order signed by the two overseers of a parish in my district, to attend a midwifery case. It was of a very urgent nature, very complicated, requiring instrumental aid, and constant attendance for ten days subsequently. The Board of Guardians have refused to pay my fee of two sovereigns, stating as a reason that the husband is in a condition to pay himself. I am therefore compelled to appeal to the *County Court*, and should be much obliged if you would kindly give me your opinion as to whether I ought to sue *the Board of Guardians or the Overseers who gave the order*, as I am anxious to avoid being non-suited by putting the saddle upon the wrong horse.

* * In Glen's *Poor-Law Orders*, it is provided by Art. 182-3 that the fee to be paid for the case in question is £2, and from note (b), it would appear that the Overseers are responsible, and not the Guardians. The best course to adopt would be to apply to the Overseers for payment, and should they refuse, then to lay the case before the Local Government Board, asking their direction in the case.

Mrs. HOLMES COOTE would remind those who have so generously promised to support her son, Henry Lennard Coote, for "The Medical Benevolent College," that the election will take place on Thursday, May 29th, at the Hanover Square Rooms, between the hours of twelve and three o'clock; and that she will be thankful to receive votes, on or before the above date, for her son.

4, Coleherne Road, Redcliffe Gardens, West Brompton, May 20th, 1873.

ERRATUM.—In Dr. Hughlings Jackson's paper, May 10th, 1873, page 532, col. 1, line 31, for "special", read "striking". In fourth line of foot-note, page 533, for "lacteal", read "tactual".

MEDICAL PRACTICE IN SPAIN.

SIR, —I see by the JOURNAL of the 10th instant, just received, that you are pleased to refer to me for information regarding medical matters here, on behalf of a young member. With pleasure I hasten to reply to each query. 1st. A British or any other diploma is recognised in Madrid (I cannot answer for the provinces), by the holder presenting himself at the office of the Minister of Fomento (corresponding to that of Public Instruction), and filling up a form stating that he intends commencing a "Nueva Industria," or new branch of industry, and paying a quarterly tax in advance of about £2 10s. 2nd. A Spanish diploma can be obtained by the holder of any foreign diploma presenting himself with £31 in his hand, and paying it over to the rector of the University, which of course would qualify him to practise in the provinces, as well as in the Spanish colonies, which are now very few. 3rd. In reference to the last inquiry, "where information could be got as to the present state of Medicine in Spain?" I have only to reply there is no work on the subject, or office where such can be had, and that any gentleman wishing it, must come and search and see for himself. I shall be happy to give a hearty and hospitable Scotch welcome in my own house to the member, as long as he pleases to remain, and where he will have an opportunity of seeing from a hundred to a hundred and fifty per week, of the diseases most prevalent in Spain. As I intend to be present at the meeting of the British Medical Association this year, in London, it may suit the Young Member to come over here at once, and remain a couple of months, and get all he desires, at the same time filling my post during a month's absence.

1, Calle Magdalena, May 16th, 1873.

I am, etc.,
W. JELLY.

FEMALE PROFESSIONAL EDUCATION.—The new law admitting female students to the full rights of the Zurich University, has (says the *Pall Mall Gazette*) been recommended by the Cantonal Government for adoption, and the popular vote is to be taken on it on the 18th instant. Zurich seems to be considerably in advance of the rest of the world in this matter of female education, for the number of lady students has steadily increased since the courses were first opened to them informally six years since; and there are now reported to be one hundred and nineteen of these "girl-graduates" who have actually matriculated under the existing university rules which it is proposed to legalise.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, May 17th; The Manchester Guardian, May 21st; The Aberdeen Daily Free Press, May 17th; The Bath Express, May 17th; The Birmingham Daily Post, May 21st; The Birmingham Daily Mail; The Hull Packet; The Daily Bristol Times and Mirror; The City Press; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Mr. T. H. Bartleet, Birmingham; Dr. Reginald Southey, London; Dr. B. W. Foster, Birmingham; Mr. Redwood, Rhymney; Mr. E. S. Davis, Mountain Ash; Mr. Clegg, Epping; Dr. Britton, Driffield; A Member; Dr. Bright, Forest Hill; Dr. F. C. Calvert and Co., Manchester; The Secretary of the Royal Medical and Chirurgical Society; Dr. Stanley Haynes, Malvern; Mr. J. R. Roe, Bridgnorth; Mr. Falkner, Dublin; Dr. F. J. Brown, Rochester; Dr. Henry Bennet, Mentone; Dr. Procter, York; Dr. Ralfe, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Pathological Society; Dr. G. H. Philipson, Newcastle-upon Tyne; Our Dublin Correspondent; Dr. Lanchester, Croydon; Mr. Poole, London; The Secretary of the Obstetrical Society; Dr. De Renzy, Lahore; Dr. J. W. Moore, Dublin; Mr. Eddowes, Shrewsbury; Dr. MacCrea, Belfast; Dr. Pitt, Norwich; Our Paris Correspondent; Dr. Gidley, London; Mr. Farr, Swinton; The Secretary of the Clinical Society; Dr. Gray, Armagh; Dr. Burney Yeo, London; Dr. T. Clifford Allbutt, Leeds; Scrutator; Dr. J. M. Crombie, London; Dr. J. Ford Anderson, London; Mr. W. Johnson Smith, London; Captain Trotter, Gosport; Dr. Murchison, London; Mr. Kesteven, London; Mr. D. Dalrymple, M.P., London; Dr. Burdon Sanderson, London; Mr. Erichsen, London; etc.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE VI.—*Concluded.*

IV. *Atrophy and Suppurative Inflammation of the Kidney from Retention of Urine—Symptoms and Diagnosis.*—V. *Acute Cystitis resembling Acute Bright's Disease—Symptoms, Diagnosis, and Treatment.*

IV. *Atrophy and Suppurative Inflammation of the Kidney from Retention of Urine.*—The effect upon the kidney of retention of urine varies according to the nature and seat of the impediment. It differs, too, according as the obstruction occurs gradually or suddenly. One of the most frequent causes of renal disease consequent upon retention of urine is stricture of the urethra. The urinary organs behind the stricture undergo changes of structure in proportion to the degree and the duration of the obstruction. The canal of the urethra on the vesical side of the stricture becomes dilated; its mucous membrane is frequently inflamed, and secretes pus. The muscular coats of the bladder become thickened by hypertrophy, and its mucous membrane often inflamed and sacculated. The obstruction then affects the ureters, one or both of which may have their canals dilated and their walls thickened; and at length the natural cavities of the kidney—the pelvis, infundibula, and calyces—undergo the same process of dilatation. The medullary cones become flattened out by the pressure of the retained urine. The cortical substance of the gland is expanded, and presents lobed bulgings on its surface, which correspond with the original lobes of the embryo kidney. The glandular tissue is squeezed between the distended interior cavity and the fibrous investing capsule; and the intertubular capillaries are compressed by the dilated tubes. Thus the circulation is impeded, and the result is atrophy of the gland, which may by degrees be converted into a membranous cyst, all traces of glandular structure being lost.

It is but seldom that the kidney undergoes much dilatation without the occurrence of other structural changes. The mucous membrane of the dilated pelvis often presents irregular inflamed patches, and secretes a purulent liquid; and the apices of the medullary cones are frequently ulcerated. Then, as the mischief extends, inflammatory deposits occur in the substance of the kidney, and numerous small abscesses are scattered through the cortex. One or more of the abscesses on the surface may burst through the capsule, and then the kidney may be found imbedded in pus.

When the retention of urine is the result of stricture, or of enlarged prostate, or of calculus with thickening of the walls of the bladder, or of atony of the muscular coats, both kidneys are usually affected simultaneously, but in different degrees; but when one ureter is obstructed by a calculus, or by a cancerous growth, the structural changes are limited to the corresponding kidney.

The explanation of these changes is not difficult. The secreted urine is unable to escape in consequence of the obstruction in front; there is, therefore, an accumulation, first in the ureter and pelvis of the kidney, and later within the uriniferous tubes. The tubes become distended by the retention of their own secretion, just as some tubes in the small red granular kidney, having lost their lining of gland-cells, but continuing to secrete a serous liquid, become distended and dilated into cysts. The epithelial lining of the straight tubes is disintegrated and destroyed by the pressure of the retained urine; and at length some of the tubes in the cortex, whose basement-membrane is more delicate than that of the cones, give way, and allow their contents to become infiltrated amongst the intertubular capillaries. The infiltration of acid urine may cause the immediate formation of coagula within the capillaries, and, as a consequence of localised capillary and venous obstruction, irregular atrophic puckering of the gland occur, somewhat similar to those which result from capillary embolism, to which I have before referred. But the escape of urine through the broken walls of the tubes may excite suppurative inflammation and abscess. A rapid cell-formation takes place between the tubes; and soon the glandular structure is disintegrated, and replaced by inflammatory products. The changes within and between the uriniferous tubes are a miniature representation of what happens on a larger scale when a distended urethra gives way behind a stricture, and a perineal abscess results from the infiltration of

urine into the submucous tissues. Bear in mind that the changes within the substance of the kidney are due to the retention and accumulation of the newly secreted acid urine within the tubes, and not to the regurgitation of foetid ammoniacal urine, as has recently been suggested. Without doubt, the urine in the bladder in cases of old stricture, vesical calculus, and cystitis, is often foetid from decomposition; but the regurgitation of such urine into the uriniferous tubes is a physical impossibility. If you have ever attempted to inject the tubes from the pelvis of the kidney, you will have found the task a very difficult one, in consequence of the resistance offered by the liquid and solid contents of the closed tubes. Obviously, then, during life, while streams of secreted urine are perpetually flowing through the tubes, it is impossible that urine from without can regurgitate into them. The tubes are dilated, and some of them ultimately ruptured, by the retention and accumulation of their contents, and not by the regurgitation of urine from the pelvis of the kidney. Then intertubular coagula and suppuration result, from the infiltration of urine escaping from the torn tubes amongst the intertubular capillaries and veins.

The *Symptoms* of renal disease consequent upon an impeded escape of urine are usually more or less masked by the diseased condition of other parts of the urinary organs. The mucous membrane of the bladder in cases of stricture, vesical calculus, or enlarged prostate, usually secretes pus; and there are no means by which this can be distinguished from matter derived from a suppurating kidney. For the suppurative process in the kidney rapidly destroys the tubular structure of the organ; the pus, therefore, is not moulded within the tubes, and there is no microscopic evidence of the renal origin of the pus. Chemistry, again, affords no more assistance than the microscope. The urine, which contains pus, is always albuminous. The coagulability of the urine by heat and acid is, therefore, no indication that the kidneys are implicated, except when the degree of coagulability is out of proportion to the amount of pus, and it may be blood, mingled with the urine. Chemical analysis affords little practical aid in estimating the efficiency of the kidney. The urine is usually foetid and alkaline, and much of the urea is decomposed into carbonate of ammonia while the urine is still in the bladder. A low specific gravity of the urine with a scanty secretion would be a suspicious condition, and especially so when associated with indications of uræmia, such as drowsiness, headache, vomiting, and a brown dry tongue, with an excess of urea in the blood. Pain and tenderness in the region of one or both kidneys may be severe when, with sudden retention of urine, there is great distension of the cavity of the kidney; but, in cases of long continued and slowly increasing obstruction, these symptoms bear no proportion to the amount of structural change in the kidneys; and it sometimes happens that the first indication of serious renal disease is afforded by the occurrence of alarming symptoms of uræmic poisoning, quickly passing on to fatal typhoid collapse and coma, with a low temperature. The cases are few in which the kidneys are sufficiently enlarged by distension and expansion to form a palpable tumour in the lumbar region.

V. *Acute Cystitis simulating Acute Bright's Disease.*—It has happened to me to meet with a considerable number of cases of acute inflammation of the mucous membrane of the bladder, unconnected with stone, stricture, or gonorrhœa, which, in consequence of the urine being blood-tinged and albuminous, have been mistaken for cases of acute Bright's disease. Therefore, before I proceed to describe the treatment of Bright's disease, I think it well to point out to you the distinctive features of acute cystitis. Remember that I exclude from our present consideration such obvious and common cases as cystitis from stone, stricture, retention of urine, and gonorrhœa; and I refer to cystitis not excited by any obvious mechanical cause. In a large proportion of cases—in six out of twelve of which I have notes—the disease directly followed, and was probably caused by, a chill. In four cases, dyspepsia with rheumatic or gouty symptoms had preceded the cystitis. In one, the disease came on after feasting with excess of wine. In one case—that of a physician—the symptoms commenced within a few hours after he had been impressed by a peculiar odour from the throat of a boy whom he was attending with a low form of scarlet fever. It is probable that in all these patients the immediate cause of the cystitis was some irritating material in the urine, as acute inflammation of the urethra is excited by the contact of the gonorrhœal poison. In the cases last mentioned, some poisonous product may have entered the circulation, and passed out through the kidneys without exciting disease in them, but setting up inflammation in the bladder. It is difficult to explain or to understand how it happens that exposure to cold should in one person excite acute cystitis, and in another acute desquamative nephritis. Of the twelve cases of acute cystitis which I have noted and tabulated, eight were males, and four females. The ages ranged from seventeen in a female to sixty-nine in a male.

In some cases there has been more or less of vesical irritation for a few days before the acute attack, but in most instances the onset has been sudden and severe. The chief symptoms are frequent micturition, with more or less of uneasiness or pain in the region of the bladder. The calls to pass urine may occur every half-hour, or even oftener; and micturition is usually attended with an increase of pain and a sense of scalding in the neck of the bladder. The vesical irritation is increased by exercise, by exposure to cold, and by alcoholic liquors. The urine quickly becomes turbid with puriform mucus, and often blood-tinged. In one case there was a puriform discharge from the urethra as well as from the bladder, though the disease was certainly not the result of gonorrhoea. Usually the urine has an acid reaction; but, if there be much admixture of blood, the acidity is lessened by the alkali of the blood. It contains an abundance of albumen, partly derived from the puriform secretion, partly from the blood. On a microscopic examination, pus-cells and blood-corpuscles are seen in abundance, but no tube-casts. Although the local symptoms are distressing, there is little or no constitutional disturbance. The nights are disturbed by frequent calls to micturate, and the broken rest is attended with a sense of fatigue and nervous exhaustion; but there is little fever, and no vomiting. If, within a few days from the onset of the symptoms, the patient be subjected to appropriate treatment, the disease usually subsides as rapidly as it came on. If, on the other hand, the symptoms be negligently or erroneously treated, the disease may become chronic, and cause prolonged and severe suffering. The urine becomes alkaline, ammoniacal, and fetid; there are perpetual pain and annoyance; and ultimately the disease may extend backwards through the ureters to the kidneys, and so set up a fatal pyelo-nephritis.

Diagnosis.—The distinction between acute cystitis and acute Bright's disease is sufficiently obvious if you bear in mind that the local symptoms are all referable to the bladder, while dropsy, vomiting, and other renal symptoms, are absent. The urine is usually secreted in normal quantity, and of normal specific gravity. It is albuminous only in direct proportion to the amount of blood and pus which it contains, and the most careful microscopic examination discovers no tube-casts.

Treatment of Acute Cystitis.—In the treatment of this form of cystitis, you have to bear in mind that the inflammation of the lining membrane of the bladder is kept up and increased by contact of the acid and irritating urine. The main object of treatment is to diminish as much as possible the irritating qualities of the urine; with this object in view, the patient must be confined to bed or to a sofa in a warm room, and be kept on liquid food without stimulants. If there be no special reason in the peculiarity of the patient's stomach to forbid it, milk, cold or tepid, may serve as meat and drink—as a rule, milk is easily digested, and, at the same time, it acts as a diluent. If milk disagree, soup, beef-tea, mutton- or chicken-broth may be given, with the addition of some farinaceous pudding, and any simple diluent drink. Pure cold water is as efficacious, though not so pleasant, as aerated or Seltzer water. In addition, the urine is to be kept neutralised by citrate of potash, given every six hours. A warm hip-bath should be given night and morning; a dose of morphia at bedtime, to allay irritation and procure sleep; and an occasional seidlitz powder as a laxative if necessary. Under this plan of treatment, the acute symptoms usually subside with great rapidity; the pain and irritation pass away, and the urine regains its normal characters. After a few days, the citrate of potash may be discontinued, and the tincture of perchloride of iron given in twenty minim doses two or three times a day after food. So long as any mucus appears in the urine, even though the local uneasiness may have passed away, the patient should be kept under observation and treatment. If a chronic catarrhal condition of bladder remain after the acute symptoms have subsided, copaiba balsam often effects a rapid and complete cure. One capsule may be given an hour or two after food three times a day; and, if the stomach will bear it, the dose may be increased until six and even nine capsules are taken in three doses in the twenty-four hours. In one case which had been of a year's duration, the urine being turbid with blood and pus, and smaller doses of copaiba having failed to cure, at the suggestion of Sir William Fergusson, who saw the patient with me, the dose was increased to three capsules three times a day, and the result was a complete and permanent cure within six weeks; the urine at the end of the treatment being of natural sherry colour, transparent, and without a trace of mucus. Quite recently I have seen a young lady in whom acute cystitis from cold had left a vesical catarrh after a period of six weeks. I prescribed one capsule three times a day, and, in less than a week, the urine was entirely free from mucus, and the cure was complete. I have seen equally good results in other cases. It is probable that the remedy, being excreted by the kidneys, has a local curative action on the mucous membrane of the bladder. The copaiba sometimes brings out a transient erythematous rash.

CLINICAL LECTURE

ON A CASE OF

PARALYSIS OF THE DIAPHRAGM.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

CASE.—E. H., aged 30, servant, was admitted January 14th, 1873. He had dark hair, and was of medium height, fairly well made. He had been ill, off and on, seven or eight years. When admitted, he had been ailing two months. He was very subject to headaches. He had had several severe falls, the first six years ago; he was insensible after the last for an hour, not after the previous ones. His father had hæmoptysis, and died four years ago, much emaciated; a sister had no hæmoptysis, but was affected like the father. The patient had had hæmoptysis himself. He was not anæmic. His aspect was distressed. Pulse 80, regular, steady. There was great hyperæsthesia of the surface; a cold hand applied made him start. The apex-beat of the heart was in the fifth left intercostal space, within or at the vertical nipple-line. The area of cardiac dulness was not increased. No *bruits* were heard with the heart's sounds; they were very weak at the midsternum, more distinct at the apex. The rhythm was quite regular. The first sound was of good length at the apex. There was no murmur at the xiphoid cartilage. The jugulars were not full. The upper ribs moved considerably, and the whole chest was drawn upwards in inspiration; the lower ribs expanded very little; the abdomen scarcely moved at all. There was good percussion all over the front of the chest. Air entered freely in both lungs in front during deep inspiration. The breath-sounds were rather harsh. Resonance was fairly good throughout the back, and air was heard entering the lungs fairly well. He complained of shortness of breath, of inability to lie down, and of being put out of breath by the least exertion. He had not had an hour's sleep at night for two months; he dozed a little towards morning. He complained very much of aching and shooting pain in the left side, which, as well as the dyspnoea, prevented his sleeping. There was no cough or expectoration, nor any swelling of the legs. He had no appetite, and was thirsty. He was ordered to have simple diet, beef-tea and milk; and to take twenty grains of saccharated carbonate of iron three times a day, and to have ten grains of chloral hydrate at bedtime, to be repeated if necessary. On the 15th, he had slept from 12 to 2 in the night, and again this morning. He was almost free from pain in the left side when visited, but had it badly a short time since. He had much headache and vertigo. He passed urine with difficulty and pain; he said that he had not passed any till to-day since the 12th. The urine was full-coloured, pretty clear, of specific gravity 1030, not albuminous. Pulse 64; temperature 100.—January 16th. He slept five hours last night, and felt better. The left side was tender when I percussed over it. There was no movement over the abdomen; the upper ribs played too much. The chloral was repeated, and he was ordered to have the following draught three times a day. \mathcal{R} Ammonia carbon. gr. iv; ferri ammonio-citratis gr. viii; tincturae nucis vomicae \mathfrak{m} x; tincturae calumbæ \mathfrak{m} x; aquæ \mathfrak{z} i.—January 17th. He had slept very well last night. Tongue clean. He had no pain in the side now at all. Temperature 98.6.—January 18th. The bowels had been freely opened; much fecal matter being brought away, with much relief. He had a good night without chloral, and felt better than he had done for two or three years.—January 20th. He slept well, and felt much better. The abdomen at the upper part fell in ten divisions of Dr. Sibson's stethometer in deep inspiration.—January 24th. The breathing now was quite normal. The abdomen while he was recumbent rose fully in inspiration, and fell in expiration; this was the case with the upper part, which a few days before fell in during inspiration. The upper ribs moved a little—not more than normal.—February 6th. He had been an out-patient ten or twelve days, and was going on very well. Pulse steady and good, 80. The upper ribs in the recumbent posture moved slightly; the lower more; the abdomen still more. A trace taken January 17th was tolerably normal. The rise was low, and rather sloped; the apex bluntish; the descent long and gradual, with one well marked notch, and several minute ones.

REMARKS.—The symptoms in this case were by no means plain to read—at any rate, at first. Subsequently, and chiefly by observation of the effects of remedies, they became more intelligible; and, on retro-

spect, the pathological story comes out sufficiently clear. The phenomena observed were, of a positive kind, dyspnoea, orthopnoea, incapacity for exertion, insomnia, left-side pain, altered respiratory movements, paresis of the diaphragm; of a negative kind, healthy state of the lungs, heart, and kidneys, and of the vascular system generally. The family history pointed to the probable existence of the tuberculous diathesis in our patient, and his personal suggested the possibility of traumatic lesion of his brain or cord.

The chief symptom, around which several of the others grouped themselves, was the singular paresis of the diaphragm; and to this, therefore, our attention was specially directed. As a male, he ought to have used his diaphragm very much in breathing; and therefore the inaction of this great muscle was even more significant than it would have been in a female. Such inaction has been observed in empyema and in peritonitis, in advanced cases of progressive muscular atrophy, in sufferers from plumbic toxæmia, and in the hysterical (so called). It has not been observed, but might be presumed, to exist in cases of fatty degeneration of the diaphragm. A little reflection will enable us, looking back, to exclude all these conditions as being in any way concerned in our patient's trouble. There was no sign of pleurisy or peritonitis, of lead-poisoning, or of muscular atrophy; while the result excludes, I suppose, the possibility of fatty degeneration. Nevertheless, I must say I had some suspicions for a while that this morbid change might lie at the root of the matter; and these were not entirely dissipated until the efficacy of the remedies was clearly pronounced. Mr. Callender (*Lancet*, 1867, Jan. 12) has recorded six cases of fatty degeneration of the diaphragm, but they were all complicated with a similar state of the heart; and it does not appear that the state of the diaphragm had attracted attention during life, so that we cannot affirm whether it was paralysed or not.

It remains, therefore, to be considered, whether the symptom in question was a nervous phenomenon—was, in fact, a paralysis of the phrenic nerves. Two possibilities present themselves here—one, that there was actual lesion of the nerve-centres; the other, that the disorder was a paralytic neurosis. The falls which he had undergone—one of them from a great height—might well have injured his cord; but the absence of any paralysis of the limbs or sphincters was an insuperable argument against this view. Had his cord been contused by a fall, the injury could not possibly have been confined to the nerve-cells connected with the phrenic nerve. The second view, therefore, seems the only one admissible. It was corroborated to some extent by the existence of left-side pain, which is extremely common in neurolytic conditions both in males and females, and by the presence also of general hyperæsthesia, and, as it would seem, of spasmodic stricture. The result of treatment was very positive, and leaves no doubt in my mind that no organic lesion existed, and that we had only to deal with a rare variety of neurotic disorder. As I mentioned before that palsy of the diaphragm was met with amongst the hysterical, you will perhaps expect that I should so designate the neurotic paralysis in our case; but I decline to do so, because the patient presented none of the recognised features of hysteria. He had had, so far as we know, no globus, or fits, or aphonia, or dysphagia, or paraplegia. There was no varying or shifting of his troubles from one part to another; no tendency to exaggeration or deception—nothing, in fact, to distinguish him from any *bonâ fide* sufferer. His aspect was distressed, and quite unlike that of some invalids, who assure you with calm countenance that they are suffering "agonies of pain". I pass by the slight difficulty that our patient did not possess an uterus, and so could not legitimately be reckoned an *ὕστερικος*. Let me strongly advise you to reserve a place in your minds for the idea of functional paralysis, either depending on remote irritation, or on toxæmia, or simple exhaustion; and to abstain from applying loosely the term "hysterical". It were better, I think, laid aside altogether, as it will, I suspect, always carry with it a savour of more or less suspicion that the disorder is not genuine, not physical, but more or less consciously simulated. In very many instances this suspicion is unjust, in others it is well founded.

I regard, then, our patient as having suffered from some cause which does not appear a functional paralysis of the centres belonging to his phrenic nerves. Possibly he has an infirm constitution of his nervous system. The hereditary tendency to tuberculosis which he evidently had may have become converted into this other deterioration. It does not seem very clear why aphonia should be reckoned a necessary symptom of palsy of the diaphragm, as has been somewhat too broadly stated. The diaphragm is not an expiratory muscle; and, if a tolerable amount of air be inspired by the other muscles, sufficient to aerate the blood, it seems probable that quite a sufficient current would traverse the glottis during expiration to produce sounds. In fact, it does not appear that the aphonia is at all complete: the patients can speak, but are sooner or later obliged to desist for lack of breath. Eulenburg

says the voice becomes weak, but phonation itself does not suffer. This was the case in our patient, and seems to have been so in the case which Eulenburg relates. In Bazire's case (*vide* BRITISH MEDICAL JOURNAL, 1867, vol. i, p. 597), laryngoscopic examination detected nothing abnormal about the glottis. The vocal cords approximated normally when she uttered a sound. This, however, is scarcely sufficient to prove that the same effort could be maintained for any continuance. It seems rather surprising that disorders of the diaphragm are not more frequent, considering the long course of the phrenic nerves, and their great liability to be pressed on by enlarged glands or indurated exudation-masses in some part of their course. Dr. Bazire well observes that the results obtained by galvanising (faradising) the phrenic nerves will at once indicate whether the palsy is due to a structural alteration, or is merely functional. In the latter case, the muscle will contract powerfully when its nerves are stimulated; in the former, it will respond feebly or not at all. Duchenne was the first to show that paralysis of the diaphragm is not of itself fatal, as had previously been thought; but he observes that, though the patient may survive long, his condition is perilous, inasmuch as a slight bronchitis may induce fatal asphyxia.

A remarkable symptom in Duchenne's patient was, that forced inspiratory efforts, instead of satisfying the want of air which she felt, greatly increased her distress. She expressed very well what she felt at such times by saying that her bowels suffocated her by rising up into her chest. In Bazire's case, however, no such sensation was ever felt; nor was it complained of by E. H., nor is it noticed by Eulenburg in the case he relates. In all these patients, the causation was obscure. The last had certainly been chilled, and got a stiff neck nine days before the paralysis came on; but it seems very doubtful whether this had anything to do with the latter.

In the way of treatment, localised faradisation of the phrenic nerves is advised by Duchenne de Boulogne, and proved strikingly effectual in Eulenburg's case; in Bazire's, it failed; in my own, it was not employed, as the tonics and sedative were so speedily successful. Whatever be the cause of the paralysis, faradic stimulation of the muscle and its nerves seems desirable, although other treatment may be varied according to the special features of the case. Even in the advanced stage of progressive muscular atrophy, faradisation has proved successful in saving the diaphragm.

CONVULSIONS TREATED BY THE INHALATION OF CHLOROFORM.*

By GEORGE MOWAT, Esq., Swansea.

I am glad to have the opportunity of laying the notes of two cases of convulsions, treated by the inhalation of chloroform, before the members of this Branch—not that the treatment is by any means original, but because the satisfactory results have made such an impression upon me, that I cannot but believe we have a remedy in chloroform which is likely to supersede the old remedies which we have been accustomed to use. I can call to mind a large number of cases treated by the warm bath, cold to the head, calomel purges, small doses of calomel frequently repeated, bromide of potassium, etc., the results in which have been anxiously tardy when successful, and in not a few of which death has resulted. I think that in chloroform we have a remedy which will check the fit and give time for after-treatment in all cases where the origin of the attack is sympathetic, reflex, or eccentric; but I should be very cautious in applying such treatment to a case of convulsions occurring during the progress of disease of the brain, for instance. Some years ago I was much struck by the successful treatment of a case of traumatic tetanus, which occurred in the practice of Mr. Parsons of Bridgewater, in which the effect of chloroform was kept up for thirty-six hours or more. I should certainly try its effects in those bad cases of chorea in which the patients do injury to themselves from the violence of the movements, which also prevent sleep.

Dr. Ringer, in his book on *Therapeutics*, says: "Fits of convulsions, especially in children, can be stayed by chloroform; and when they have been prolonged, and exhaustion has been threatened, the child in some cases has been brought from a state of great danger to one of safety, the convulsion being quite stayed, and consciousness restored by the inhalation of chloroform."

Dr. Churchill, in his book on *Diseases of Children*, quotes a "case of convulsions, complicating whooping-cough, where he used it with benefit; and one in which Sir James Simpson used it with perfect suc-

* Read before the South Wales and Monmouthshire Branch.

cess in an infant five weeks old, who had severe convulsions for nearly a fortnight. He was under its influence for nearly twenty-four hours, allowing him to wake to take food, and he emerged from the sleep perfectly well, and with no return of the fits."

"Dr. Williamson of Manchester has recorded the case of an infant six weeks old whom he kept under the influence of chloroform for sixty hours, sixteen ounces of chloroform having been used with complete success."

The following is a brief account of my own cases.

CASE I.—On March 10th, 1872, I was called to see a child aged two years, whom I found in severe convulsions of more than half an hour's duration. It appeared that, about two hours previously to the commencement of the fit, the child had eaten a hearty dinner of pork and fruit-pie, and that it had been sick once. The contractions of the muscles of the left side of the face and body were very severe: the face was very pale. I had the child placed in a warm bath, while a messenger was despatched to my house for chloroform. The bath not having had any beneficial effect, I proceeded to administer chloroform; the child was speedily brought under its influence, and the convulsions gradually disappeared. The child was placed in bed, and, shortly after its recovery from the anæsthetic effect of the chloroform, it fell into a calm sleep, which lasted two or three hours. A grain of calomel was then administered, followed by a dose of castor-oil; and on the following morning I found the child running about the house, and to all appearances well. The bowels had acted freely, and there had been no return of convulsions.

CASE II.—On September 2nd, 1872, I was called upon to see a child aged eighteen months, who had been in strong convulsions for five hours. I found it with strong interrupted contractions of the flexors of the limbs of the left side, and twitching of the muscles of the face. She was cutting some of her molar teeth. The friends had placed her in a warm bath before sending for me, but without benefit. I immediately administered chloroform, and the child passed imperceptibly into a comfortable sleep, from which she did not awake for three or four hours, when she seemed cheerful and intelligent, and without any sign of convulsion. A grain of calomel was then administered, followed by castor-oil, and the gums were lanced. On the following day the child seemed comparatively well; it had passed a good night, without any return of convulsions. The bowels not having acted freely, the castor-oil was repeated, and was followed by a motion resembling dirty green paint. On the third day the child was convalescent.

ON THE TREATMENT OF ULCERS OF THE LEG.

By J. GORDON BLACK, M.D.Lond.,

Surgeon to the Hospital for Sick Children, Newcastle-upon-Tyne.

THE perusal of the valuable reports which have appeared in the JOURNAL on the treatment of ulcers, at the various London hospitals, induces me to offer a few remarks, in the belief that good will accrue from the further ventilation of the subject.

It seems pretty generally admitted, that the treatment of ulcers of the leg, in the out-patient room, is unsatisfactory and disheartening. Whilst some instance the intemperate habits, the poorly fed and over-worked condition of the patients, to account for this want of success, I am more inclined to blame a wide-spread belief in the profession, as expressed by Mr. Lawson, of the Middlesex Hospital, that "for the effectual treatment of all ulcers of the leg, absolute rest of the limb is the first element." Having for some time past been in the habit of curing cases of this kind without requiring the patient to neglect his ordinary duties for a single day, I certainly cannot hold such a belief. If it be possible to cure a large ulcer of the leg without rest, and in quite as short a time, to say the least, as would be required to heal the same by recourse to the horizontal position, what becomes of the theory that absolute rest is necessary?

Moreover, during the time that the patient remains in bed, the circulation through the limb is rendered more efficient, and healing of the ulcer ensues; but no sooner are ordinary duties resumed, than the old conditions recur, bringing back with them the inevitable ulcer. A cure, therefore, under the absolute rest system, can scarcely be alleged, because it is not permanent; whereas, if an ulcer be healed without rest, it is clear that a cure has been effected, provided similar therapeutic conditions are maintained. This latter provision cannot, of course, be observed under the former plan of management.

Knowing, as I do, the easy practicability of healing ulcers without rest, I cannot think it proper to admit such ailments to the wards of a

hospital. To do so, seems wasting the funds of the institution, no less than the time and labour of the sufferer. At the same time, it is not creditable to surgery that such patients should be neglected, or given to understand that their weary and loathsome malady is incurable.

The plan which I adopt is practically the same as that recommended by Baynton, nearly eighty years ago, but with the important modification of using it antiseptically. Baynton's strapping has long been recognised as valuable and effective, and is described by Mr. Erichsen under the head of "Indolent ulcer." Such management, however, taxed too severely the time and patience of the surgeon, for its successful practice. Unless the plasters were very frequently removed (Mr. Erichsen says every forty-eight hours, at least), the pent-up discharge became very offensive, causing the dressings to be disagreeable, both to doctor and patient.

In order to avoid these disadvantages, I now warm the plasters by passing them through hot water, to which a little solution of carbolic acid has been added. The sore having been washed clean by the patient, is then saturated with weak solution of carbolic acid, and the straps, first treated as described, applied. The pieces of plaster (stout emplastrum saponis), should be two inches broad, and long enough to overlap four inches, after passing completely round the limb. They should be applied after the manner of a "Scot's dressing," from about three inches below the lowest diseased surface, to about the same distance above the highest. In their adjustment I think it most important to use no compression, but simply to lay them down evenly, so as to fit the limb accurately, and leave no creases in the plaster. Should pain be produced, the strap has been improperly applied, and must be at once removed. The bandaging of the limb, lightly and carefully, from the toes to the knee, finishes the dressing, which latter need not occupy more than ten minutes altogether. The patient may be told to return at the end of a week, when, on removal, the plasters will show only a slight moisture, instead of the profuse and offensive discharge seen when no antiseptic is used.

The advantages of the above plan of treatment are briefly these. It is cleanly; it saves the time and labour of the surgeon, for the dressings need rarely be changed oftener than once a week, and occupy only a few minutes. And finally, whilst the healing process is conducted with a minimum of pain and discomfort to the patient, he is in no way restricted from pursuing his ordinary occupations.

In cases of irritable ulcer, with much pain, Baynton recommended the sufferer to remove the bandage occasionally, and pour cold water upon the strapping for a few minutes, afterwards drying lightly with a soft towel, and reapplying the bandage. The plan is an excellent one, and usually very grateful to the patient's feelings.

Instead of employing carbolic acid, another good antiseptic may be used, namely, sulphurous acid. This is easily applied by playing upon the ulcer and surrounding diseased skin with a Dewar's spray-apparatus. The plasters may then be adjusted, after passing them through hot water, simply. A little smarting ensues, which, however, soon passes off. The effect of the sulphurous acid, in checking discharge and mal-odour, is quite as good as that of the carbolic, whilst its application is perhaps less troublesome and disagreeable. The sulphurous acid is especially suitable to ulcers of moderate size.

Baynton's strapping, especially when used antiseptically, may be employed for nearly all kinds of ulcers. The surface of a weak, indolent, or inflamed ulcer, speedily assumes a healthy appearance, without the preliminary use of astringent, soothing, or other lotions, being necessary. The most irritable sore may be stripped if care, and no compression, be used. Occasionally, however, it may be found advantageous to substitute linen or calico for the plaster straps.

For varicose ulcers, no treatment could be better. The horny edges of the "callous" variety quickly disappear, without recourse to such a dangerous excitant as blistering, which may easily set up unmanageable inflammation in the old or infirm. In eight or ten dressings, even very extensive ulcers may be healed by strapping, so that the cases must be few where skin grafting is really needed.

The administration of medicines internally is unnecessary. In most cases opium may be given to relieve pain, but the healing process goes on steadily, without such assistance.

I observe that Mr. Nourse, of Brighton, has used strapping and bandaging with great success. The plan, I feel sure, only requires more extensive employment to be better appreciated. For the frequent failure of the ordinary treatment by lotions, etc., patients are often blamed, because they do not strictly obey the instructions given. This neglect is, however, due rather to the well-known feebleness of such remedies, than to any lack of pains or inconvenience on the part of the sufferers. On the other hand, the interest which the latter manifest in carrying out directions under the treatment by strapping, is by no means the least recommendation of this method.

THE OPERATION OF THE PUBLIC HEALTH ACT.

By JOSEPH CLEGG, Esq., Epping.

FEELING a very deep interest in all sanitary questions, I have been led seriously to consider how the provisions of the Public Health Act might be best turned to account for the public good. After much anxious thought, I succeeded in preparing a scheme which I have submitted to many medical and other gentlemen, upon whose judgment reliance may be placed, and they have all very strongly urged me to publish it.

It has occurred to me, that my suggestions may very appropriately appear in the BRITISH MEDICAL JOURNAL. I will therefore lay before its readers the leading features of my scheme as briefly as possible.

Before doing this, however, let us see what it is that is required. We will take a house as the unit, and see the requirements for its healthiness. These are, first, a good supply of pure water in it, or within a short and convenient distance; secondly, good drainage and sewerage; thirdly, the absence of any accumulation of decomposing vegetable or animal matter, either in cesspools, on the surface of the ground, or in open ditches; fourthly, sufficient cubic space for the number of inhabitants whom it is intended to accommodate. If all these conditions be met, the house will be healthy.

Let us next consider what are the requirements for healthiness where a number of houses are collected together, forming a village or town, etc. First, each house will require the above-mentioned conditions. Secondly, the drainage of each house should be so arranged and connected with a sewer, or sewers, common to all the collection of houses, as not to annoy or become a nuisance to any surrounding houses. Thirdly, the sewage should be so utilised and disposed of as not to be a nuisance to the community. Fourthly, the houses should be so situated as to admit of free ventilation. Fifthly, no noxious trade should be allowed to be carried on near any inhabited house. These conditions would give a healthy village, or town, provided that it were supplied with food of wholesome character, unless it should become infected with some contagious or infectious disease, which might become epidemic.

Having now considered what is necessary to make a house, village, or town healthy, let us next consider the best means of keeping it so. This can only be done by a proper system of inspection, which should be quiet, continuous, and inoffensive to the most susceptible. A reference to the nervous system of man will furnish an illustration of my meaning.

All parts of the human body are supplied with nerves of sensation, conveying sensation to nervous centres, and with nerves of motion, conveying nervous influence to the muscles, to act when required. Thus, if we tickle the foot, the nerves of sensation distributed over the skin convey the sensation to the spinal ganglia, and at the same time, a filament of nerve-fibre conveys the same intelligence to the brain, through the spinal cord, and so from the brain another nerve-fibre may convey intelligence through the spinal cord to the spinal ganglia, and thence to the muscles of the lower extremity, and cause the foot to be withdrawn from the irritating object. If, from injury to or pressure upon the spinal cord, the nervous influence cannot be conveyed from the brain, the extremity is said to be paralysed, but still it retains the power of local self-government in some degree, for if the foot is tickled the foot will be removed by nervous influence from the spinal ganglia, independent of the will.

I now proceed to develop my scheme for complete sanitary inspection on the principle of the nervous system of man. I would propose, that every district Poor-law medical officer should be a deputy medical officer of health; that each rural and urban sanitary committee should have attached to it a medical officer of health, who should carry out the duties specified in the order of the Local Government Board, with some modification. He should attend each meeting of the committee, to advise them on sanitary matters, and should receive weekly, fortnightly, or monthly, the reports of the deputy medical officers of health on the sanitary state of their respective districts, the number of cases of sickness, and their nature, attended by them, whether in public or private practice, together with the number of deaths, and cases of vaccination. These reports he should classify, report upon them to the sanitary committee, and forward a copy of them to a medical sanitary inspector resident in the county in which the union is situated, who, after recording them, would transmit them to the sanitary department of the Local Government Board. By this plan, health-intelligence would be constantly and quietly conveyed from every medical district in the kingdom, first to the rural or urban sanitary authorities, next to the county medical sanitary inspectors, then to the sanitary department of the Local

Government Board, so that all cases of contagious diseases would be registered at the Board before they could become epidemic, and if necessary, the chief medical officer of the Board could send down one of his special medical inspectors to take steps to prevent its spread to adjoining districts.

If this plan were fully carried out, in five years time we should have no epidemics. This part of my plan would represent the nerves of sensation which would convey health-intelligence, otherwise unobtainable, to all centres from which action could arise.

The next part will represent the nerves of motion, the surveyors and inspectors of nuisances. These would carry out any orders issued by the sanitary committees, see to the removal of nuisances that were patent to open inspection, and require the carrying out of all regulations laid down by the sanitary committee and the medical officers of health. I would advise the appointment of the superintendents of police as inspectors of nuisances over their respective districts, with their men under them as deputy inspectors, and by this means every locality would be inspected daily.

The next point is the means of communication between the spinal ganglia and the brain, *i.e.*, between the local authority and the Local Government Board, which would be by means of the county medical sanitary inspector, whose duties, I would suggest, should be, first, to receive reports from all medical officers of health within the county, and after classifying and recording them, to transmit them to the Local Government Board. Secondly, he should advise all medical officers of health, where he thought it necessary, and give his advice to them, or to the local sanitary authorities, whenever sought by either; to visit every local sanitary authority as often as convenient, and ascertain that the recommendations of the medical officers of health had been carried out, as well as the orders of the Local Government Board. Thirdly, he should be the first referee in case of dispute between the sanitary authority and the medical officer of health. Fourthly, he should inspect all workhouses, hospitals, asylums, and public buildings in the county, and report upon their sanitary condition to the central authority. Fifthly, his inspection should include vaccination and hospitals for contagious diseases.

The next point to be considered is that of remuneration. As the duties of the county medical sanitary inspector would be necessarily very severe and onerous, he ought to be well paid, and according to the extent of those duties; and he should be paid from the Consolidated Fund, as he would strictly be the servant of the Local Government Board, and appointed by it.

The medical officer of health would have duties to perform that would occupy a great deal of his time, and sometimes at great inconvenience to his private practice, when he would have to attend committee meetings; therefore he ought to be better paid than I now suggest. He should have as a minimum one halfpenny per inhabitant within the union, and one farthing per acre *per annum*.

The deputy medical officer of health would have heavy duties to perform, and grave responsibilities in making inspections, and sending in his reports on the same, as well as regular reports on deaths and sickness. He ought to be excused from attending committees or giving evidence in court, that being done by the medical officer of health. His remuneration ought to be, as a minimum, one penny per inhabitant, and one halfpenny per acre *per annum* within the district of which he is medical officer.

Having thus far provided for the complete inspection of all towns, villages, places, houses, etc., so far as regards the sanitary condition of each county (including water-supply, drainage, vaccination, death and sickness returns, also hospitals and sanatoria), I will now proceed very briefly to show how all the information thus gained should be utilised for the general good of the nation, as well as for each locality.

With all due respect for existing authorities, I venture to suggest that a complete reorganisation of the Local Government Board might be effected which would prove very beneficial, and would enable it to receive, digest, and utilise the information which would be obtained by the county medical sanitary inspectors, and in doing so would make use of the present officers of the Local Government Board, and hold each one responsible for the department over which he does or would preside. In order to do this, I would urge the recommendation of the Royal Sanitary Commission, that the Local Government Board should have two subdepartments, the one Sanitary and the other Poor-law.

As it is often convenient and desirable to have a bird's-eye view of what we are considering, I have thought that it might be of advantage to afford this assistance in the present case. For this purpose I have designed a diagram, showing at one glance the relative positions of all officials and persons engaged in the machinery I have suggested, from Parliament down to the householder who might be a

complainant. In giving the names of those at present holding high offices, and of those holding permanent appointments in their respective departments, I wish it to be clearly understood that I do so, not in a spirit of dictation, but by way of illustration.

PARLIAMENT
LOCAL GOVERNMENT BOARD.

President—The Right Hon. James Stansfeld, M.P.
The Right Hon. W. E. Gladstone, M.P.; the Right Hon. Earl Ripon;
the Right Hon. Robert Lowe, M.P.; the Right Hon.
H. A. Bruce, M.P.
Secretary—Mr. Lambert.

Sanitary Department.

The Chief Medical Sanitary Inspector—Vice-President.

Mr. Simon—Chief Medical Officer.

Dr. Seaton—Vaccination Medical Officer.

Dr. Farre—Registrar of Deaths, etc., and Sickness.

Mr. Rawlinson—Chief of Engineers.

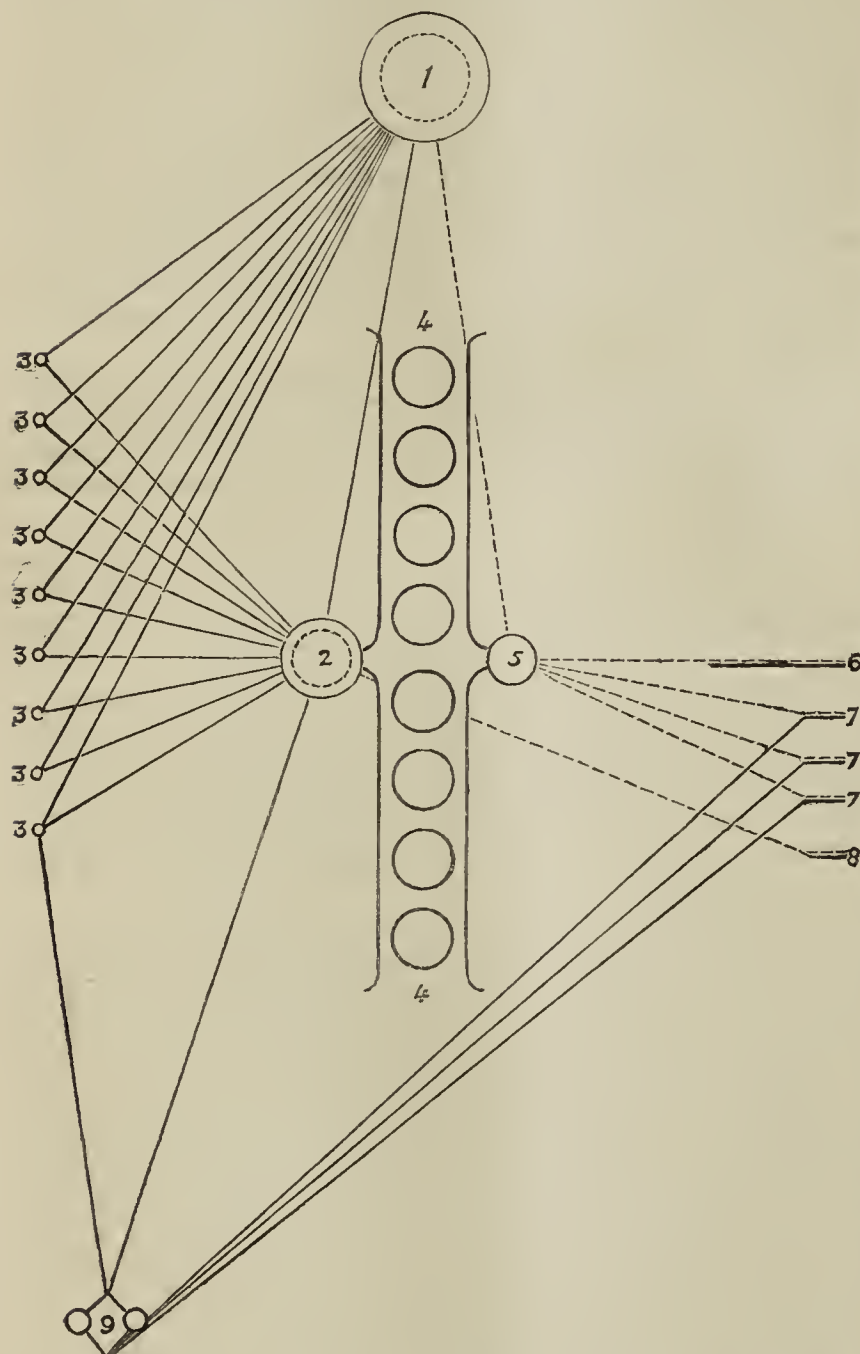
Dr. Frankland—Analyst for Water, etc.

Dr. Angus Smith—Analyst for Air, etc.

Secretary.

Poor-Law Department.

Vice-President; Secretaries; Inspectors.



1. County Medical Sanitary Inspector; 2. Medical Officer of Health—Rural or Urban; 3. Deputy or District Medical Officer; 4. Rural or Urban Sanitary Committee; 5. Clerk to Rural or Urban Sanitary Authority; 6. Surveyor to Rural or Urban Sanitary Authority; 7. Nuisance Inspector; 8. Disinfectors; 9. Two Householders.

The straight lines indicate the course by which intelligence is conveyed on sanitary matters from the householder to the sanitary officers, and

from them to each superior officer. Thus if a householder (No. 9) wish to complain of the existence of a nuisance, he has the option of making the complaint either to the inspector of nuisances (No. 7), to the deputy medical officer of health (No. 3), or to the medical officer of health (No. 2). Number 3 will forward his reports to No. 2 and No. 1. By this means No. 1 is acquainted with the contents of reports to No. 2, and can thus learn where the fault lies if the reports are not acted upon. Number 2 will receive the reports of the deputy medical officer of health (No. 3), the inspectors of nuisances (No. 7), and complaints of householders. It will be his duty to report on these to the Sanitary Committee, to advise them on matters contained therein, and to forward a copy of his report and advice to the county medical inspector (No. 1). The last named officer (No. 1) will receive reports, etc., from Nos. 2 and 3, and forward his own reports on the same to the vice-president of the Sanitary Department of the Local Government Board. Where any authority makes default in any sanitary matters, the county medical sanitary inspector will first give notice of it to the clerk of the defaulting authority, and if not immediately attended to he will then report to the Sanitary Department of the Local Government Board.

The dotted lines in the diagram indicate the course by which orders or instructions are conveyed from the superior to the lower sanitary officials. The dotted lines from No. 1 to No. 5 indicate action requiring the sanitary authority to perform its duty; Nos. 6 and 7 show that orders, etc., are transmitted to them from the Sanitary Committee; and from No. 3 to No. 8 show the course orders take to the disinfectors.

I have endeavoured to be as brief as possible, in order not to occupy too much space; and for this reason I shall content myself for the present with saying very little about the tabulated form showing the proposed reorganisation of the Local Government Board. I cannot doubt that some such arrangement as I propose would be far better than the present one; for, with a vice-president conversant with all the details of public and private practice, and the working of sanitary measures, urban and rural; having the appointment and control of the county medical sanitary inspectors, whose reports he would receive weekly, and with the advantage of a board composed of the heads of the subdepartment named, to whom he would weekly submit the reports, and with whom he would consult, he would undoubtedly be able to utilise to the fullest extent any information he might acquire as to the carrying out of existing Acts and their deficiencies, and thus be able to furnish the president of the Local Government Board, and, through him, Parliament, with most valuable data for remedying any existing defects in the various sanitary Acts.

In conclusion, I venture to hope that this slight attempt of mine to contribute to the furtherance of sanitary science may be productive of some good, and that at least it may lead to further discussion on the subject, and by that means elicit a better scheme, if there be one.

HYDROCYANIC ACID AS A REMEDIAL AGENT IN DELIRIUM TREMENS.

By HENRY B. DOW, M.D., Bayswater.

WITHOUT describing the causes and pathological conditions of delirium tremens, as that would occupy too much space in this notice, it will be simply necessary to mention briefly the chief symptoms of the disease, and then refer to the therapeutic value of hydrocyanic acid in its treatment.

The first and most important symptoms of delirium tremens are loss of appetite, followed by nausea and vomiting, and accompanied by mental excitement, as exemplified by anxious and often hideous dreams during sleep, sometimes wandering; and, during wakefulness, by the presence of imaginary objects and foes. The tongue is furred, indicating a disturbed condition of the digestive organs, and tremulous, in sympathy with the impaired state of the nervous centres. The circulation, which often at the outset of an attack is depressed, becomes quickened, and oftentimes the patient becomes violent, as in the delirium of an acute attack of mania. The course of the disease may be from bad to worse, until exhaustion and death end the scene. Or, on the other hand, sleep may supervene, and the sufferer awake refreshed and in a fair way towards recovery.

Opium in its various forms, digitalis, and belladonna, have been used in the treatment of this disease; but they do not fulfil all the indications for treatment, and are liable to cause harm, either by their cumulativeness or by their influence on some idiosyncrasy of the system. Hydrocyanic acid does unquestionably fulfil these indications. It allays the irritation of the stomach, and checks the nausea and vomiting; it quiets the nervous excitement, and, by so doing, tends to produce sleep; and it also controls the action of the heart. It has the advantages of

producing its effects quickly, and of not being cumulative, and is taken readily by most people. I have used it with the most satisfactory results, and will now mention my usual method of administration. I give it in combination with bicarbonate of potash, chloric æther, and camphor mixture, in doses of one, two, or three minims of the Pharmacopœia solution every two, three, or four hours, according to the severity of the case; and also find that benefit may sometimes be derived from the addition either of three or four grains of carbonate of ammonia, or a few minims of the compound spirit of ammonia. The patient is to be nourished by the administration of beef-tea, milk, etc., and wine or other alcoholic stimulants to be given, according to the discretion of the medical adviser; the less, however, the better. As soon as the worst symptoms have been relieved by the above treatment, the appetite is soon restored by the use of dilute nitric acid and decoction of cinchona.

CLINICAL MEMORANDA.

CASE OF POISONING WITH CARBOLIC ACID.

THOMAS LLOYD, aged 72, was admitted into the Merthyr Infirmary on April 18th, suffering from a severe burn on the left leg. In a few days, when the eschar began to slough, a large piece of sponge saturated with carbolic acid was placed on a plate underneath his bed. On April 29th, about 3 A.M., I was sent for, and on the way was told that T. L. had got at the sponge and had sucked the carbolic acid from it, as far as could be ascertained, about twelve midnight. The patient was in a semi-comatose state, pulse 98 and feeble, respirations 48. I administered some olive oil and castor-oil, which was swallowed very slowly. I then gave a scruple of sulphate of zinc dissolved in warm water, and two grains of tartar emetic; but vomiting was not induced. The pulse and breathing became gradually more feeble and complete, coma set in, and death occurred an hour after my arrival.

Post mortem examination, April 30th. The body was well nourished. The lips, the chin, the right side of the face, the right breast and hand were of a brown colour, with a strong odour of carbolic acid; the dura mater and arachnoid were very much congested; the brain-substance was healthy. The membrane of the mouth and tongue was white and softened. The mucous membrane of the larynx was thickened. The lungs were healthy, with old pleuritic adhesions. The membrane of the pharynx and œsophagus was pale, thickened, soft, and corroded. The lining membrane of the stomach was much softened, corroded, and congested. The whole of the small intestines were congested, the upper part being softened. The odour of carbolic acid could be traced as far as the cæcum. All the other organs were healthy.

I did not think it advisable to use the stomach-pump, which was at hand, as the acid had been taken at least three hours previously. For the future, I intend using the carbolic acid powder.

CORNELIUS BIDDLE, L.R.C.P.Lond.,
Surgeon to the Merthyr Tydfil Workhouse.

OBSTETRIC MEMORANDA.

ENEMATA OF CHLORAL HYDRATE IN PUERPERAL CONVULSIONS.

THE notice in a contemporary of a somewhat similar case, induces me to mention an instance of the successful administration of chloral in a most severe case that I recently saw in conjunction with my friend Dr. Hulme, of Wigston Magna.

Mrs. T., aged 22, primipara, who had had slight anasarca before her confinement, was delivered at 5 P.M. on February 9th. The labour was satisfactory, the placenta following naturally. Shortly afterwards, convulsions set in, and continued almost without intermission. I saw her first at 2 P.M. on February 10th, the convulsions having lasted twenty hours. She was totally insensible, cold, and clammy; the pupils were largely dilated; pulse 180. She was unable to swallow; the fæces and urine passed unconsciously; she had had turpentine enemata with no benefit. While I was there, she had the most horrible set of convulsions I ever witnessed. In fact, I thought she was dead, respiration ceased for so long. Unable to give any remedy by the mouth, I suggested, as a forlorn hope, half a drachm of chloral in a small starch enema, to be repeated once. I saw her again at 6 P.M., and found her in a quiet natural slumber that I did not disturb. She had fallen into it, and had had no more convulsions after the second enema.

Passing through the village next day, the 11th, I found her only a

little stupid; the pupils were natural; pulse 108; the milk and lochia appearing. She made a good recovery, and is now well and nursing her baby.

JOHN BARCLAY, M.D., F.R.C.P., Leicester.

REPEATED ABNORMAL PRESENTATIONS.

ACTING upon the suggestion contained in Dr. Molony's communication to the JOURNAL of April 12th, I beg to record the following unique case of repeated abnormal presentations occurring in the same person, and tending to suggest an affirmative reply to the question raised, Is a woman who has had a breech or footling presentation at one labour more liable to the same at her subsequent labours than any other woman of the community? The case in point is that of a strong healthy woman, who, about three years and a half ago, engaged me to attend in her then approaching confinement, remarking at the time that she had had nine children, all of which, excepting the first, were "wrong births" and still-born. In due course, I was called upon to attend. Making an examination, I found the feet presenting; the labour progressed rapidly, the child, a very fine one, being still-born. Twelve months subsequently, I was again engaged to attend her. Upon this occasion, the breech presented; child still-born. About six months ago, I attended her again for the third time; but upon this occasion, the presentation was natural, and the child was born alive. Of the previous nine births, my inquiry confirmed the statement made by the mother that eight were preternatural—all being either foot or breech presentations, and still-born. Of the twelve births, therefore, this case presents the extraordinary number of ten breech or footling cases occurring successively, the first and twelfth being the only natural presentations.

RICHARD LOUGHER, L.R.C.P., L.S.A., etc., Cardiff.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

SUBPERIOSTEAL EXCISION OF A PART OF THE LOWER JAW.

(Under the care of Mr. MAUNDER.)

ON May 21st, Mr. Maunder showed a young girl from whom, three years ago, he had removed a portion of the lower jaw, containing a myeloid tumour, comprised between the position of the right canine tooth and the middle of the left ramus. The separation of the soft parts and sections of the bone were executed from within the cavity of the mouth, and the mass was withdrawn through this orifice. In this way, no important vessels or nerves were injured; and, as neither lip nor cheek had been severed, there was no scar whatever. The patient could masticate well with the remnant of the right base of the jaw. (See photograph of this patient in Maunder's *Operative Surgery*, 2nd edition, p. 113, and in the BRITISH MEDICAL JOURNAL, January 13th, 1872). Mr. Maunder now proceeded to perform a similar operation on a female adult, the subject of a tumour occupying the right side of the base of the jaw. It had existed nearly two years, and had been removed on two previous occasions elsewhere. The knife was used very sparingly, the soft parts being separated chiefly by a raspatory and the finger. The ramus and base of the jaw were divided from within the mouth partly by the saw and partly by cutting forceps. The isolated portion of jaw was extracted through the mouth without any section whatever of important vessels, nerves, or skin. No scar will result, and it is scarcely needful to note the importance of such a method of operating, especially in the female.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF DISEASE OF PULMONARY VALVES AND RIGHT VENTRICLE, WITH COMMUNICATION BETWEEN THE VENTRICLES.

(Under the care of Dr. SANSOM.)

The notes of this case were taken by Mr. Gill, Resident Medical Officer.

Lydia S., aged 8½, was admitted into the hospital on January 12th, 1873. She manifested much languor, but no other prominent symptoms; she was extremely pallid, but showed no cyanosis whatever. Of healthy parentage, the pregnancy of the mother having presented no abnormal circumstance, the child was weakly from birth, but was quiet

and very intelligent. Eighteen months before admission she had gastric fever, and since that time feebleness had increased. Physical examination of the chest showed no abnormality of percussion sound or respiratory murmur; but over a very wide area was heard a rushing systolic cardiac *bruit* of much intensity, the point of greatest accentuation being the aortic cartilage. There existed no trouble of respiration and no cough; the pulse was small and rapid. Quinine and steel were ordered, but no improvement took place, and diarrhoea and abdominal pain became paramount symptoms. Bismuth and astringents were fruitless in checking the diarrhoea; the child progressively wasted. Twenty-two days after admission, she seemed almost moribund, the radial pulse scarcely perceptible, the hands very cold, but the feet warm; a small hæmorrhoid appeared, the diarrhoea continuing. Cod-liver oil inunction was practised, and occasionally starch enemata slightly opiated were administered. After four days of a condition continuously critical, loud noisy delirium occurred. Quinine dissolved in compound spirit of ammonia and given mingled with water, with two grains of nitrate of silver in a starch enema, brought about a slight amendment, and the delirium gradually passed away; but a new access of diarrhoea occurred, and oxide of zinc in two-grain doses was given with no effect in relieving it. No alteration of the auscultatory signs occurred. The urine was never albuminous. The child died on March 17th.

POST MORTEM EXAMINATION.—On opening the thorax, the lungs were found small and retracted. The base of the right lung was adherent to the diaphragm, and its tissue, though pale, was non-crepitant and dense; emphysematous at the borders. The lowest lobe was thickly studded with caseous and suppurating nodules, varying in size from a small pea to a large bean. The left lung was fairly crepitant, and showed no adhesions; very small caseous nodules were found in the middle of the apex. The bronchial glands were of normal size. About an ounce of pale yellow fluid was found in the pericardium. The heart was small, pale, and contracted, weighed $2\frac{3}{8}$ ounces avoirdupois, measured only 3 inches in length and $2\frac{1}{4}$ inches across the base, and occupied a space of 4.33 cubic inches. The aorta and its valves were perfectly healthy. The mitral valve was also quite normal, but in the interventricular septum rather less than one-eighth of an inch below the semilunar valve was an oval perforation, a quarter of an inch by one-eighth of an inch, filled up at its circumference by firm, and its centre by soft, clot. In the right ventricle, opposite to this perforation, was a triangular patch of thickened endocardium with a roughly fringed surface. Each side of the triangular patch measured about one inch, and its base was at the upper part of the ventricular space. The septal segment of the valve of the pulmonary artery was thickened and fringed; and its next segment showed also signs of old endocarditis. The tricuspid valve was healthy; the auricles were normal. The liver was large, and of "nutmeg" appearance. The mesenteric glands were greatly enlarged, and the large intestine ulcerated throughout its whole extent, presenting the ordinary signs of tubercular ulceration.

REMARKS.—This case, which was evidently one of congenital incompleteness of the interventricular wall, with thickening of the endocardium of the upper part of the right ventricle and the valves of the pulmonary artery, presented many points of interest. It was remarkable, not only from the fact of the conditions having existed for several years without betrayal by any marked constitutional disturbance, but from the absence during the whole course of the illness of any obvious respiratory or pulmonary trouble. The most prominent signs on the child's admission were extreme pallor and muscular flabbiness and malnutrition. Dr. Sansom remarked on the difficulty of accounting for the intense systolic *bruit*. He had no difficulty in diagnosing a progressive tuberculosis as one element of the child's condition. The pallor suggested that the *bruit* might be anæmic, but this was negated by the rarity of such occurrence in a child so young, and by the loudness of the observed sound. The situation of the murmur pointed to aortic obstruction, yet observation failed to detect the hypertrophy which might be expected to follow such a condition. The intensity of the sound and the decided accentuation at the aortic level, together with the absence of dyspnoea, seemed to preclude the diagnosis of right-side disease. Dr. Sansom thought, therefore, that the cardiac *bruit* was probably due to a congenital fringing of the aortic valves offering no considerable obstruction, the sound being aggravated by a condition of spanæmia, or that possibly some tuberculous glands caused pressure upon the aorta. The necropsy showed how impossible it was to diagnose the nature of the *bruit* from its situation, for the rough patch of thickened endocardium in the right ventricle was exactly on the same level as the aortic orifice. The intensity of the *bruit* was explained by the fact that the pulmonic current passed through a channel roughened on the one side by the thickened patch, and obstructed on

the other by the diseased valve. The interventricular perforation was possibly so filled with clot as to allow little or no commingling of the blood of the two systems. The smallness of the heart was a noteworthy fact; the walls of neither ventricle were to any notable degree thickened. The left was little more than half an inch, and the right less than a quarter of an inch, in section. The intestinal symptoms were recognised to be due to tubercular ulceration, and this view was abundantly confirmed at the necropsy. The sequence of tuberculosis upon the pulmonary obstruction confirms the view of Lebert, that the latter may be a predisposing cause of the former, but is in opposition to the observation and the reasonings of Traube.

NEWCASTLE-UPON-TYNE INFIRMARY.

NOTES OF TWO CASES OF THORACIC ANEURISM.*

(Under the care of G. H. PHILIPSON, M.A., M.D. Cantab., Physician to the Infirmary.)

CASE I.—Thomas C., aged 43, labourer, Tudhoe Iron Works, Whitworth, was admitted under my care on September 26th, 1872. He stated that he had been off work for twelve months, and that he had suffered from difficulty in breathing and cough, but that he had never expectorated blood or experienced actual pain in the chest. He was a strong, muscular, well-proportioned man, and was fairly nourished. On physical examination, the right side of the chest was noticed to be fuller than the left, but regular on the surface. From the second interspace to the fourth rib, pulsation was seen, which was also very perceptible to the hand, and which was expansile in character. Over the swelling there was dulness upon percussion, and an increased sense of resistance. The dulness extended for half an inch to the right of the middle of the sternum, transversely within one inch and a half of the right nipple, and from above down from the second interspace to the fourth rib. Over the site of the dulness there was an absence of vocal fremitus. No murmur was heard, the sounds being double and deep in tone. No thrill was perceptible. Here and there, on the right chest, the veins were dilated. There was no œdema of the chest-wall, neck, face, or right arm. The heart's impulse was seen and was felt about half an inch within the left nipple line, and about one inch below. At this spot, a blowing murmur was heard with the first sound of the heart. At the middle of the sternum, on a level with the second cartilage, a murmur was heard with the first sound, but was decidedly less loud than that at the apex. The sounds were regular. The respiration was slightly stridulous, but equal at the bases, where the percussion note was clear. To the eye, the right back was more rounded than the left. Between the posterior border of the right scapula and the spine there was dulness upon percussion, but no pulsation was seen or felt, nor was any distinct murmur heard. The right chest measured at the nipple line nineteen inches, and the left seventeen and a half. The pupils were equal. The pulse was 60, heaving, and to the finger, the right was less powerful than the left. A sphygmographic tracing showed a diminution in the force, a modification in the intensity of the diastolic, and a dissimilarity in the pulse of the two radial arteries. He had no knowledge of any strain or accident. He had been in the army, in the band of the 2nd Foot Regiment, and was accustomed to play a bass instrument. He had been employed at the Tudhoe Iron Works, in the foundry department, for nine years. He had syphilis when he was in the army. Strict quiet was enjoined, and he was ordered a simple expectorant mixture for the cough.

October 22nd. From the severity of the cough, slight epistaxis occurred.

November 9th. Of his own accord, he asked to be discharged. No change had taken place in the physical signs.

On February 18th, 1873, Mr. Heffernan of Spennymoor (under whose care the patient was previously to his admission into the Infirmary, and also since his discharge from that institution) informed me that he had been employed since the new year at an easy job in the iron works at Tudhoe, and had managed to attend to it very well. His general health had remained pretty good, and he had passed good nights. The dulness had not extended.

CASE II.—Richard B., aged 35, was admitted under my care on November 28th, 1872. He stated that he had been discharged from the Royal Artillery for ill health on November 15th, 1872, and that he had been twelve years a gunner, seven of which had been passed in India in active service. He also stated that he had suffered from cough for five months, difficulty in breathing, a feeling of choking, and that he had expectorated frothy mucus, but never blood. At the time

* Read before the Northumberland and Durham Medical Society.

of his admission, he complained greatly of difficulty in swallowing, and of feeling as if the food stopped "half way," and pointed to the sternal notch as the spot of the impediment. His pulse was 72, very small, the right radial artery being scarcely perceptible to the finger. The subcutaneous veins of the left shoulder, left arm, and left side of the chest were dilated. There was no oedema of the face, chest, or left upper extremity. The pupils were equal. The heart's impulse was seen and felt a little outside the left nipple, and an inch and a half below. There was no thrill. The sounds at the base and apex were without murmur. There was distinct fulness at the second left cartilage, where there was visible pulsation, very perceptible to the hand, and which was expansile and synchronous with the heart's impulse, and at which spot, upon pressure or percussion, cough was excited. There was marked dulness and increased resistance upon percussion at the site of the pulsation, but no vocal fremitus, thrill, or murmur, the sounds being double and deep, and of the same characters as the sounds heard at the base of the heart, with the exception of the divisions being more marked. His breathing was laboured and stridulous, and the speaking voice was husky. At the bases, the percussion was clear, and the respiratory sounds were equal. He was ordered to be kept very quiet, and to take liquid food and an expectorant soothing mixture.

December 7th. He experienced a distinct aguish rigor, followed by heat and sweating. He stated that when he was in India he had suffered severely from fever and ague, and that every year since, in the spring and in the autumn, he had been similarly affected. He was ordered five grains of the sulphate of quinine.

December 11th. He has had no return of the shivering.

December 14th. He expressed himself as feeling much easier, especially in his breathing, and was able to take a little solid food.

January 14th, 1873.—The difficulty in swallowing had again recurred.

February 8th. During the past few days, the breathing had been very difficult, more stridulous and paroxysmal.

February 5th. When visited at 7 P.M., by the house-surgeon, he appeared to be sinking. At 2.30 A.M., having shortly before been left by the night-nurse, he inflicted a severe gash on his throat with a razor, and was shortly afterwards visited by the house-surgeon, who found that the larynx had been slightly wounded, but that the chief vessels had not been injured. The wound was carefully adjusted and stimulants were administered, but the difficulty in his breathing increased, and he died at 4 A.M.

At the necropsy, upon the removal of the sternum, the right lung was found to extend to the middle line, while the left lung was not seen, the space to the left of the anterior edge of the right lung being occupied by an aneurism, which was found to be about the size of an ordinary sized melon, and which was situated in the posterior aspect of the transverse portion of the arch of the aorta. The aneurismal sac was lateral and globular, and communicated with the aorta by an opening which was fully two inches wide, and contained very little laminated fibrine, principally dark coagula. The wall of the sac was composed of the outer and middle coats, the inner being destroyed. The inner surface of the ascending portion of the arch of the aorta was roughened and irregular from atheromatous deposit. The posterior wall of the aneurismal sac surrounded the œsophagus, while the left pneumogastric nerve, the left recurrent laryngeal nerve, and the left brachio-cephalic vein, were imbedded in its wall. The heart was normal in size; the left ventricle was not hypertrophied; the mitral and aortic valves were healthy; the lungs were emphysematous. There was no tubercle in any of the organs. On the prepuce there was a cicatrix of a soft chancre.

REMARKS.—These cases are of interest, chiefly in illustration of the diagnosis of thoracic aneurism. In both, at the site of the aneurism, there was neither thrill nor murmur, but two points of pulsation in the chest, each with its own distinct beat, each with its own distinct sounds; pulness upon percussion, with increased sense of resistance, absence of vocal fremitus, and symptoms occasioned by pressure—in the first, of the innominate artery, the right brachio-cephalic vein, and pneumogastric nerve; and in the second, of the left brachio-cephalic vein, pneumogastric nerve, and œsophagus. Hence it may be inferred that, in the diagnosis of an aneurism, it is not essential to have thrill or murmur; but what is much more so, is to find two points of pulsation in the chest, local bulging with dulness upon percussion, and symptoms occasioned by pressure. The absence of the thrill and murmur, it may be surmised, may have been owing to the aneurismal sac containing blood and only a small amount of laminated fibrine. For, in the second case, as revealed at the necropsy, the aneurismal sac was found to contain chiefly coagula, very little laminated fibrine. Possibly the same condition is the explanation of the absence of hypertrophy of the left ventricle in the second case.

REVIEWS AND NOTICES.

FEVER AND CHOLERA FROM A NEW POINT OF VIEW.*

DR. ALEXANDER SMITH has printed two hundred and fifty copies of this work "for private circulation", with an intimation that he is prepared to place a public edition within reach of the profession generally, "should subsequent events show its more extended circulation to be desirable." As a copy has been sent to this JOURNAL, we take it for granted that the author courts criticism on his labours.

There seems to be at the present time, a class of writers in India, who are disposed to investigate "fever" by methods which do not appear likely to advance knowledge, or to commend such methods to pathologists in Europe. Mr. Lyons, of the Bengal Army, has recently published a book designed to inculcate the doctrine, that the soil, under certain conditions, supposed to have been established by observers in all countries for ages past, never gives off any morbid agent which is capable of causing the class of fevers to which the provisional name *malarial* has been given. And not only so, but Mr. Lyons thinks that not only should all such be classed as relapsing, or famine fevers, but that even so called specific yellow fever, and the severe symptoms from which the blood-poisoned survivors of the Calcutta Black-hole catastrophe suffered, should be classed under the same head of relapsing fever.

And now we have Dr. Alexander Smith, with his "new view." According to Lyons, there is no such thing as a malarial fever; while the doctrine of Dr. Smith is, that malaria is the cause, not only of the so called malarial fevers, but of yellow fever, typhoid, and cholera. Dr. Smith thinks he has demonstrated, "that they are but species of one genus of fever, of which an ordinary accession of ague may be held to represent the simplest form; that all the varieties of this genus may be gradually developed from this one primary form, and that there is no evidence whatever to support the view, which has hitherto so firmly held its ground, that any one of the varieties of this description of fever can generate a specific poison-germ, a poison, specific in the sense of its being capable of reproducing the disease by which it was originated, and that only. The author goes on to say, "that he believes he has shown sufficient grounds for including typhoid fever, yellow fever, and cholera, under this head (ague), and that they owe their origin to the one fundamental cause, as yet only known by the general term *malaria*, having, however, their times of manifestation and forms of intensity of expression determined by various accessory causes, among which must be included certain peculiar general influences, only spoken of, up to the present time, as epidemic conditions."

As regards typhoid, Dr. Smith rejects the notion that emanations from sewage and putrefying animal matter have anything to do with its cause. The physicians who attended the Prince of Wales will learn with confusion of face, that they entirely mistook His Royal Highness's case, which, according to our author, was one of ague; and it is plainly hinted that if, at the outset, quinine had been administered, the anxiety of the nation as to the issue would have been spared. The author is quite distressed to observe how physicians in this country, when they have to do with cases of so-called enteric fever, waste their time by searching out "some flaw in a drain, or defect in a water-supply", and he particularly indicates, as a special example of such folly, the investigations into the drainage of Londesborough Lodge, and the water-supply of Sandringham, when to Dr. Smith's mind it is clear the Prince contracted his "ague" at a cover side, and His Royal Highness's groom his in the malarious climate of Sandringham, to which, "being a delicate lad, from the colder climate of Scotland," he was not accustomed.

Had Dr. Smith spent his entire professional life in merely manipulating figures, and studying disease from statistical tables, we should have been less surprised than we are that he should have put forth such "views" as the above; but we gather from other parts of his book, that he has treated the sick, and had considerable bedside experience, which, we are concerned to have to observe, he has turned to very little profitable account. How any man, with the most elementary knowledge of his profession, can regard ague and enteric fever as the same disease, with only a difference in degree of intensity, is quite a marvel to us. It indicates one of two things, either a want of observing power, fatal to every hope of success in his profession, or a mind so

* *Fever and Cholera from a New Point of View.* By Alexander Smith, M.D. Edin., Staff Surgeon-Major; Statistical Officer to the Inspector-General of Hospitals, British Forces in India. (For private circulation.) Calcutta: William Smith, Calcutta Central Press Company (Limited). 1873.

wedded to a crochet as to be incapable of reasoning on the facts before him, such as causation, symptoms, duration, temperature, lesions, and sequels.

We have looked carefully into what the author has written on the treatment of ague, put forth with amusing simplicity, as something quite novel. Our readers, especially those familiar with modern tropical medicine, will smile when told that this "new view" of the treatment of ague consists, "in rest, purgation, and the exhibition of quinine", with, let us add, a revival of the obsolete, and, nine times out of ten, mischievous practice, of applying leeches to the head. This, with the now not novel use of quinine by the hypodermic method, and its prophylactic administration, which is older still, is put forth by Dr. Smith as a mode of treatment hitherto unknown, a fresh discovery, and a great advance in therapeutics.

Before concluding, we must notice a passage at page 258 of his book, in which Dr. Smith not only indulges in an unbecoming sneer at the medical officers of the India service, but lays down the absurd proposition, that the study of the diseases of India can only be profitably carried on in the persons of Europeans. What would he say to his opinion formulated in another way, "the diseases of England can only be studied in the persons of the natives of India who visit it?" It appears that many Indian medical officers note that cholera can be, and is often, propagated by water-contamination; an opinion sufficiently reasonable, and generally received in this country. But Dr. Alexander Smith seems to think that he has disposed of it by the observation, that not being "British" officers, their opinion is of no practical value. The medical officers of the Indian service need not fear that their labours will suffer by such unwise comparisons as are plainly implied in the passage under notice, which the author, if tempted to give a wider circulation to his book, will do well to erase.

PHYSIOLOGICAL CHEMISTRY. By C. H. RALFE, M.A., M.B. London: H. K. Lewis. 1873.

THIS little book of two hundred and seventy pages contains a concise account of organic chemistry, in so far as it pertains to physiology, and will be found an useful guide to the medical practitioner who desires to gain a knowledge of modern chemistry. It has very little pretension to originality or to criticism, and is compiled almost exclusively from English text-books and English journals. It is clearly written, and very fairly correct; but there is a secondhand character about it, which manifests itself in many ways. On page 1, we note that Berthelot's name is written Berthôlet; and on page 26, we read Schützenberg instead of Schützenberger. The chemical formulæ appear to be correct in nearly every instance, which speaks much for the care bestowed upon the getting up of the book. An exception to this statement is, however, to be found on page 1, whereon starch is written with the formula $C^6 H^{10} O^6$, instead of $C^6 H^{10} O^5$; and glucose is written $C^6 H^{12} O^5$, instead of $C^6 H^{12} O^6$. Confining our remarks to the contents of Chapter III, on the Albuminous and Gelatinous Principles, we meet with the statement that Lieberkühn wrote the formula of the albuminoids as $C^{12} H^{13} N^{18} SO^{23}$, from a consideration of the percentages of carbon, hydrogen, etc., contained by them. The fact is, of course, that the formula was arrived at from analyses of combinations of albumen which contain metallic bases. There is no mention of the important paper of Hlasiwetz and Habermann, nor of the employment of Wanklyn, Chapman, and Smith's ammonia-process in the estimation of albumen in albuminous fluids.

NOTES OF A COURSE OF NINETEEN LECTURES ON NATURAL PHILOSOPHY, delivered at Guy's Hospital during the Session 1872-73. By G. F. RODWELL, F.R.A.S., F.C.S. London: Longmans and Co. 1873.

THIS book contains a set of definitions and aphorisms which do not seem to be very happy in many instances. For instance, matter is first defined to be anything which possesses weight; and then (in order, as the author says, to include "the ether which we are unable to weigh") the definition is amended into "that which is receptive or communicative of motion". Now, we have no objection whatsoever to the definition of matter by a still more fundamental property than "the possessing of weight", but we altogether object to the reason above alleged. To class a purely hypothetical entity, such as the hypothetical ether, along with matter, is on a par with the enumeration of "caloric" along with oxygen, hydrogen, and the other elements, in antiquated chemical books.

The author is unhappy on the subject of the Bramah press: he says "a small pressure may produce a pressure of considerable magnitude", instead of explaining that the press is simply a device for the accumulation of a succession of small efforts. The definition of specific gravity

is as follows: "The specific gravity of a body is its *relative volume-weight referred to some standard*." Certainly such a definition is not conducive to clearness of thought. With the remark, that philologically it is also unsatisfactory (the Greek not being invariably correct), we close the book.

SELECTIONS FROM JOURNALS.

PATHOLOGY.

CHANGES IN THE SYMPATHETIC NERVOUS SYSTEM IN CONSTITUTIONAL SYPHILIS.—P. Petrow of St. Petersburg describes (Virchow's *Archiv*, vol. xvii, March 1, 1873) the changes produced in the sympathetic nerve by syphilis, and arrives at the following conclusions. 1. The general disorder of the organism in syphilis manifests itself plainly in the sympathetic system by changes in the nerve-elements and in the interstitial connective tissue. 2. The nerve-cells undergo (independently of the interstitial changes) pigmentous and colloid degeneration—more frequently the former. 3. The interstitial tissue partakes in the changes undergone by the same structure in other parts of the body, producing atrophy of the nerve-cells and fibres. 4. The endothelium which surrounds the nerve-cells in like manner partakes in the disease. At first there is increased size, with proliferation, of the cells; and afterwards fatty metamorphosis.—*Allgemeine Medicin. Central-Zeitung*, March 12.

CONGENITAL ALOPECIA.—Dr. M. Schede describes in the *Archiv für Klin. Chirurgie*, vol. xiv, the case of a boy aged 13 and that of a girl aged 6 months, children of the same mother, who were perfectly bald at birth, and remained so. Two other children, of ages between these, did not present this abnormal condition. A small piece of the scalp of the boy was examined under the microscope. The perspiratory and sebaceous glands were normal. In the immediate neighbourhood of the latter, especially near the base, were seen a large number of small atheromatous deposits, the origin of which could be traced in various places to gland-like sacs, lined with cylinder epithelium, and filled with round cells. These sacs appeared to be the rudimentary representatives of the outer root-sheaths of the hair; the erector muscles, which were well developed, had the same relation to them as to the normal hair-follicles.

DIPHThERITIC NEPHRITIS.—Letzerich gives an account in Virchow's *Archiv*, vol. lv, part i, of the necropsies of two children who died of diphtheria. He refers to M. Recklinghausen's observations on the participation of the kidneys in the disease, characterised during life by diminished or arrested urinary secretion, and after death by obstruction of both the convoluted and straight tubules with peculiar finely granular masses. On making fine sections of the organ after hardening, the epithelium of the convoluted tubules is found to be remarkably increased, and filled with thickly packed glistening granules. These, as well as the granular masses which occupy the lumen of the canaliculi, and lie between the loops of tubes and vessels, are regarded by Letzerich as in great part consisting of cryptogamic sporules. The epithelium of the straight tubes is similarly changed. These tubes are also sometimes filled, sometimes distended, by masses and plugs of fine dark-coloured granules of the same kind, among which may be found unmistakable cryptogamic filaments, originating from the spores. Letzerich points out the direct causal connection of this affection of the kidneys with the parasitic organisms already described by him as passing through the medium of the lymphatic vessels and glands into the blood, and being probably excreted by the kidneys. In fact, he was able to find similar structures in the small blood-vessels of the liver and spleen.—*Centralblatt für die Medicin. Wissensch.*, February 8th.

TUBERCULOSIS OF THE SKIN.—Dr. Bizzozero of Turin describes, in the *Centralblatt für die Medicin. Wissensch.* for April 26th, the appearances presented at the necropsy of a child aged 15, who had for several years suffered severely from scrofula. There were chronic suppurative inflammation of the left ankle-joint and of the articulation between the phalanges of the left thumb; tubercle of the lungs with peribronchitis; diffuse tuberculosis of the intestines, with extensive ulcers; fatty degeneration and chronic interstitial inflammation of the kidneys; fatty infiltration of the liver; an abscess as large as a hazel-nut, with cheesy contents, beneath the skin of the left forearm; and numerous cutaneous ulcers, especially at the elbow, on the right side of the face, and on the left shoulder. These ulcers had a diameter varying from one to two centimeters (two-fifths to four-fifths of an inch); some were one or two millimeters deep; others were mere superficial excoriations. Their edges

were sinuous, often somewhat elevated and slightly undermined. The surrounding skin was slightly swollen and pigmented. In many cases, small rather hard nodules were felt in the subcutaneous tissue beneath the ulcers. On microscopic examination, the papillæ of the surrounding skin were found to be enlarged; their vessels were dilated, and the connective tissue cells surrounding the latter contained much pigment. Numerous wandering cells were infiltrated around all the vessels of the skin, and around the coils of the salivary glands. There was a still greater cellular infiltration at the edge and base of the ulcers; the most superficial layers of this infiltrated tissue were softened, and their elements broken up into granules. At the base and at the edges of the ulcers, and in the neighbouring skin, were seen numerous, mostly isolated, tubercles. They consisted each of a giant-cell with numerous processes and nuclei, and surrounded by numerous epithelioid cells. The cutaneous tubercle was in many instances found lying close beneath the epidermis. Tubercle was also found, on microscopic examination, in the lymphatic glands, lungs, and intestines. Bizzozero states that he once found giant-cells in an old, apparently syphilitic, ulcer of the left foot. The subject was a woman aged 50, in whose body were found syphilitic gummata of the dura mater and cranial and tibial nodes, and also tubercle of the apices of the lungs. It is probable, he says, that scrofulous ulcers of the skin are very often of tubercular origin.

MIDWIFERY.

DURATION OF MENSTRUATION.—Dr. Cohnstein gives, in the *Deutsche Klinik* (No. 3, 1873), the results obtained from careful inquiry of four hundred women in whom the menopause had occurred several years previously. 1. The average duration of menstruation was thirty-one years. 2. The menopause occurred gradually in 76 per cent., suddenly in 24 per cent. 3. It occurred in those who had menstruated early (under 13 years) about three years later than in those in whom the catamenia appeared late (after the 17th year of age). The regularity or irregularity of menstruation appears to have no influence on its duration. 5. More married women than unmarried obtain a menstruation period of 29—34 years. 6. Pluriparæ show the highest percentage of duration of menstruation for 29—32 years. If their last confinement take place between the ages of 38 and 42, the duration of activity of the uterus varies between twenty-four and thirty-three years; if it occur between the ages of 30 and 38, the duration of menstruation varies between twenty-five and twenty-eight years. Abortion hastens the appearance of the menopause. 7. Lactation increases the duration of menstruation. To sum up, the catamenial function is of longest duration in women who menstruate early, are married, have more than three children, nurse their children themselves, and cease child-bearing between the ages of 38 and 42.—*Wiener Medizin. Wochenschrift*, April 12.

FORM OF THE BODY IN NEW-BORN CHILDREN.—Pfankuch calls in question (*Archiv für Gynæcologie*, vol. iv, part 2) the statement of Simpson that male children are more exposed to danger than females during birth, on account of their greater size. He finds that, of children of equal weight, more males die than females; and, with the view of ascertaining whether this was to be accounted for by the size of the head, he has examined the relation between the head and the rest of the body in 714 new-born children. He finds that, towards the end of pregnancy, the increase in weight of the child is relatively more rapid than that of its length or of the size of its head, the body and limbs becoming more developed. For equal weights, boys are longer and have larger heads than girls. First children are longer and have larger heads than those which follow them.—*Centralblatt für die Medizin. Wissensch.*, February 8th.

SYPHILIS DURING PREGNANCY.—In the *Wiener Medizinische Presse*, No. 1 for 1873, Dr. Sigmund describes those forms of syphilis which are communicated during or within a fortnight before pregnancy, or during the act of impregnation. The disposition to syphilitic infection appears to be greater in pregnant than in non-pregnant women. Dr. Sigmund explains this by the changes which the genital organs of the female normally undergo in consequence of pregnancy. The period of incubation is apparently not of longer duration in the pregnant than in the unimpregnated female, or in the male. The initial forms of syphilis have the same points of origin, but are developed much more quickly and extensively in the pregnant woman. The situation of the induration, as well as of the papules, in the vaginal portion, on the lower commissure of the labia and on the perinæum, not only indicates that the affection is especially obstinate, but that the act of labour will be very perilous. The tissues lose their elasticity and are torn under even moderate distension; and the lacerations thus produced are at-

tended with a marked disposition to sloughing, which may be followed by pyæmia. While the initial affection in pregnant women is thus severe, the consecutive symptoms are very mild. Eruptions are few and limited, and soon disappear. Alopecia is rare. Affections of the nervous system, especially of the central organs, syphilitic pains, convulsions, etc., occur very rarely in pregnant women. Dr. Sigmund has never seen a case of iritis. Speaking of the treatment, he says that it cannot be too much insisted on that it is of the highest importance not to trust to medicinal remedies alone, but to employ with them a suitable hygienic and dietetic regimen.

DISEASES OF CHILDREN.

CLOSURE OF THE SINUS POCULARIS IN INFANTS.—In examining the bodies of seventy children, newly born or a few days old, Dr. Englisch (*Wiener Medizin. Jahrb.*, 1873, 1) found in five cases a closure of the opening of the sinus pocularis. This leads to distension of the sinus with its retained secretion, so as to form a cyst, bulging sometimes on the anterior, sometimes on the posterior, wall of the prostate. The obstruction is sometimes so slight that it gives way under slight pressure; sometimes it is firmer; it arises evidently not from any malformation, but from the mucous surfaces remaining in contact. According to its size, the tumour produces more or less difficulty of micturition, and may even give rise to retention; and Dr. Englisch believes that to it are to be attributed not a few of the cases of retention of urine in newly born children. Usually, the obstruction is overcome by the efforts of the child; in other cases, it is almost always readily removed by the catheter. If the obstruction be firm, and no instrumental means be employed, the changes consecutive on retention may take place in the parts of the urinary passages lying beyond it. The anterior part of the sinus pocularis may also be shut off from the posterior; and the latter, lying in the neighbourhood of the connective tissue between the prostate and rectum, may become distended into a cyst. This has been observed in several cases.—*Centralblatt für die Med. Wiss.*, April 5th.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

The Epidemic of Small-pox.—Shall Ladies be admitted to our Schools?—Hospital Saturday.—Testimonial to Mr. Gamgee.—The General Hospital Dinner.

WE record with regret, that small-pox is again on the increase here. Just this time last year the epidemic was at its height, and only a short time ago its public expenses were paid, and our house set in order. But we have never been quite free, and have generally had about five new cases reported per week. A fortnight ago they numbered fourteen, last week twenty-three. The present outbreak is principally in one district; thirty-two cases are in one street.

It is noteworthy that the majority are in the parish of Aston, not in the parish of Birmingham, though they are within the borough.

Now the vaccination arrangements in the Birmingham parish are particularly good, and, to judge from figures recently quoted by Mr. Clay, very successful. Of 8,506 births, all but 52 are accounted for by the vaccination register. The vaccination fees for the last half-year were £500, more than half of which sum was for re-vaccination. Moreover, the public records of the small-pox cases for the last five years do not show one child patient between three months and five years of age. The vaccination arrangements in the Aston parish are not so good; in fact, Dr. Ballard, on a recent visit, blamed them as insufficient. Query? Is there no relation between this and the present spread of the disease? Unvaccinated cases still come from somewhere, for Dr. Hill reports 10 out of the 210 attacked in last two months.

There is much stir in our Town Council about the dirty condition and defective drainage of the infected streets, and public men refer to this as accountable for the increase; but surely no amount of dirt will generate small-pox, and a sewer, unless well trapped, ventilated, and disinfected, is as bad as a privy, often worse. The street in which the inhabitants are now suffering most is Darwin Street, and that is the only one of the set that is sewered.

Surely the remedies are vaccination and isolation; and all energy should be directed to these; for, what with the liberty of the subject, the distinction between paupers and others, the division of authority between Councils and Boards, the meeting of committees and deputa-

tions, and some difference of opinion, these two important things are very difficult to carry out. We have no desire to criticise the authorities; they are alive to the emergency, and are anxious to do what is best; but the system is not yet competent to deal thoroughly with this direful epidemic.

Mr. Lowe's recent speech on female education would have been well timed here. A lady, we may say exceptionally qualified as a suitable student of medicine, applied this term to enter for lectures at Queen's College. The majority of the professors were willing, and even desirous, that consent should be given; but, in deference to various opinions, separate classes were proposed. This, however, though acceptable to many in the theory, is clearly impracticable for one student. On the other hand, the advanced proposition of mixed classes seemed to meet with the strongest possible opposition on the part of the students, and was objected to by others also.

The question was considered at a council meeting on Friday last, and the following resolution, proposed by Lord Lichfield, was passed: "That the Council, whilst fully recognising the right of women to occupy any field of employment for which they deem themselves qualified, and desirous to afford any facilities in its power towards the higher education of women, considers that it cannot, under existing arrangements, conveniently admit female students to any of its departments, and is not prepared, at present, to make such alterations as the admission of female students would require."

The matter has excited much interest, and I see to-day (May 20th), a letter in the local press from "a mother," advocating separate classes; there are "resolutions" also, of the students. It begins to remind one of Edinburgh, where one studies University affairs in the daily *Scotsman*. But seriously, it seems to many hard that this application should, almost by the necessity of things, have to be declined; it seems hard that ladies, however willing, however qualified, and, we may add, however much in request, should have to go to Paris, or to Zurich, to be taught. What is the best solution of the difficulty? Who will be the first to cut this Gordian knot?

The great success of our Hospital Saturday, which gave £4,700 in one day, "for the free benefit of the medical charities in Birmingham" was largely due to Mr. Gamgee. We are extremely glad to see that the subscriptions for a testimonial to him amount to upwards of £500; and moreover, a substantial acknowledgment of his valuable services in connection with the Queen's Hospital extension movement, is now ready for his acceptance. It is gratifying to record that his onerous and important public work is not suffered to go unrewarded.

The General Hospital dinner, last month, was a great success. It was to accomplish, and at the same time to celebrate, the paying off of a debt for building, in 1864, when the number of beds was largely increased. The Marquis of Hertford, who presided, spoke ably on behalf of this justly popular Hospital, "one of the best provincial hospitals extant," and headed a subscription list, to which our townsmen have contributed generously, Messrs. Chance & Kenrick offering £200 apiece, and not fewer than twenty other gentlemen £100 each; neither were the medical staff wanting in their contributions. £4,300 were wanted, and rather more than that sum was obtained.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CALVERT'S CARBOLIC VAPORISER.

MESSRS. CALVERT have introduced a vaporiser for the purpose of giving off fumes of carbolic acid when it is desired to employ "aërial disinfection". We have already given reasons for considering this to be a less satisfactory and trustworthy mode of disinfection than the actual application of the substance in solution; and we believe that aërial disinfection is a method on which medical officers are not justified in placing reliance—all official and semi-official directions to the contrary notwithstanding. In hospital wards and sick-rooms, we should consider this to be an especially delusive and objectionable mode of attempting to disinfect; nor do we believe that it is of any use in disinfecting rooms which have been in use by the sick. But, as a good many medical officers cling to the superstition of "fumes" of sulphur and of carbolic acid as agents of disinfection, they may be glad to know of this vaporiser, which is simple, effective, and acts cheaply on a large scale. Copious washings should, however, we think, always be preferred.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 31ST, 1873.

THE ASSOCIATION AND MEDICAL REFORM.

THE *Lancet* never has been, and, if past experience justifies any prediction as to the future, never can be otherwise than hostile to the British Medical Association. For many long years, it persistently omitted all notice of its meetings and proceedings; it was only when these attracted representative visitors from all parts of the civilised world, from the new as well as the old hemisphere, that the *Lancet* sent a special reporter to attend the meetings, and competed for the earliest publication of the addresses delivered at the annual gatherings of the Association.

The *Lancet* has never aided the Association while fighting the battle, and for a considerable time a very hopeless one it seemed, of medical reform. In the second year of the existence of the Association, an admirable paper was read on the subject, which was largely circulated among the profession. In 1852, a Medical Bill was drafted, on behalf of the Association, by Mr. Hastings, son of our revered founder; several distinguished statesmen and ministers—Sir James Graham in 1844, and again in 1845, Lord John Russell, Sir George Grey, Mr. Walpole, Mr. Cowper—had previously grappled with the subject, and had failed; private members of parliament, amongst them the late Mr. Wakley, had also attempted it, and equally without success. In 1853, Lord Palmerston, in the House of Commons, expressed the hope that the Government might be able to take it up, but without result. At this apparently hopeless conjuncture, when, owing to the inability to reconcile the conflicting interests of the various corporations, members of succeeding governments, alike with private members, had abandoned the task in despair, the Association again came to the rescue. It had appointed a special committee for the express purpose of preparing a Bill to secure uniformity of medical education and qualification throughout the United Kingdom; and on May 17th, 1855, a deputation waited on Sir George Grey to press upon his favourable consideration a measure which was the result of four years' laborious and persevering exertion. Sir Charles Hastings (Chairman of that Committee), Mr. Southam (now President of the Council of the Association), Dr. Sibson, Dr. Lankester, Dr. Webster, were present on that occasion, with several members of parliament; but above all, the deputation was introduced by Mr. Headlam, then, as now, the esteemed and valued advocate of the Bill of the Association. At that time, there were even more licensing bodies than at present; they were twenty-two in number, varying greatly in their requirements; there was then no registration by which those duly qualified to practise could be distinguished from ignorant pretenders. The object of that Bill of the Association was to provide for the establishment of one uniform system of medical examination, for perfect reciprocity of practice founded upon that uniformity, and for an efficient registration. The General Medical Council was to be elected partly by the colleges, partly by the universities, and partly by the whole body of the medical profession. The composition of a *British Pharmacopæia* was also indicated.

This Bill, which was the Bill of the Association, was introduced in

1855. It was again introduced by Mr. Headlam in 1856; but upon the motion to go into committee, was opposed by Sir G. Grey on the liberal, and by Mr. Walpole on the conservative side, and defeated, 116 voting for postponement, and 81 for going into committee. Notwithstanding this check, Mr. Headlam did not give up the struggle, but in 1857 again brought the measure forward; and, despite the opposition of the Government, on July 2nd, 1857, carried the second reading by the very large majority of 147, 225 voting for the Bill of the Association, and only 78 against it; then, as now, the Scottish universities were in strenuous opposition. In consequence of this vote, Mr. Cowper promised to take up the subject; and acknowledged the influence of the Association by writing to Sir C. Hastings on August 1st, 1857, stating his intention of bringing in a Bill in the ensuing session, and requesting an interview.

The present is an opportune period for reminding the profession of these facts; the tradition of success attached to Mr. Headlam and the Association, and the diatribes of irresponsible and inexperienced writers, will not weigh against the acknowledged ability, matured judgment, and ripe experience of Mr. Headlam, coupled with the respect and consideration which he and Sir H. Selwin-Ibbetson enjoy on both sides of the House.

It is also well to bear in mind, in no invidious spirit be it stated, that the *Lancet* in past days, no more than at present, lent the Association a helping hand. On the contrary, then, as now, its connection with impracticable measures only tended to mar the attainment of what was feasible. The Association, however, did succeed. The formation of a Medical Council, reciprocity of practice, a *Register* of the profession, and a *British Pharmacopæia*, objects secured by the Medical Act of 1858, were amongst the objects for which the Association strove, and for the attainment of which it bore down all opposition, even that of the Government of the day.

The present Bill of the Association has been framed with a just regard to the claims and rights of existing bodies: it is the work of men in whom the Association has for several years placed implicit confidence. Year after year have they come before the Association with a detailed report of their proceedings, and year by year have their proceedings been approved and their appointment renewed. The Bill of the Association is an improved edition of all that the Association would joyfully have accepted from the Government in 1870, and of the Bill which was prepared for introduction by Mr. Headlam in the session of 1871, but which he wisely refrained from introducing on account of the *Lancet* Bill being also pressed forward. It was held that rival measures would find no favour in the House of Commons, where the quarrels of doctors are simply held in horror. The field was left clear for the *Lancet* Bill, but it was not again heard of. In 1871, the *Lancet* again showed no sign of life; nor was this to be wondered at, considering the reception of a deputation in favour of it received by Mr. Forster in March 1871. On that occasion "one of the proprietors of the *Lancet*, with seven members of the staff and a reporter, were introduced by Mr. Mundella. Mr. R. Brudenell Carter made a statement, in which he explained and supported what is known as the *Lancet* Medical Bill. Mr. Forster, after hearing the remarks of the gentlemen present, replied that the observations made as to the Government Bill of last session and the General Medical Council, did not accord with his own opinion and information. It did not appear that the scheme laid before him had received any professional support; and if it reached the House of Commons, of course its promoters must, from its disfranchising tendencies, expect to have to combat with an overwhelming opposition. He could promise no support to it from the Government. They would be able to learn how much chance there was of a measure so little supported becoming law."

The Reform Committee do not deem it prudent to endorse this Bill. They seek two objects: first, the realisation of direct representation in the General Medical Council in the proportion of which the

Association has declared its approval; and secondly, the compulsory formation of conjoint boards of examination, with equal fees and equal qualifications for each division of the kingdom. The *Lancet* asks, How can seven English and five Irish and five Scotch corporations combine? To this the Association replies, that the English corporations are prepared to combine, that the Irish are inclined to combine, and that proper measures will end in effecting combination in Scotland also. Very little persuasion will be required on the part of any member of the Medical Reform Committee to make corporations drink at the waters of conjunction, once the Bill of the Association becomes law.

EFFECTS OF BLOOD-LETTING.

OF late years blood-letting has fallen much into disuse; and, to the younger generation of medical practitioners, the extent to which it was carried thirty or forty years ago seems hardly credible. This revolution in practice is due in no small degree to Marshall Hall, who pointed out with the utmost clearness, in his work on the subject, the injurious and even fatal effects of excessive loss of blood, although he still held it to be "the remedy, and the only remedy, for inflammation". It is somewhat astonishing to us that he could still regard it with any favour whatever after the disastrous results which attended it in a case of a friend of his own. This gentleman, himself a medical man, had two of his ribs broken by his horse falling upon him when riding. For the relief of his pain he was bled and purged, and bled again time after time, till he had lost within four days no less than a hundred and twenty ounces of blood. Further bleeding was proposed once or twice afterwards, but, on consideration, his medical attendants thought better of it, and gave him stimulants instead. But these came too late, and the unfortunate man expired, a victim to his own and his friends' belief in the lancet. Such a case could hardly occur in the present day—in this country at least—without the medical men in attendance being charged with manslaughter; but the question can hardly fail to be asked by thinking minds, whether the reaction against the practice is not too great, and a valuable remedy allowed to lie unused because it was formerly abused? In this state of doubt we gladly welcome such researches as have been lately published by Bauer in the *Zeitschrift für Biologie*, for they give us some insight into the changes which are produced in the organism by abstracting blood from it, and enable us to form a better judgment regarding the cases in which it may or may not be employed. The experiments which he relates were made for the purpose of discovering what changes occur in the metamorphosis of albumen and fat in the body after venesection. One would expect *a priori* that the withdrawal of a quantity of blood, by merely lessening the amount of albuminous substances in the body, would be followed by a diminution in the daily metamorphosis. So far from this being the case, however, Bauer finds that the quantity of albuminous bodies decomposed daily in the organism is invariably increased by blood-letting, and the excretion of the urea which is formed by their decomposition is consequently augmented. Notwithstanding this, however, much less oxygen is consumed than before, so that the substances into which albumen splits up cannot undergo such perfect combustion as before the venesection. One may readily understand this, for it is the red blood-corpuscles which carry oxygen throughout the body; and when their number is lessened by blood-letting, combustion in the tissues can hardly go on so rapidly as before. The decomposition of albumen in the body is altogether independent of the oxygen consumed in it. Now, fat is one of the substances formed by this decomposition; and, as its formation is increased and its combustion lessened, to say nothing of the fat taken as food, it must accumulate in the body: and this it actually does, as was well known to the phlebotomists of former days, whose writings con-

tain many a record of cases where patients became enormously fat after copious blood-lettings. The same thing is seen in a milder form almost every day in the case of chlorotic girls, on whose bodies fat becomes deposited, because they have too few red blood-corpuscles to carry to it the oxygen required for its combustion. In many localities, too, cattle-breeders have become acquainted with the fact, and they increase the quantity of fat formed by their animals either in the shape of butter yielded by their milch-cows, or accumulated on the bodies of the oxen they wish to fatten by bleeding them from time to time.

In diseases such as pneumonia, blood may be drawn for the purpose of diminishing temperature or of lessening dyspnoea. It may be supposed that Bauer's experiments support the use of blood-letting for the former purpose; but this is not the case, for the fall of temperature which blood-letting produces takes place immediately, and is soon over, while combustion does not diminish till some hours have elapsed. The fall of temperature is, therefore, due to another cause—viz., the relaxation of the superficial vessels allowing the blood to cool more readily; but temperature can be reduced much more quickly and effectively by the cold douche or a wet sheet; and increased transformation of albumen, with diminished oxidation, is not unlikely to lead to fatty degeneration of important organs.

The relief which venesection generally affords in dyspnoea probably depends in part on its effect in cooling the body, for Fick and Goldstein have shown that increased temperature of the blood is sufficient to produce dyspnoea. This is a real benefit; but it would be attained as well by the use of the wet sheet, and a second cause of the subjective relief after blood-letting is by no means so desirable. The loss of blood, according to Traube, diminishes the irritability of the medulla oblongata, which is the centre of innervation for the respiratory muscles, and, by thus producing a sort of narcosis in this part of the nervous system, deprives it of its power to appreciate rightly the respiratory wants of the body. A third way in which it may prove useful in dyspnoea is by lessening the resistance, which hinders the right ventricle from emptying itself completely, and, by thus facilitating the circulation in the lungs, may assist respiration. The author considers that this condition will only last until as much fluid has been absorbed into the vessels from the tissues as will restore the blood to its former volume; but of this we are not quite sure.

Lastly, he says it is not to be denied that the danger arising from serous exudations in important organs, as well as of congestion of the brain or lungs, may be temporarily averted by general blood-letting, in consequence of the absorption of fluid into the vessels which it occasions. This observation has been too often made to leave any doubt upon the subject; but as often has it been noticed that the danger of these conditions recurring increased after every venesection. (Edema is to a great extent dependent on weakness of the vaso-motor nerves (see this JOURNAL, June 15th, 1872, p. 644); and, this weakness being increased by blood-letting, the oedema is of course more likely to recur. Bauer, however, gives a case which shows most strikingly the immediate benefit produced by blood-letting, in a case of oedema of the lungs; and we are inclined to think that the weakness of the vaso-motor nerves which might lead to a recurrence of the oedema might be successfully combated by a vaso-motor tonic, such as digitalis. While this shows that immense benefit may be derived from its use, in proper cases, the effects which it produces on the tissue-change in the organism teach us that it is not a remedy to be thoughtlessly used, but one which must be employed only after due consideration and with watchful care.

INFECTION AND INFECTIOUS DISEASES.

THE following abstract of some of the researches made by German observers to solve the problem of infection and infectious diseases will be of interest, in connection with the paper lately read by Dr. Burdon

Sanderson before the Royal Medical and Chirurgical Society. We have already published an account of the observations of Hueter and Greveler (BRITISH MEDICAL JOURNAL, December 7th, 1872; Feb. 15th, 1873), and Senator (*Ibid.*, March 1st).

It has been stated by Bastian, Ferrier, and others, that spores have been found in the blood of healthy as well as of diseased persons. On this point, Klebs, at the meeting of German Naturalists and Physicians in 1872, gave an account of some interesting observations (*Allgemeine Medizin. Central-Zeitung*, December 18th, 1872). Glass tubes, closed at one end, were exposed for hours to a high temperature, the open end then fused. They were next introduced into the heart of living animals, one end broken off, and blood allowed to enter. Were the animals healthy, the blood formed a dark-red, opaque, crystalline pap, which remained unaltered for six months. The blood of animals into whom microsporon septicum had been injected also crystallised. When exposed to a temperature of 89.6 deg. Fahr., it liquefied, and was found to contain spores, single or united into masses. The report states, also, that "the distribution of the microsporon in sepsis, variola, and rinderpest, presents such characteristic differences that a specific distinction of them must be accepted."

Reiss (*Reichert u. Du Bois-Reymond's Arch.*, 1872; *Centralblatt*, 1872, No. 55) examines the blood of living persons in case of disease. In scarlatina, minute round bodies are seen, strongly refracting light, in part isolated, in part joined together in chains, again lying in large groups and masses. Their nature is considered infectious, because inoculation of such blood produces the death of rabbits, in whose blood similar bodies were afterwards found. (As will be seen later, the results of such experiments can hardly justify the conclusions). Other bodies were found in the blood of scarlatina and other exanthemata, typhoid, acute rheumatism, puerperal fever, pneumonia, etc., similar, as Reiss thinks, to those observed by Max Schultze, Hüter, and Hallier. He finds them in greatest numbers during the retrogression of the disease; the more numerous, the greater the general anæmia and exhaustion. They were also found in various chronic diseases, accompanied with anæmia or cachexia. He regards them as derived from the retrograde metamorphosis of white blood-corpuscles. Inoculation with blood containing them gave negative results.

Vogt (*Centralblatt*, 1872, No. 44) examined the fluids from joints, where metastatic inflammations had occurred, with reference to the presence of spores. The joint of the living person being punctured, and the fluid observed, innumerable monads, possessing lively movements, were found. The corresponding uninflamed joint, and the blood in general, contained but few of these. He could not find the rod-like bacteria seen by Klebs under similar circumstances, and is inclined to regard this observation as the result of faulty method. The patient having died, the moving monads could not be found after a lapse of twenty-four hours. Rabbits were inoculated with the fluid from the diseased joint; death occurred in eight days; and in the pus taken from the point of inoculation, also in the muscular fibrils, numerous monads were seen. Inoculation of the fluid from the healthy joint produced no result.

There being little or no opposition to the fact that the inoculation of certain fluids produces infection, and it being also granted that such fluids contain spores, it becomes desirable to ascertain whether the presence of spores in infectious fluids is essential. Zülzer, at a meeting of the Berlin Medical Society, November, 1872 (*Allg. Med. Centr. Zeit.*, 1873, No. 7), after repeatedly filtering vaccine lymph, was finally able to obtain a fluid almost entirely free from bacteria. Attempting to vaccinate with this, he found that its activity was lost.

Wolff (*Centralblatt*, February 15th and 22nd, 1873) could not entirely free a fluid from germs, either by filtering, freezing, or other methods. At the same time, he ascertained that putrid blood acts wholly differently from its filtrate, even when bacteria are added to the latter. His inference is, that the active principle of the putrid blood must be some other morphological or chemical constituent than bacteria. The filtrate, in addition to relatively few bacteria, contained scarcely any odorous principle and no sulphuretted hydrogen, while the residuum had a horrible odour and gave distinct evidence of the gas just named. He attempted to produce infection by the introduction of fluids containing bacteria and micrococci into the lungs of guinea-pigs and rabbits. Twenty experiments were made, in eight of which disease of the lungs was found, mostly in the form of bronchopneumonic nodules, varying in size from a bean to a pea, rarely in the form of red or yellow hepatitis of an entire lobe; in some cases, there were circumscribed deposits with diffuse pneumonic infiltration. Large accumulations of micrococci were not found. Similar appearances were observed in animals who died from other causes, where the introduction of fungi could not be proven. Putrid alterations of the lungs, diphtheritis,

miliary abscesses, containing colonies of bacteria, could not be produced by the introduction of fluids containing large amounts of fungi.

In the three other cases, where the bronchial mucous membrane was irritated previous to the introduction of the fungi, no alterations were found.

In some of the animals, an excretion of the fungi, by means of the kidneys, could be proven, though metastatic nodules could not be found in these or in other organs. In the lungs of the animals who died within six days, fungi were found to a slight extent; the lungs of those who lived six weeks contained either none at all, or very few.

These results accord with those of Sanderson, and have been confirmed by Vulpian in his contributions to the discussion on septicæmia, commenced by Davaine in the French Academy.

Birch-Hirschfeld (*Arch. d. Heilkunde*, 1872, p. 389) gives, as the results of experiments, that when moderate amounts of fluids containing micrococci are injected into the blood, the white blood corpuscles take them up in large numbers. After a while, probably depending on the amount injected, a progressive increase of the free cocci takes place until death occurs. In the pulp cells of the spleen, a part of the micrococci are retained, and when a large number are present, a distinct swelling of the organ occurs. If putrid fluids are injected into the serous cavities, a local inflammation results, and the animal may die before the micrococci enter the blood in large amounts; in such cases no splenic tumour is found. He has observed that in the septicæmic forms of puerperal fever, the appearances are similar to those occurring in animals in whose blood putrid fluids have been injected. Hence, where the patient dies with a splenic tumour, the infectious material must enter the circulation early; while, in the other series, the infection advances rather by way of the lymphatics, though both forms may occur.

[For the preceding portions of abstract, we are indebted in great part to an able report by Dr. R. R. Fitz in the *Boston Medical and Surgical Journal* of April 17th.]

Popoff (*Wiener Medizin. Jahrb.*, 1872, part iv, quoted in *Centralblatt für die Medizin. Wissenschaften*, March 29th) states that he found micrococci in large numbers in pus contained in the bronchi and alveoli of the lungs in putrid bronchitis; they were found in the alveolar cells and epithelium and in the interalveolar tissue. He found micrococci in the same situations, and also within the blood-vessels, in a case of variola hæmorrhagica and in one of laryngeal diphtheria. In the portions of lung rendered gangrenous by embolism in putrid bronchitis, the micrococci were found only in the capillaries, while the air-passages were free from them. The results of examination were negative in a case of measles, in several of acute and chronic hepatisation of the lungs, and in many of simple bronchopneumonia; but micrococci were abundant in the contents of caverns.

After the injection of putrid fluid containing micrococci into the lungs of rabbits, he could not find bacteria, though fever and more or less extensive bronchitis and pneumonia were induced. He also injected ammonia into the blood of three dogs, and then introduced an infusion of putrid animal matters into the jugular vein. In one of the animals, symptoms of circumscribed pneumonia appeared before the injection into the blood; and, after its death on the nineteenth day, the right lung presented a large suppurating cavity containing greenish shreds of tissue and innumerable micrococci, while the blood was entirely free from them. The liver contained numerous whitish deposits of the size of pins' heads, in which no micrococci could be found.

Eberth, of Zurich, gives (in the *Centralblatt für die Medizin. Wissenschaften*, February 15th, 1873) the results of experiments in which he applied various purulent and other fluids to the cornea of rabbits, with the result of inducing a diphtheritic condition of the part. In using the pus taken from a wound, which to the naked eye presented no appearance of diphtheritis, or the purulent contents of the vein, he produced diphtheria of the cornea, even when the number of bacteria in the pus used was very small. The inoculation of the exudation found in child-bearing women who had died of peritonitis produced diphtheria, even though the inner surface of the uterus presented no diphtheritic deposit. The result in this case he attributes to a rapid development of bacteria. Diphtheria of the cornea was also induced by the application of the blood of child-bearing women who had died of septicæmia, if the blood in the heart and the fluid in the uterus contained bacteria, whether there were diphtheritic exudation in the uterus or not. Eberth believes that there are diphtheritic bacteria and septic bacteria; and that it is to the latter, rather than to the former, that septic changes are due. Both forms of bacteria, however, excite inflammation; and both, when they become localised, give rise to abscesses. Hence, he says, pyæmia is, for the most part, a diphtheria; and many forms of septicopyæmia are the combined result of septic and diphtheritic bacteria. Similar changes in the cornea may also be induced, but with less certainty and intensity, by the application of the bacteria found in the

mouth, and of the micrococci found in putrefied meat, blood, and urine.

In a subsequent communication (*Centralblatt*, April 26th) Eberth says that the introduction of a clean needle for a distance of three or five millimeters into the cornea of a rabbit is merely followed by some cellular infiltration, even though the needle be left for six or ten days. On the other hand, if a fine thread of silk or hemp be introduced, the result is not only violent suppuration, but more or less extensive mycosis, in no respect distinguishable from diphtheria, and characterised by the presence of micrococci, some of which are large and of a brownish grey colour, while others are smaller. Both these forms, he says, are also met with in diphtheria affecting the throat.

In another brief communication in the *Centralblatt*, of May 3rd, Eberth remarks that Kühne has attributed the colour in blue sweat and pus to the presence of vibriones; but that he has found that normal sweat contains bacteria, though in varying amount. The bacteria are small, oval in form, generally arranged in chains of two or three links, and manifest rather active movements. In the hairy parts they are attached to the hairs, often in a thick layer, and even penetrate their interior. By colouring with logwood, both single bacteria and colonies can be readily perceived on the hairs.

Leber, of Göttingen, referring to the remarks of Eberth, gives (*Centralblatt*, February 22nd) the results of some similar experiments which he has made. He found that intense keratitis and hypopyon, with a tendency to extension to the entire eye, is produced by the inoculation of masses of *leptothrix buccalis* from the healthy mouth into the cornea of rabbits. When the injection was made into the anterior chamber, the change was more rapid; the eye was soon destroyed by suppurative panophthalmitis, attended with a very foul odour. No development of the leptothrix could be found with any certainty in the pus.

Obermeier contributes an article on moving particles in the blood in relapsing fever to the *Centralblatt* for March 1st. He first made the observation in 1868, but, as the epidemic came to an end, he was unable to prosecute his researches. The prevalence of the disease in Berlin for more than a year has, however, given him an opportunity of continuing his observations, which have been carried on in Professor Virchow's wards. On examining under the microscope blood taken from a puncture in a patient suffering from recurrent fever, there are observed, he says, filaments varying in length from one-and-a-half to six blood-corpuscles, and about the diameter of a filament of fibrin. As long as the blood is fresh, they exhibit rapid movements of two kinds. In the first place, they present undulating movements, and sometimes four joints and knots. They also exhibit movements of locomotion, assuming a bent, circular, or spiral form. These last named movements last one or two hours; the undulations continue for six or eight hours. These bodies have been found by Obermeier only in the height of the fever; not during the remission, or shortly before or during the crisis. He does not attempt to decide whether they are specific to recurrent fever; but as yet he has not found them in the blood of healthy persons or in other diseases.

MR. JOHN MARSHALL, F.R.S., has been elected Professor of Anatomy to the Royal Academy, succeeding the late Mr. Partridge.

DR. KLEIN, of the Brown Institute, has been appointed Lecturer on Practical Histology at St. Bartholomew's Hospital.

DR. POORE is about to give a practical course, in the evening, of Electro-Therapeutics, at Charing Cross Hospital.

AN important meeting is to be held to-day in Manchester, on the subject of the abuse of medical charities. We shall report the proceedings in our next issue.

THE WESTMINSTER HOSPITAL.

DR. RADCLIFFE has been elected Consulting Physician, Dr. Anstie Physician, and Dr. Allchin Assistant-Physician, to the Westminster Hospital. Mr. Thomas Bond is a candidate for the vacant appointment of Assistant-Surgeon to the Hospital.

MEDICAL OFFICERSHIP OF CHELMSFORD, ESSEX.

DR. CORNELIUS FOX of Scarborough is, we understand, a candidate for the appointment of Medical Officer of Health to the combined rural districts of Chelmsford, Maldon, and Billericay, in Essex. Dr. Fox is well known to the profession as a painstaking and earnest worker in sanitary science, and especially in questions relating to meteorology.

CAUTION TO WINE-BIBBERS.

"LOOK not on the wine when it is red, when it giveth its colour in the cup." Habitual drinkers of Burgundy and other red wines are cautioned to abstain in time, before they are poisoned. Dr. Charvet, a French chemist (*Druggists' Advocate*), states that rosaniline, which is used for colouring red wines, contains arsenic; and that, if taken constantly, it will give rise, by accumulation, to poisoning. This is a cheerful prospect for invalids, who are ordered to drink claret regularly.

MARINE ZOOLOGY.

THE fourth edition of the handbook of the Marine Aquarium at Sydenham, by Mr. W. A. Lloyd, Superintendent of the Aquarium, has just been issued at the commencement of the official year in May. It has grown to three times the dimensions of its earliest predecessor issued in 1871, and is a little handbook of more interest than its name implies. It not only affords a very clear and well-thought statement of the history and principles of construction and management of marine aquaria, and a good account of the well devised and well-managed establishment at the Crystal Palace, but it may well serve as a little handbook of the marine (aquarium) zoology of the British Fauna. The model establishment to which it is the official guide has well maintained its character of scientific and financial success to the close of the official year. Its population is more numerous, more healthy, and more fully representative, than ever. The mortality has been very small, and the three hundred and three species of marine creatures which may be seen there are in excellent health. The results attained at Sydenham—and it is on this that the superintendent especially prides himself, and justly, as we think—are remarkable, in that they are not attained by the evasion of any of the difficulties of marine zooculture, by the introduction of lung-breathing animals, such as turtles, porpoises, otters, etc, which, however interesting in themselves, do not require the solution of the problem of efficiently and economically maintaining water in a respirable condition, which is the true problem to be solved in aquaria, and which has here been successfully solved. Just at this moment, the aquarium has many objects of special interest. A large proportion of the animals now exhibited have lived in the aquarium since its opening in the summer of 1871. Many of these have largely increased in size, and they have multiplied in numbers. The sea-water has not been changed, but is in bulk the same which was first brought there, and is at the present time in a better state for the maintenance of the population of the aquarium than at the outset. A small portion has been added, to make up accidental losses; but these additions have been found rather prejudicial than advantageous at the time to the inhabitants of the aquarium; so perfectly successful is the simple system of purification by atmospheric oxidation—the *eremacausis* of Liebig, who was deeply interested and greatly delighted with this aquarium. During the past year, the constructors of marine aquaria in progress at Naples, Vienna, Manchester, Southport, Yarmouth, Torquay, Jersey, and other places, have applied to the authorities at Sydenham to permit Mr. Lloyd to furnish information as to the best mode of construction to be followed in their establishments; and this has in each case been readily accorded. Thus the experiment at Sydenham is furnishing data for a great number of marine aquaria throughout Europe. It may be expected that soon these islands will be girdled with a series of public marine aquaria, successfully arranged on principles of scientific simplicity. The last novelty in aquaria is a ship-aquarium which is projected by Mr. Catt of Ramsgate, who has also drawn inspiration from the Sydenham experience. He is fitting a ship of between two and three hundred tons, which will sail from port to port, satisfying the curiosity of populations not favoured with establishments of the kind, and will introduce into aquarium management the element which Mr. Wombwell popularised in general zoological collections. The most important work of the kind in progress is that at Naples, belonging to Dr. Dohrn. This will have, as we have explained, high zoological aims, and will be a training place and station for observation, to which students of all countries will resort. The

University of Cambridge has already appropriated £100 a year towards a travelling studentship for this purpose. Drawing upon the exceptionally rich stores of the Mediterranean for its treasures, this station will be nobly supplied; and, in recognition of the liberality with which the Sydenham managers and superintendent have supplied the plans and prepared the fittings, Dr. Dohrn has arranged to supply the Crystal Palace aquarium with animals from the Mediterranean; and two firms of ship-owners trading from London to Naples—Messrs. Pickernell Brothers, and S. Laming and Co—have with the greatest kindness permitted travelling aquaria, each containing one ton weight (2,000 lbs.) of water, to be placed in four of their ships, and travel backward and forward without charge. Already several consignments have been safely received, and are flourishing; and Mediterranean crabs and molluscs of considerable interest may be seen living in the tanks of the North Room. Norwegian and Hamburg ship-owners—Messrs. Drolenvaux and Bremner, and Pearson and Langlese—have been equally kind in permitting the free transport of some very interesting Norwegian stone-crabs (*lithodes*) from the extreme north of Norway, near Hammerfest. It is right to add, that the British collectors on the English and Welsh coasts show not less marked interest in the cause, and transmit living specimens with great success, in spite of many and complicated difficulties. A collector in the Channel Islands has recently come into active work; and, as this is the richest locality in the British Fauna, he has already done much to improve existing collections, and will be able to do yet more. Naples and Vienna will both draw largely on British aquaria for their richest treasures—sea-anemones, which have been more fully studied and described by British zoologists than by any others.

THE CLINICAL SOCIETY.

THE last meeting of the session took place on Friday of last week, when several papers were read which gave rise to considerable discussion. A contribution by Dr. Greenhow, on the treatment of a case of diabetes by means of skimmed milk, was followed by a sharp passage of arms between Dr. Pavy and Dr. Donkin, which led to the protest of the President. Dr. Pavy expressed his utter disbelief in the skimmed milk treatment of the disease; and said that, after a lengthened trial, he had come to doubt the good results alleged by Dr. Donkin to have been obtained in that gentleman's hands. He questioned the propriety of the author of the paper in lending his position to countenance the treatment by skimmed milk. Dr. Donkin, in reply, offered facilities for inquiry into the cases which had been cured or alleviated by the method of treatment which he advocated.

THE ETIOLOGY OF ALBUMINURIA.

AT the meeting of the Royal Medical and Chirurgical Society on Tuesday, Dr. George Johnson read a paper on the Etiology of Albuminuria, deduced from the analysis of two hundred consecutive cases, in which he presented details showing the relative frequency of albuminuria from various causes. Amongst these causes, alcoholic excess accounted for 29 per cent.; exposure to cold and wet, for 25 per cent.; scarlet fever, for 12 per cent.; other causes, under thirty heads, for the remaining 40 per cent. The first two causes were in many instances combined. This subject has acquired a good deal of interest in connexion with the recent discussions on the influence of alcohol in the production of kidney-disease which have been conducted at the Royal Medical and Chirurgical Society, *à propos* of the paper of Dr. Dickinson, and subsequently in our columns by Dr. Roberts, Dr. George Johnson, Dr. Dickinson, and others. A very lively discussion followed the paper, in which Dr. Dickinson spoke with some bitterness, and described the paper as an attack upon himself; and Sir William Gull, with some show of excitement, asserted his astonishment to hear so old-fashioned a terminology as albuminuria employed in the discussion of kidney-disease, and announced his continued adherence to his recently published views of the morbid anatomy of Bright's disease (arterio-capillary fibrosis); while he considered Dr. Johnson to be

supremely happy in being so well able to indicate the causes of Bright's disease, which for his own part he believed to be, in a great proportion of cases, beyond our knowledge. The discussion was, however, polemical rather than scientific, and betokened strong feeling. In some respects, both Dr. Dickinson and Sir William Gull transgressed the ordinary rules of good taste; they introduced elements of personality which had been better avoided, and offended the feeling of the Society. Dr. Dickinson did us the honour of frequently referring to our columns, and, with a singular want of propriety, entertained the Society with his own opinions as to the authorship of the articles impugning his views on the innocence of alcohol in respect to the etiology of kidney-disease, which appeared in the columns of this JOURNAL, and to which he published his replies at length at the time.

A CASE OF HYDROPHOBIA

AN inquest was held this week at Hampstead by Dr. Lankester on the body of Mrs. Revitt, aged 29, who had died of hydrophobia. The husband of the deceased, a butcher, said that one Saturday morning, a few weeks ago, he left home about six o'clock to attend market, leaving the door leading from the shop to the staircase ajar, so that his wife could hear when the shopman arrived. On his return, his wife told him that she was awakened by a slight noise, and saw a dog licking the face of a child which was asleep in a crib by her bedside. She tried to drive the dog away, and it bit her hand. She then seized the dog, carried him to the window on the second-floor landing, and threw him out into the yard. Dr. Cooper Rose stated that he attended the deceased on the morning the dog bit her. She had a lacerated wound on the left thumb and scratches about the hand, which he cauterised. The wound healed up, but the thumb was torn under the nail, and was very troublesome. On Saturday week last he was again sent for, but did not exactly know what was the matter, but on the following day the symptoms were fully developed. She died from hydrophobia. The jury returned a verdict in accordance with the evidence, and desired the coroner to forward to the police authorities a requisition, calling their attention to the large number of stray dogs, which are a source of great and increasing danger to the public, in order that the necessary steps may be taken to put an end to the danger and nuisance.

EMIGRANT SHIPS.

THE following important communication is from Dr. R. H. Bakewell from the Cape of Good Hope, under date January 6th, 1873.

"I write this from the deck of the emigrant ship, *Charlotte Gladstone*, 1304 tons, *en route* for Otago. We have been obliged to put in here for water, coals, disinfectants, and drugs, and for medical comforts.

"When I took charge of this ship, I was under the pleasing delusion that the duties of a surgeon-superintendent of an emigrant ship would form an agreeable relief to the monotony of a long sea-voyage. I was told that there was generally very little illness on board these ships, and that the rate of mortality was actually below that of England and Wales. When I saw at Gravesend, for the first time, the lot of sickly, anæmic, underfed people, many of them evidently phthisical, with their pale flabby babies, I thought to myself that, if there were not a good deal of sickness among such people, I should be most agreeably surprised; and my prognostications have been fulfilled.

"From the very commencement of the voyage, we have had nothing but one epidemic after another. First, there was diarrhoea, chiefly among the children, which became dysenteric in some of them. Of this four died, and two more will die. Then came measles, which, however, fortunately did not attack us until we had reached the warm latitudes. We have had thirty-four cases so far, and not a single death, nor has a single dose of medicine been given to any one of them. The treatment has been purely expectant, with wine as the rash faded. Then we had thrush, then inflammatory sore throat, and last of all typhoid fever. The latter has attacked ten adults and one child. One of the adults, a man of phthisical habit, and two of whose brothers have died of consumption, had double pneumonia, which proved fatal. The others have all recovered, or are in a fair way.

"Besides these, to keep one's hand in, there has been an immense number of minor cases, amounting in all to upwards of three hundred, among three hundred and fifty souls. This amount of sickness, of which, of course, we have not seen the last, as we have still between

thirty and forty days between here and New Zealand, is so extraordinary that it deserves a little consideration.

"The primary cause is unquestionably overcrowding. The government allowance of space is eighteen superficial feet per statute adult. A 'statute adult' may be one human being, or two or three. For instance, a father, mother, two children under twelve, and a baby under a year old, would count only as two adults; if the child were above a year old and under twelve, they would count as two and a half adults. By this ingenious plan it will be seen that the very persons who most require pure air, the infants, are not supposed to require any. From the gross space has to be deducted that required for the hospital and dispensary. These are wooden erections built up in the 'tween decks, instead of being, as they ought to be, in the upper decks. They are dark, and the hospitals each contain eight berths in two tiers. When I first saw them, I was aghast, until I was informed that they were seldom occupied, and then only two or three at a time. There has never been a time when I could not have filled twenty such berths if I had had them, even in the married compartment alone.

"The berths of the married people are three feet wide for two adults, and six feet long. They are placed side by side athwart ships, all along the ship's side. This stupid plan prevents any air from entering at the back of the berths; and as there are two tiers, the only aperture by which air can enter is a space in front three feet wide by three feet six inches high. It is quite obvious that no amount of ventilation in the 'tween decks will properly ventilate the insides of these berths. To make matters worse, a curtain is put, for decency's sake, over even this aperture. The berths are, in fact, large pigeon-holes, with a curtain over the opening. The smell in them is of that abominable frouzy, fusty smell, which can only be smelt in perfection in the attic story of country cottages, or in the lower houses in large towns. It reminds me of early midwifery experiences when I was a 'Middlesex student,' and learnt obstetrics in the purlieu of St. Pancras and St. Giles's. To make matters worse, when the weather is at all cold, numbers of the married couple hang up their clothes in front of their berths, so as to stop up even the small amount of air that would enter.

"Personally, the emigrants entertain a horror of soap and water. I made an order that on three afternoons in the week the married men were all to leave their compartments for an hour and a half in order to allow the women to bathe. The women, however, would not avail themselves of this order; and, except on the first occasion, when I turned the men out myself, they have never bathed since they embarked. Only a few did then. Lice are abundant; and as we stand on the poop, the interesting spectacle is to be seen, of an affectionate mother with one breast hanging out suckling a baby, while she amuses herself with hunting lice in another child's head. The women are lazier and dirtier than the men, which is saying a good deal. The greater number of them evidently make nursing a baby a mere excuse for dawdling about all day and doing nothing. Whether a child is asleep or awake, the mother always has it in her arms. They will not get up before breakfast in the mornings, and the husbands cannot get them up. It is perfectly useless to talk to them; I have exhausted the language of vituperation, short of absolute swearing, without effect. I can make them clean the decks, tables, and berths, but I cannot make them wash their clothes or their skins.

"That the diarrhoea depends wholly on this filth and overcrowding, is shown by the fact that it is almost confined to the married compartment. If it had been caused by the water or the food, it would have prevailed equally over all. Those cases which have occurred among the single men and women may fairly be attributed to overfeeding and complete idleness; and the proof of this is that even several days of such diarrhoea do not produce any serious debility. Measles may be easily accounted for, as there were two children convalescent from this disease on board for two days in the docks. They were not taken in with us, but they remained on board unknown to me for those two days. Fourteen days afterwards the first cases appeared; and fourteen days after the commencement of the epidemic the second batch showed the eruption. After this they came on irregularly. The first batch consisted of three cases; the second of eight. This observation is worthy of notice, as it fixes the normal incubation period. But it is evident that when the contagious force is very powerful, the period of incubation may be shortened. Cases are still occurring, and, although every child in the ship has now been exposed to the contagion for a month, some have escaped so far.

"It is worthy of note that there was *no catarrh* among those cases which were at their height in the tropics. The conjunctivæ were congested; there was cough, but there was no running of the eyes or nose; the eruption was copious, fading away in nearly every case on the fourth day. Nearly all had diarrhoea, but, as there was so much diarrhoea epidemic, it was difficult to say whether this arose from measles or not.

"Nearly all the children have been attacked by thrush, and there has been an extraordinary quantity of inflammatory sore throat among the adults. This I treated by the perchloride of iron, until all in the medicine chest has been used. It acted very well.

"The outbreak of typhoid commenced with one case, a man who had been drunk for some days after he came on board. During the period of invasion it was masked by an attack of measles, but when this passed off the fever did not diminish, and violent delirium came on. I have not time or space to discuss fully the measures I took to isolate this case; the man was placed under a sail in the fore-castle, but a few days after some other cases occurred. I shall trouble you with an account of this outbreak, as it presents many points of remarkable interest, particularly as to the effect of treatment in the open air modifying the temperature. We have had up to to-day fourteen cases of typhoid, and several (I am not sure how many) of ephemeral fever. Of all I have got temperature charts; and the latter I may publish, as they differ in some respects from Wunderlich's.

"Since the cases have been placed in the fever-tent in their very earliest stage, they have been milder. The treatment has been the same that I have always adopted—Dr. King Chambers's. Out of eleven cases which have passed the dangerous period, only one has died, from the cause mentioned above. Even he would not have died, but for his own obstinacy in insisting on moving out of bed to the night-stool, instead of using the bed-pan. Syncope, with extensively rapid breathing, came on, and he died in half an hour. This was at 7 A.M. At 1 A.M. the same morning he was doing well, and the number of respirations had fallen.

"I am at a loss to what to attribute the typhoid, unless to the bedding. The beds were stuffed with a quantity of most filthy old rags, pieces of old hats, trousers, coats, crinolines; even an umbrella handle has been found in one of them. I never saw such rubbish. Probably some of this stuff contained the contagion. Unfortunately the supply of disinfectants was quite inadequate, and one of our reasons for putting in here is to obtain an additional quantity.

"I have had fourteen fresh cases of fever during the last two days, *i.e.*, since the above was written."

THE ORDER OF THE BATH.

THE following is a list of army and navy medical officers decorated on the occasion of the Queen's birth-day. To be K.C.B.: Surgeon-General W. M. Muir, M.D., C.B. To be C.B.: Inspector-General of Hospitals and Fleets J. Rees, M.D. (retired); Inspector-General of Hospitals R. Dane, M.D. (half-pay); Inspector-General of Hospitals B. W. Marlow, M.D. (half-pay); Surgeon-Major J. Wyatt, Coldstream Guards.

UNIVERSITY COLLEGE, LONDON.

Two handsome tablets have just been erected, one on each side of the entrance to the Arts Library. They are inscribed to the memory of Alexander Bruce and James Stanton Cluff, very promising students of the College, who met with an untimely fate some years ago. The tablets were designed in most excellent taste by Signor Monti. That of Mr. Bruce is ornamented with a very good medallion portrait in high relief by the same artist.

THE ADULTERATION ACT.

DR. CORFIELD has presented his first report as Food Analyst to the Vestry of St. George's Hanover Square. Of fifteen samples of ground coffee only four were genuine, while nine were adulterated with chicory, caramel, etc. He had analysed twenty samples of milk, and found five only genuine. Two or three were deteriorated, some were adulterated with water, besides having been skimmed. He proposed to send notice of the adulteration to the seller. The report was ordered to be printed. In reply to a question in Parliament on this report, the Attorney-General has stated that the Act seemed clearly to lay down that when an analyst had cases of adulteration brought before him it was his duty to lay them before the magistrate, who would issue a summons, and with whom the matter would then rest. Dr. Corfield has explained that by the 1st, 2nd, and 3rd sections of the Act of 1872 proof is required that the sellers of an adulterated article knew that it was adulterated, and unless such knowledge is proved no conviction can legally take place. The plan which he has adopted to overcome this difficulty

is as follows. The inspector, or some one employed by him, procures samples of an article at various shops, without saying what use is to be made of them, and brings them to him; he examines them and gives the inspector a list of the numbers of those samples which are found to be adulterated; he then sends a formal notice to each of the persons from whom the articles so numbered were procured, stating that such and such an article bought at his shop has been found to be adulterated. At some future time another sample will be brought under his direction at each of these shops, the precautions required by the Acts being taken in the case of this second sample; and then it will be the inspector's duty to apply for a summons against those persons who are found still to be selling an adulterated article, and proof will be forthcoming that they had been previously warned they were doing so. The advantages of this plan are obvious. From the samples that are obtained without any formality, and about which there could not be a prosecution, we gain the most certain information as to the persons who are, knowingly or unknowingly, selling adulterated articles; by warning these persons we deprive them of the excuse of ignorance, and as our object is to prevent adulteration, and only to prosecute where it can be shown to be necessary, we believe that we shall attain it best in the way indicated.

A GENEROUS GIFT.

WE learn from an American contemporary that Mr. John Anderson, of New York, learning that Professor Agassiz proposed establishing a school at Nantucket for the instruction of naturalists during the coming summer vacation, generously offered the professor the fee-simple of Renekese Island, and further appropriated the sum of fifty thousand dollars as a permanent endowment for the school. It is proposed to carry on this school in close connection with the museum at Cambridge. The island is situated in Buzzard's Bay, and is the most easterly of the western group of the Elizabeth Islands. Its extent is about one hundred acres. It has sufficient buildings upon it for present use, and is well supplied with fresh water. No doubt the island will become a favourite resort for naturalists from all parts of the country, who wish to spend a few weeks or months of their summer vacations in studying marine life.

ADULTERATION OF COCOA.

MR. F. CAVE, a grocer, was summoned before the Richmond magistrates this week for selling a packet of adulterated cocoa as an unadulterated substance. The cocoa had been analysed by Dr. Stevenson, who stated that it contained an admixture of sago and sugar, but nothing injurious to health. The packet was labelled "Fry's Soluble Cocoa, manufactured by J. S. Fry and Sons from cocoa, combined with other perfectly pure and wholesome ingredients, according to Act of Parliament." The packet was wrapped in a trade cover of Mr. Cave, on which was also printed—"This is an admixture in which no injurious ingredient has been used. Vic. 35 and 36, c. 7." It was contended for the defence that the labels formed a sufficient declaration of the article sold. A declaration need not be *vivâ voce*. It only meant a proper explanation of the thing sold. The magistrates, after consulting a few minutes, said it was not their opinion that this was a case for conviction. In the face of the notices upon the cocoa, it was doubtless the presumption in Mr. Cave's mind that his customers knew what they were buying. But it should be borne in mind that in the case of those who could not read, the attention of purchasers should be called to any manufactured article, even if it should be all the better for the admixture. This requirement of the Act was imperative, and if not carried out by Mr. Cave in a similar case, a conviction must follow.

THE LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

THE first annual general meeting of this Society was held last week in the board-room of the Leeds Infirmary; Dr. Chadwick, President, in the chair. A large number of members were present. In the report, the Committee congratulated the members of the Society on its prosperous condition. At the preliminary meeting of members of the medi-

cal profession residing in Leeds and the neighbourhood, held on November 29th, 1872, under the presidency of Dr. Chadwick (who convened the meeting), 113 gentlemen enrolled themselves as original members, and since that time 34 ordinary members and 1 honorary member had been elected, making the total number of members 148. Four ordinary meetings of the Society had been held, the average attendance of members being fifty-four. Numerous valuable communications had been brought under the consideration of the Society. The Treasurer (Dr. Heaton) reported that the financial condition of the Society was highly satisfactory. The following gentlemen were elected office-bearers for the ensuing year. *President*: Mr. Samuel Hey. *Vice-Presidents*: Dr. Heaton and Mr. Wheelhouse. *Treasurer*: Dr. Heaton. *Secretaries*: Mr. A. F. McGill and Dr. E. W. Symes. *Committee*: Dr. Clifford Allbutt, Mr. E. Atkinson, Dr. Bell (Bradford), Mr. Bramley (Halifax), Dr. Crichton Browne (Wakefield), Dr. Chadwick, Dr. Eddison, Mr. Jessop, Mr. Knaggs (Huddersfield), Dr. Myrtle (Harrogate), Mr. Nunneley, and Mr. Scattergood. The meeting terminated with a vote of thanks to Dr. Chadwick, the retiring President.

IRELAND.

ROYAL COLLEGE OF SURGEONS.

IN July next, a revised scheme of examination, which was adopted by the Council in 1871, will commence for medical students who entered on their studies after October 1871. The new examination will comprise the following subjects. *Anatomy*: Bones, muscles, articulations; and descriptive anatomy of the abdomen, chest, urinary and genital organs. *Chemistry*: Chemistry and physics, as applied to pharmacy and medicine. *Materia Medica and Pharmacy*, not including therapeutics. *Surgery*: Fractures and dislocations. The fees for this examination will be five guineas for registration, and the same amount for examination.

QUEEN'S COLLEGE, CORK.

SIR ROBERT KANE, the celebrated chemist, has sent in his resignation to the Government as President of this College; and the vacancy, it is expected, will be filled up by the appointment of Dr. Ryall, Vice-President, son of the late Surgeon Ryall, an oculist of considerable fame, who practised in Dublin, and at one time held the post of Surgeon in Ordinary to the Duke of Kent.

CASE OF NÆVUS.

MR. PORTER, of the Meath Hospital, Dublin, has at present under his care a man aged about 50, with an enormous nævus, involving the right side of the face, so as almost to close the eye on that side, and the upper lip, especially on the left side. A plaster cast, taken when first admitted, showed that the upper lip altogether excluded from view the lower lip; but at present the swelling of the lip has gone down considerably, also the right side of the face has diminished very much. Mr. Porter is using an injection into the affected parts of the solution of persulphate of iron, which he considers preferable to the tincture of the perchloride, the dose being four drops. The patient has already undergone this subcutaneous injection about twenty-four times; and, although the treatment is painful and seems tedious, yet the alteration in the man's appearance from that when admitted makes us feel convinced that a cure will result when the treatment has been sufficiently carried out.

THE FUNDS OF THE IRISH COLLEGE OF SURGEONS.

THE Council of the Irish College of Surgeons are placed, apparently, in a somewhat uncomfortable position. They have for some years past been in the habit of from time to time testifying their regard for retiring members of long and distinguished service by granting sums of money for presentations out of the funds of the College. They were about to adopt a similar course now towards Drs. Hargrave and

Benson, very strong compulsion having at last sufficed to induce the same gentlemen to retire; but some one, it appears, has thought it wise to inquire whether this liberal expenditure of the Council towards each other out of the College funds was legal. The opinion of the Attorney-General has been taken; and, sad to say, he decides that any such grants are quite unauthorised, illegal, contrary to the bye-laws, and without justification in the Charter. It further appears that the Council has been in the habit of paying a fee of 5s. 6d. each to two members of the Council attending examinations for every student passed at such examinations. It is now discovered that these payments also constitute a quite unauthorised expenditure of the funds of the College. What with the sale of hospital appointments and the grants from college funds, there is a good deal of room for political and social reform in the corporations and hospitals of Dublin.

THE ARMY MEDICAL WARRANT.

REPRESENTATIONS OF ARMY MEDICAL OFFICERS.

THE Right Honourable the Secretary of State for War having been pleased to state, in reply to a question in the House of Commons, that any grievances under which army medical officers feel they labour, if properly represented, would be "duly taken into consideration, with a view to explanation, or, if necessary, to alteration"—it was unanimously resolved at a meeting of army medical officers (numbering upwards of forty), held at Aldershot on the 14th of May, 1873—with the sanction of the Surgeon-General Principal Medical Officer, and the permission of the General commanding the Division—to respectfully request that the following representations may be forwarded, through the prescribed channel, for the favourable consideration of the Right Honourable the Secretary of State for War.

A. ROYAL WARRANT, DATED 1ST MARCH, 1873. Para. 3. *Rank and Rate of Pay* (vide BRITISH MEDICAL JOURNAL, May 24th, 1873, p. 599).—By the terms of this paragraph, no provision is made for the increased rate of pay after fifteen years' full-pay service, allowed by the warrant of 1st April, 1867, under which medical officers have been serving; and it is suggested that this privilege may be restored, or that the term for the promotion of all qualified surgeons do not, in any instance, exceed fifteen years.

Para. 4. *Relative Rank*.—I. A surgeon-general shall rank as brigadier-general, according to the date of his commission; if with an army in the field or after three years' full-pay service as surgeon-general, he shall rank as major-general from the date of his joining such army in the field, or according to the date of the completion of such service. II. A deputy surgeon-general shall rank as lieutenant-colonel, according to the date of his commission; after five years' full-pay service as deputy surgeon-general, he shall rank as colonel, according to the date of the completion of such service. III. A surgeon-major shall rank as major, according to the date of his commission; after twenty years' full-pay service as surgeon and surgeon-major, he shall rank as lieutenant-colonel, but junior of the latter rank. IV. A surgeon shall rank as lieutenant, according to the date of his commission; and, after six years' full pay service, as captain, according to the date of the completion of such service.—It is suggested that the relative rank of the three higher grades of medical officers should stand as follows:—Surgeon-general as major-general, according to the date of his commission; deputy surgeon-general as colonel, according to the date of his commission; surgeon-major, after twenty years' full-pay service, as lieutenant-colonel, according to the date of his commission. It is further suggested that all surgeons-major, after twenty years' full-pay service, be designated senior surgeons-major.

Para. 6. *Forage* (see JOURNAL, *ut supra*).—By this, forage is not now allowed as an appanage to rank, and medical officers may be deprived at any moment of a privilege enjoyed since the formation of their department, and suffer much pecuniary loss by the frequent purchase and sale of horses and appointments. It is suggested that forage, or allowances in lieu thereof, should be continued to all medical officers hitherto entitled to it; and that those medical officers attached to cavalry and horse artillery, who draw no extra pay equivalent to that received by combatant officers in these corps, should not be subjected to any stoppages.

Para. 12. *Surgeon-major* (see JOURNAL, *ut supra*).—With reference

to this, it is proposed that all promotions of qualified surgeons to the rank of surgeon-major should be strictly by seniority.

Para. 13. *Promotion for Distinguished Service* (see JOURNAL, *ut supra*).—By this, promotion for distinguished service is at the expense of the officers passed over. It is suggested that when distinguished service is rewarded by promotion, the officer so promoted should remain as supernumerary in his rank until the date on which he would have been promoted, according to his seniority.

Para. 15 (see JOURNAL, *ut supra*).—It is suggested that the appointment of a medical officer to a regiment should be at least for five years, and that he should be eligible for reappointment.

Para. 20. *Retirement* (see JOURNAL, *ut supra*).—With a view to secure a reasonable flow of promotion, it is suggested that all officers of the administrative ranks shall be placed on the retired list at the age of sixty years, or on completion of thirty-five years full-pay service; unless, in any special case, it would be for the good of the service that they should continue in employment.

Para. 28. *Non-effective Pay* (see JOURNAL, *ut supra*).—It is suggested that the rates of half-pay under these circumstances be, in the case of surgeons-major with twenty-five years' service on full pay, £1 *is. per diem*, and of surgeons-major with twenty years' full-pay service, 18s. *per diem*.

Para. 29. *Half-pay* (see JOURNAL, *ut supra*, p. 600).—It is suggested that, in the case of a surgeon-major retiring for his own convenience, who has served twenty years on full pay, including eight years on foreign service, or two years with an army in the field, the rate of half-pay be 16s. 6d. *per diem*.

Para. 30. *Retirement* (see JOURNAL, *ut supra*).—It is suggested that, in consideration of the greatly increased duties of a very onerous and responsible character which have been imposed on executive medical officers by recent regulations, as well as in view of the fact that only a small proportion of such officers can reasonably expect to be promoted to the administrative ranks, surgeons-major of twenty-five years' full-pay service, including ten years abroad or three years with an army in the field, be entitled to retire on the lowest rate of half-pay of the higher grade, viz., £1 *is. per diem*. It also suggested that, as in other branches of the service, a certain number of retirements at an increased rate of pay be offered annually to the three higher ranks of the department.

Memorandum.—With a view to prevent the ever-recurring "block in promotion", and to provide for the emergency of sudden war, the organisation of a medical reserve, composed of officers over twenty years' full-pay service, is suggested; such officers to receive £1 *per diem*, and be available in time of war, for all home duties, up to the age of fifty-five years, and, when so employed, to receive the full pay and allowances of their rank.

B. ARMY CIRCULAR (SPECIAL), DATED 6TH MARCH, 1873.—With regard to the duties referred to in this circular, it is felt that they will impose on medical officers a serious pecuniary liability, without any compensatory advantages; and further, that they will interfere with their professional duties, especially during war.

It is suggested that the Medical Department should have no direct responsibility regarding anything outside the hospital and not actually in use in the wards or surgery; nor for the care of any non-medical stores, further than duly to represent any defects or deficiencies in the same; nor for tents or tent equipage not actually in use. The Department should not be responsible for the cooking of the diets for the sick, further than to represent defects in the same.

C. OTHER GRIEVANCES.—1. All regimental medical officers have suffered pecuniary loss, in some instances of a serious nature, by being deprived, in consequence of the system introduced in November 1871, of the power of exchanging on their own terms as formerly.

The recent warrant, by abruptly removing the late regimental assistant-surgeons from their corps, has inflicted a further pecuniary loss on these officers; and it is suggested that they should be reinstated in their respective regiments, and so remain as long as the exigencies of the service shall permit.

2. *Sick-Leave*.—The present orders regarding sick-leave are, that a medical officer who obtains sick-leave either from abroad or otherwise, must be placed on half-pay, if not reported fit for duty after a period of six months from the date of his medical board; whereas a regimental combatant officer is entitled to receive a further extension of sick-leave beyond that period, should the nature of his case require it.

With reference to the above, it is suggested that medical officers who are called upon to expose their lives in all climates may be placed on the same footing regarding sick-leave as regimental officers.

3. *Leave of Absence*.—It is suggested that all medical officers should be entitled to sixty-one days' leave of absence yearly, without any deduction whatever, and that, in addition, they be granted the same advantages as regards short leave as regimental officers.

We have great pleasure in laying this important document before our readers, and in expressing our satisfaction with the very temperate manner in which it is drawn up. It cannot be otherwise than gratifying to us to note how closely in all essential respects its views coincide with those recently adopted by our Parliamentary Bills Committee; and this independent expression of opinion on the part of forty experienced army medical officers will materially strengthen the hands of the deputation which we have no doubt Mr. Cardwell is willing to receive.

In dealing with the many intricate questions of detail raised by the altered warrant, it is necessary that very precise notions should be popularised concerning the real wants of the Department, without dwelling too much on generalities and vague grievances. The report of the Aldershot meeting comes as a fitting corollary to our published statements of last week, and clearly shows how small an amount of consolation can be derived from the Director-General's efforts to meet the gravity of the case.

REPORT OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

A COMMITTEE of the King and Queen's College of Physicians in Ireland on the Army Medical Warrant of March 12th, 1873, have very carefully and ably analysed and discussed the Warrant and the further Circulars relating to the organisation of the Army Hospital Corps, and the Circular dated the 6th of March last. After pointing out the defects in these documents, the Report which they have issued concludes by recommending "that the College should use its best efforts to obtain such alteration in the existing regulations which apply to the medical officers of the army as will effect the following changes. 1. The publication in the *Army List* of the names of all medical officers attached to regiments or battalions. 2. Full compensation for expenses or pecuniary losses occasioned by the removal of officers from those regiments or battalions. 3. Surgeon-generals to rank with major-generals; the director-general with lieutenant-general. 4. The retirement of surgeon-generals of five years' standing to be compulsory on full pay. 5. The pay of surgeons of fifteen years' standing to be 17s. 6d. per day. 6. The pay of surgeon-generals to be increased. 7. The pay of the director-general to be fixed at £2,000 *per annum*. 8. Medical officers to have a right to allowance for forage, stable, and groom. 9. The military hospitals to be placed in the sole charge of medical officers."

ARMY MEDICAL EXPLANATIONS.

SIR,—The copy of the official memorandum furnished to the Secretary at War by the Medical Department, and published by you as Mr. Cardwell's explanation of the objectionable clauses of the New Medical Warrant, is a remarkable document. Permit me to show how absurd are the excuses made for a warrant which every one affected by its provisions has condemned.

1. If it be *intended* to give promotion a few weeks after or before the completion of fifteen years' service, what objection can there be to state that in the warrant? In the absence of such a statement, medical officers justly claim the restoration of their half-crown a day. They have had sufficient experience of War-Office intentions to know their value.

2. The standard of rank by which forage was granted to medical officers by clause 17 of the Royal Warrant, October 1st, 1858, was the combatant officer of corresponding grade, not the *departmental officer*. These last officers did not receive this allowance until long after medical officers. The allowance was granted to surgeons ranking with combatant field-officers in 1858, as an appanage of their rank, and as only just to them. As such, they may justly claim its continuance. It is a distinct portion of income, and without it a medical field-officer loses his status in the army.

3. Whoever heard of a *bonus* being given to stimulate promotion in the Army Medical Service? If, as is stated, it be *intended* to promote after fifteen years, a bonus would be unnecessary, and such an explanation as a reason for substituting selection *in any form* for seniority is absurd on the face of it.

4. Regimental surgeons have not been removed from their regiments in a manner causing "the least difficulty to them." They have been treated with scant courtesy, and should have been shown in the *Army List* with their regiments until required for other duties. They have uniform, equipment, etc., thrown upon their hands, and feel keenly the position in which they have been placed.

5. The tenure of the rank of field-officer was limited in the combatant

ranks, in order to give promotion. This does not hold good with the Medical Department. Again, "with power of reappointment" occurs in the combatant warrant, not in the medical. It is most unfair to grant a military medical officer (a professional man) relative rank according to date of army commission, and then place him, for the good of the public service, in a regiment where he must rank junior of all its field-officers, and lose his choice of quarters and lodging money.

6. Junior officers do not reap "considerable benefit" either as junior officers or otherwise; for, the moment they are promoted, they are at once deprived of their former right to the appanages and privileges of their relative rank solemnly guaranteed in former warrants, without which that relative rank is valueless. An indefinite promise of promotion after fifteen years' service is no recompense for the deprivation of a right to £45 *per annum*.

No explanation has been given in this remarkable document as to why medical officers, against their wishes and the recommendations of a previous War Office Committee, have been saddled with a large responsibility for stores and equipment, the loss of which may cause them serious pecuniary embarrassment. Neither has it been explained why the ages fixed for compulsory retirement have been enlarged, or why medical officers specially attached to regiments are to pay all regimental subscriptions without being accorded the status of regimental officers. If a medical officer be only attached to a regiment, it is unfair to ask him to pay to band and mess funds. If he pay to these, he should be gazetted to his regiment, wear the uniform of his corps as other field-officers, and be considered in every way as a regimental officer until he leaves it.

I am, etc.,

ESPRIT DE CORPS.

May 1873.

MEDICAL INTERESTS IN PARLIAMENT.

REMUNERATION OF POOR-LAW MEDICAL OFFICERS UNDER THE PUBLIC HEALTH BILL.

DR. PHILIPSON of Newcastle-on-Tyne, Honorary Secretary of the Northern Branch, informs us that, in accordance with the request of the last meeting of the Parliamentary Bills Committee, a petition from the Branch in respect of the thirteenth clause of the Public Health Bill, praying that Poor-law medical officers may be adequately remunerated for any work which they may be called upon to do under the provisions of that Bill, was presented on May 22nd by the Hon. H. G. Liddell.—A similar petition was also presented on Friday, May 23rd, by Mr. Donald Dalrymple, M.P., on behalf of the Parliamentary Bills Committee of the Association. Mr. Dalrymple took the opportunity of reading the petition from his seat, with the view of calling the attention of the House to the importance of the subject. Dr. Bryan of Northampton has forwarded to the local members a petition from the Midland Branch; and we have received from Mr. Fowler of Bath a petition signed by Poor-law medical officers in Bath and its neighbourhood, which has been since presented by Mr. Dalrymple.

Some forty other petitions to the like effect appear in the Parliamentary notices as having been forwarded. Mr. Dalrymple has further consented to put on the notice paper of the House of Commons, a notice of motion, to add at the end of Clause 13: "Provided that for such reports of particulars of sickness medical officers appointed under the laws for the relief of the poor shall receive payment according to a scale to be settled by the Local Government Board, and out of the funds provided by Parliament."

CERTIFICATES UNDER THE REGISTRATION OF BIRTHS AND DEATHS BILL.

Dr. William Reeves of Carlisle writes to us on this subject as follows.

"If not too late, I wish you would direct a passing thought to the subject of gratuitous death-certificates—made so by Act of Parliament. Are there any other bodies of men, or any individuals, who are called upon by Act of Parliament to perform gratuitous services to the State? Out of the raw material thus extorted from medical men, large salaries accrue; for registrars and others, both local and general, make handsome livings. Local registrars get medical certificates gratuitously, and are authorised to sell to benefit societies and burial clubs, etc., copies; so that I have known ten shillings or more made out of a death-certificate in the first instance granted gratuitously by a poor doctor for science sake and for the good of the state. No one connected with the handling of these death-certificates does his work without pay, except the doctor. Will you not say a word? and will not the profession rebel against this injustice?"

* * This subject has not escaped attention. It is one of considerable difficulty. The Chairman of the Parliamentary Bills Committee has been in communication with influential members of Parliament, with a view to the protection of medical interests. The opposition of the Government to any clause providing payment is to be feared; but an effort will be made to obtain such a clause. The precedent for requiring gratuitous death-certificates, on which stress will be laid, is the Scottish Act. The reason urged will be, that the state has granted to the medical profession certain privileges under the Medical Act—only registered practitioners can sue for fees or hold public appointments; and that it has a right to require at their hands a certain essential service to the state without payment, as a return for this monopoly. The argument does not seem to us a sound one; for a similar monopoly has been granted to pharmaceutical chemists and other bodies without exacting any such services in return. Moreover, such monopoly was not granted for the benefit of the profession—and it would be difficult to show that it does in any way benefit them—but for the benefit of the public, and to protect them from the assumption by ignorant persons of deceptive medical titles. The Pharmaceutical Act confers an actual monopoly: the Medical Act does not, but only guards a distinctive title, which it is desired to protect, in order to save the public from frauds. Moreover, any such condition or return should have been exacted as a previous, and not a subsequent, condition of the Act. The considerations have been urged by the Chairman of the Parliamentary Bills Committee on members; and Mr. Dalrymple has consented to put on the notice paper a clause to provide payment for certificates, on which he will take the opinion of the House. We shall take the opportunity of urging our members at the proper time to secure parliamentary support for Mr. Dalrymple's important motion on the subject.

THE CASE OF THE MILITIA SURGEONS.

A correspondent writes to us as follows.

"May I ask your powerful aid in advocating the just claims of militia surgeons in our JOURNAL? At the meeting of the Association at Birmingham, a conference of militia surgeons took place, where it was resolved to call a meeting in London at an early date. Since then, nothing has been done. Mr. Cardwell, in reply to questions in the House, has never admitted that we are entitled to compensation, but has said that individual claims should be taken into consideration. In reply to Mr. Arbuthnot, he lately said that the appointments of medical officers to the dépôt centres will greatly relieve the dissatisfaction of army surgeons in the new warrants. What is gain to them is destruction to many of us. I fear that, without organisation, we shall do nothing. I feel morally certain that, unless we take some decided steps, we shall be quietly ordered to discontinue our duties, and personal remonstrance will avail us nothing. In the new regulations, militia surgeons will not examine recruits or attend the permanent staff. Consequently, all that is remunerative will be taken from us; and, as all practices must have been to a considerable extent sacrificed by attending to its duties, more especially in recruiting away from home, the loss to all must be great, and to some surgeons very serious. The medical profession must be very grateful to you for fighting the battle of the army surgeons; and I hope you will forgive my calling your attention to militia surgeons, whose grievances are far more serious."

We can only say that if our correspondent, or any others interested in the matter, with whom he can place himself in communication, will address the Chairman of the Parliamentary Bills Committee of the British Medical Association, with a communication detailing the grievances complained of, and suggesting the remedies desired, the subject matter of the communication will be immediately brought before that Committee, in which every Branch of the Association has a representative voice; and the Committee will, we do not doubt, give careful attention to the matter, and at once take steps to sift it, and to see what can be done, by adequately influential proceedings with the Government or in Parliament, towards procuring satisfaction for just claims.

THE LATE MR. FARR, OF SWINTON.—At a recent weekly meeting of the Manchester Board of Guardians, the following resolution was passed:—"That this Board desires to record its sincere regret at the death of Mr. C. J. Farr, the Medical Officer of the Industrial Schools at Swinton, belonging to the township of Manchester, and its appreciation of the valuable services which he rendered to that institution during the period of twenty-four years for which he held the office in question. That this Board desires, at the same time, to tender to Mrs. Farr the expression of its deep sympathy with her in the irreparable loss which she has sustained."

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 9TH, 1873.

PRESCOTT HEWETT, ESQ., President, in the Chair.

Dermatolysis, or Pachydermatocele.—Dr. TILBURY FOX brought forward, for Dr. GUSTAVUS FRITSCHÉ, of Czenstochowa, the particulars of two unusual cases of dermatolysis, or pachydermatocele, with photographic illustrations. Case 1 was that of a beggar, in the Island of Madeira, the whole right side of whose face resembled an empty bag, which, on handling, was found not to be a growth which weighed down the skin, but consisted of a remarkable hypertrophy of the skin and cellular tissue. The length of the bag-like process was two-and-a-half inches. The external appearance of the mass was that of healthy skin. The right nostril was thick and elongated. The opening of the right eye was on the same level as the opening of the nose. On lifting up a thick and lengthened eyelid, the eyeball was seen to be atrophied and changed, so as not to be easily recognised, and it hung from the lengthened and thinned optic nerve, like an apple hanging on its pedicle. The sight was lost. The left eye was normal. The corner of the mouth, on the right side, was very much drawn down. The act of eating was executed with difficulty. The speech was unintelligible. The right half of the tongue was greatly enlarged in all its parts. The helix of the right ear was hypertrophied, but the skull-bones were normal. The disease appeared in young life, and was idiopathic in character. Case 2 was that of a girl, aged 25. The disease appeared in her when she was eight years old; it began with two very small outgrowths, one on the face, and the other on the clavicle, like fibroma molluscum. When Dr. Fritsché saw the case, from the right edge of the under jaw there hung lax ten or eleven flabby folds of skin, like empty bags, each being distinct, with its own base and apex. The tumour in the chest consisted of a fold of the skin, eight inches broad at the base, four inches at the apex, and ten-and-a-half inches in length. The external aspect was that of healthy skin, but it felt thicker than normal. There were other smaller growths, of the size of hazelnuts, about the body. Dr. Fritsché removed the large tumour with complete success, but then lost sight of the case. Dr. Tilbury Fox made some comments upon the pathological relations of such cases as these.—Mr. BARWELL referred to the particulars of Mr. Pollock's case, read at a recent meeting of the Royal Medical and Chirurgical Society, and pointed out that in it there was a symptom not mentioned by Dr. Tilbury Fox in Dr. Fritsché's cases, viz., a bad odour from the glands.—Dr. DUFFIN thought the cases to be very probably congenital nævi, and referred to the case of a girl with a similar affection, in which a clue was afforded to the nature of the disease by the presence of a nævus in the leg. A nævoid mass existed over the temple, and another tumour, an aborted nævus, was present over the pectoral muscle.—Mr. DE MORGAN pointed out that the disease was generally found to attack the right side of the chest. What was the explanation of this?—Dr. TILBURY FOX thought the cases different from Mr. Pollock's case of fibroma. Fibroma, he remarked, originated about the sebaceous glands, and presented microscopical nests of cells, while dermatolysis, on the other hand, was generally localised, and did not exhibit the cellular characters of fibroma.

Intraorbital Nævus Treated by Ligature and Actual Caution.—Mr. W. SPENCER WATSON read the report of a case of nævus within the orbit in a child who, at the commencement of the treatment, was eight months old. The eyeball was thrust aside by the growth, but not protruded. The nævus was evidently increasing; and two attempts to strangulate its nutrient vessels by means of subcutaneous ligatures were ineffectual, it being impossible to reach the apex of the orbit with any needles, however curved. Mr. Watson then employed the galvanic cautery, but the platinum wire used could not be made long enough, and he subsequently used a cautery-iron made specially for the purpose, with a protruding piece an inch and a quarter in length. This was thrust into the orbital cellular tissue, both from the skin-surface and also through the conjunctival aspect of the lid. Considerable shrinking of the bulk of the nævus had taken place, and it appeared likely that it would diminish still more as the cicatrix contracted. The fact of the tumour increasing and threatening to cause further displacement of the eyeball seemed to justify the operation resorted to; though it was pointed out that other operations, such as extirpation of the nævus by a cutting operation, or the injection of its substance by the perchloride of iron, were not free from danger, and that any proceeding less formidable than the actual cautery would have been inadequate to effect the

result aimed at.—Mr. LAWSON thought that the cases were best left alone, unless there were sudden increase. He thought that then enucleation, and arrest of the hæmorrhage by means of pressure, constituted the best treatment.—Mr. HAWARD suggested the treatment by means of probes with nitrate of silver, as in nævus of the lip.—The PRESIDENT observed that it was often a matter of difficulty to know when and when not to remove nævi. A large number might be safely left alone until they began to grow. They not unfrequently died out. He referred to the case of his own son, who was, as a child, the subject of a nævus of the size of a walnut on the forehead. It did not increase up to the age of four years, when he had an attack of whooping-cough, during which the nævus disappeared.—Mr. JOHN CROFT referred to a case in which a nævus gradually disappeared. Whenever a white spot indicating atrophy was observed on the nævus, he advised it to be left alone. In others, enucleation was, he thought, often the quickest mode of treatment.—Mr. BARWELL was of opinion that cutaneous nævi before puberty generally disappeared, and often, also, subcutaneous ones. Deeper ones, as a rule, however, did not spontaneously cease to exist. He believed that Mr. Watson had not seen the end of this case; he expected it to reappear.—Mr. WATSON replied in a few words.

Curative Action of Ipecacuanha in Diarrhœa.—Dr. THOROWGOOD read notes of two cases. William B., aged 20, after passing through an attack of typhoid fever, remained subject to obstinate diarrhœa. He improved somewhat, and was discharged from the West London Hospital in February 1872. On January 1st, 1873, he was readmitted, having been for some time under the care of Dr. Ferrier as an out-patient with diarrhœa. When admitted, he had, on an average, ten or twelve liquid motions in the twenty-four hours. These were repeatedly examined, and found of a red colour from admixture with blood; a small amount of shred-like substance was also mixed with them. The patient was not much emaciated; he had a fair appetite, no sickness, no night-sweats. His pulse was from 88 to 100; temperature 99 deg. The abdomen was tense and swollen, and at the left iliac region tenderness was very evident. He had had some chronic mischief at the base of the right lung, but this seemed to have subsided. The urine was loaded with pale lithates, and free from albumen. The treatment consisted of rest in bed, with milk-diet and a mixture of chalk with bismuth. After a week, being no better, and it being observed that the bowels acted rapidly after food, he got for a few days iodide of potassium with two drops of liquor arsenicalis. This mixture made him worse, and it was soon stopped. About the middle of January, he was put on a diet of solid meat instead of milk; and had nitrate of silver with opium, decoction of logwood, injections of starch with tincture of opium, and powders of hydrargyrum cum cretâ and Dover's powder. None of these methods produced any change for the better, and the motions had the same characters as before. There was not much complaint of pain and tenesmus. During the first week in February, he was ordered two grains of powdered ipecacuanha with five grains of compound tragacanth powder, thrice daily in water. On this medicine he soon improved, and the dose of ipecacuanha was raised to five grains. On February 26th, the diarrhœa had ceased; he was passing formed motions, and was allowed to leave the hospital.—The second case was that of a young man who for six years had been troubled with diarrhœa, as a result of wet and exposure in his work as a bricklayer. He usually had six motions in twenty-four hours, liquid and often mixed with blood. At times, he was laid up for a few weeks. Pain was felt over the region of the liver; the chest was healthy. This man had taken much physic, and he now had two grains of powdered ipecacuanha with five grains of compound tragacanth powder in water thrice daily. In one week, he said he was better than he had felt for the last six years. For the last three days he had passed one consistent motion daily. A few weeks later, he came with return of diarrhœa from exposure to wet. He got solution of pernitrate of iron; and this failing to relieve, Indian bael was tried, to no purpose. He requested to have the powders again, and under their use he seemed to recover completely. Dr. Thorowgood considered that these two cases of obstinate chronic disease, having apparently no inherent tendency to spontaneous cure, were capable of well illustrating the action of powdered ipecacuanha. The fact, also, of the remedy acting so well when given pure and uncombined was worth consideration.—A discussion ensued, limited to the treatment of dysentery by ipecacuanha, in which Dr. Church, Dr. Southey, Dr. Archibald Hewan, Dr. Wilberforce Smith, Dr. Dyce Duckworth, and Dr. Greenhow joined.—Dr. THOROWGOOD, in replying to the observations made on the paper, regretted that by inadvertence he had first announced the cases as of dysentery, while this word did not occur once in the papers as read. He could not think that these were other than cases of very chronic, and, to a certain extent intractable, diarrhœa cured by ipecacuanha powder.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MAY 6TH, 1873.

W. HOWSHIP DICKINSON, M.D., Vice-President; afterwards Sir WILLIAM JENNER, K.C.B., Bart., M.D., President, in the Chair.

DR. CAYLEY read a report on Dr. Charles Carter's Fibrous Ovarian Tumour.

Loose Cartilages from the Knee-joint.—Dr. WALTERS (of Reigate) exhibited a specimen of loose cartilage from the knee-joint of a young man who had dislocated his patella twice. He believed that the cartilage had originated from the femur. It was not the form of loose cartilage ordinarily met with, and it appeared to be necrosed.

Epithelioma of the Glottis and Base of the Tongue.—Dr. DICKINSON showed this specimen for Dr. Bagshawe of St. Leonard's. The disease destroyed the epiglottis, and passed into the larynx. The patient died two years after the beginning of the attack.

Aneurism of Aorta.—Dr. DOUGLAS POWELL exhibited a specimen of aneurism of the aorta close to the sinus of Valsalva. The patient was under the care of his colleague Dr. Tatham. There was a crimson colour of the aorta, and thickening of the middle coat. The whole disease was, he thought, secondary to renal disease.—In answer to the PRESIDENT, he said that there was no clot in contact with the diseased portion.—Dr. PAYNE asked what were the signs between acute and chronic aortitis; how did they know the former. Cornil and Ranvier said that in the acute disease the cells are in the superficial, and in the chronic in the deep layer.

Specimens of Disease of the Aorta and of the Aortic Valves.—Dr. SILVER exhibited a series of specimens of diseased heart, illustrative of imperfection of the aortic valves and disease of the aorta. The first was from a lighterman, aged 28, who had suffered frequently from rheumatism. He had also been subject to unusual strain in carrying on his employment. He first complained of palpitation and shortness of breath about a year before admission. On examination, there were signs of marked enlargement of the heart. There was a diastolic murmur at the base, and a systolic at the apex. The vessels in the neck pulsated to a marked degree. There was also a systolic impulse to be felt over the liver. Later on, he became anasarcaous. After death, his heart was found greatly hypertrophied and considerably dilated. The pericardium was universally adherent, and the auriculo-ventricular orifices greatly enlarged. The valves were healthy, but in two of the aortic valves, near their margin, were small orifices, crossed by slender filaments of tissue.—The second case was that of a waterman, aged 24, who had been exposed to cold and overwork. He had not suffered from rheumatism; but five months previously to admission, he had suffered from fatigue and exposure, after which he began to suffer from shortness of breath, with cough and palpitation. His feet were swollen on admission, and his cough was very severe, with muco-purulent expectoration. The cardiac impulse was greatly diffused, but was most marked inside the left nipple. The apex beat was considerably outside the left nipple. The breath-sounds were obscured by loud *rôles*. There was a double basic *bruit*. The right side of the heart was markedly dilated. Dyspnoea was the most distressing symptom. After death, the heart was found greatly dilated and thinned; there was an aneurismal dilatation of the aorta just above the valves, so far involving them as to render them incompetent. This aneurism pressed against the pulmonary artery, so as to cause obstruction. Both auriculo-ventricular orifices were greatly dilated, especially the right.—The third case was that of a commissionaire, aged 44, who had served twenty years in India. He had suffered from syphilis, drink, rheumatic fever, and ague. He was discharged for heart-disease. There was no distinct *bruit* at the apex, but at the base there was a double murmur. On the right side of the neck, there was some thrill and pulsation to be felt in the vessels, and a double murmur, differing in character somewhat from the basic sounds. The impulse of the heart became very diffuse. He died from the pulmonary complication. The aorta was found enormously dilated, and distinctly aneurismal near the origin of the innominate, which was also involved so as to project up into the neck. The walls of the aorta were greatly thickened and rugose. The aortic valves were thickened and atheromatous; they also presented vegetations. The walls of the heart were thickened. The liver was partly cirrhotic, partly of the nutmeg character. The spleen was large, hard, and black; the kidneys somewhat contracted. The aortic valves were not involved in the aneurismal dilatation, but were incompetent from disease.—The fourth specimen was taken from a woman aged 50, who had been a patient for many years. She first complained of indigestion, but she also suffered from what seemed an aneurismal tumour just above the manubrium sterni, between the sterno-mastoids, but rather more to the right side. Over this tumour a double *bruit* was audible, and there was a distinct

regurgitant murmur over the base of the heart. When she was excited, this tumour pulsated violently. The connection of the tumour with a large vessel was plain, but with what vessel, could not satisfactorily be made out; nevertheless, so clear was it, that more than one distinguished surgeon proposed to operate for the relief of the patient. The woman finally died of bronchitis, and probably she had some albuminuria. The parts were carefully dissected; there was no aneurism. There was dilatation of the aorta, with patches of atheroma, and the aortic valves were incompetent; but in the neck no tumour could be found. What seemed to have given rise to the semblance of aneurism was an unusually long and slightly curved innominate. The liver was so fatty that it floated in water, and the kidneys were also fatty.

Two Cases of Ruptured Chordæ Tendineæ.—Dr. BRISTOWE exhibited two specimens. The first was from the body of a male, aged 62, who, without any apparent cause, became subject to a cardiac murmur and dropsy. One chorda tendinea was ruptured. The second specimen was taken from the body of a bargeman, aged 21, who received an injury to his back, but went on with his work for several weeks with pain and stiffness of the back and leg. He was admitted with doubtful swelling of the joints. He began to pass his motions involuntarily. A week after admission, pericarditis, followed by a systolic endocardial murmur, supervened. After death, adherent pericardium and several ruptured chordæ tendineæ were discovered. No spinal disease was discovered.

Hydatid of the Brain.—Dr. BRISTOWE exhibited a specimen. The patient, aged 17, three weeks before death began to suffer from headache, vertigo, vomiting, and double vision. There was paralysis of the third and sixth nerves on the right side and of the right portio dura. The right side of the tongue and soft palate were paralysed. The optic discs were congested. Latterly a few slight epileptiform attacks supervened. After death, a cavity of the size of a small orange with a solitary hydatid was found in the left hemisphere. There was at no time aphasia, or anything like it.—Dr. DUFFIN referred to a similar case which had come under his observation, that of a child who died in a fit. She had double optic neuritis. A cyst was found in the anterior lobe of the right hemisphere. There were no other symptoms pointing to the existence of a tumour.

Changes in the Liver produced by High Temperature.—Dr. WICKHAM LEGG showed specimens of parenchymatous degenerations produced in healthy rabbits simply by raising the animal heat. Four of these animals had been placed in a tin vessel, which could be surrounded by hot water, and the temperature thus raised. The temperature in the rectum was maintained at 105 deg. F., or above that, for several hours; and at the end of the experiment the animals were killed by raising the temperature to 112 deg. or more. During the observations, the rabbits were rendered insensible by chloral. After death, the livers were all found dry, no blood exuding on section, and the markings of the acini being indistinct. Examined with the microscope, the cells were all found filled with finely granular contents; in most, the nucleus was invisible; the section was often quite dark. In most of the animals the epithelium of the kidneys had suffered a like change, and the muscular fibres of the heart showed an early stage of granular degeneration. The parenchymatous changes commonly found in fevers were thus shown to be due solely to the action of the high temperature and not to any specific cause, the liver being more prone to these parenchymatous degenerations than the kidney or muscular fibre. The result of the experiment also explained some pathological appearances which had hitherto been obscure.

Spinal Cord.—This specimen was forwarded to the Society for examination by a committee; and was referred to Dr. Lockhart Clarke and Mr. Kesteven.

Primary Cancer of the Spleen.—Mr. ARNOTT exhibited, for Dr. O'CONNOR, a specimen of this disease. The diaphragm was secondarily affected, but there was no cancer of any other part of the body. The patient, a female, had been ill six months. She was admitted under Dr. O'CONNOR's care with a tumour in the neighbourhood of the spleen, dyspnoea, and effusion into the left side of the chest, and died in a few hours.—Referred.

Disease of Larynx.—Dr. SILVER showed a specimen from a man aged 45, who came under treatment on August 15th, 1872. At that time he had completely lost his voice, but had been hoarse twenty months before coming under treatment. He had a cough which was peculiarly hoarse and stridulous, and latterly his larynx had been swollen and painful, both on pressure and on swallowing. On examination with the laryngoscope, a large ulcer of a slate-grey appearance was seen on the angle of the thyroid, but not apparently involving the vocal cords. A subsequent examination showed this increased in size, but latterly no satisfactory view of the throat could be obtained. The diagnosis rested between syphilis and epithelioma, but Dr. Silver in-

clined to the former, though there was no definite history to that effect, and the patient was given cod-liver oil and iodide of potassium. He did not improve, though various local remedies were also tried, and it was evident that tracheotomy would have to be performed sooner or later. One day a violent fit of dyspnoea seized him, and it was resolved at once to open the trachea. This was done by Mr. Bellamy, and the patient, as far as the operation went, made an excellent recovery. Soon, however, he had greater difficulty in swallowing. Portions of his food and drink began to return by the tracheotomy-tube, and this increased until hardly any could be got to pass. An attempt to press a tube past the orifice was given up on account of the pain. Nutrient enemata were tried, but the man sank from exhaustion. On examination, a considerable layer of fat was found on the body. The substance of the larynx was completely gone, and in its place was a dark, sloughy-looking cavity. The ulceration ceased abruptly just above the tracheal opening.

Renal Calculi.—Dr. CURNOW exhibited several mulberry calculi. One, rough and tuberculated, was situated at the orifice of each ureter, and there were others in the pelvis of the kidney. There was no sacculation, but mere atrophy of the kidney without pyelitis. There was a blood-clot in the centre of the calculus, probably the immediate origin and cause of the formation of calculus. One of the calculi pressed on the lowest intercostal nerve. This might explain the pain in the side in some cases of renal calculus. There was no uric acid in them.

Myxoma of the Genitals.—Mr. CHURCHILL exhibited for Mr. WAGSTAFFE a myxoma from the labium pudendi. It was of seven years' duration.

Bifurcation of the Urethra of a Dog.—Mr. SEBASTIAN WILKINSON exhibited a specimen.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MAY 7th, 1873.

E. J. TILT, M.D., President, in the Chair.

Specimens.—Dr. BARNES showed specimens of (1) Procidencia Uteri, and (2) Inversion of the Vagina with Hypertrophic Elongation of the Cervix Uteri.

Mr. SCOTT exhibited a Cyst from a case of Extrauterine Foetation.

Mr. ROSS JORDAN showed a Foetus and portion of Placenta from a case of Extrauterine Foetation.

Dr. PLAYFAIR exhibited a new Pessary for Antelexion of the Uterus. It consists of a double-limbed flexible pessary made on Hodge's principle.

Dr. SELL, of New York, showed some Photographs of Ossification of Muscles in various parts of the body, including those of the Pelvis.

Extrauterine Pregnancy: Gastrotomy Successfully Performed. By W. ROSS JORDAN, Esq.—The woman, aged 29, was a patient in the Birmingham Hospital for Women. In April last, she had inflammation of the bowels. In July or August, she first felt the child, and in September she expected her confinement. From this time she gradually became smaller for six weeks, when she fancied she was in labour, being in great pain for three or four days. After that, she had frequent shivers and a cold sensation in the abdomen. On December 13th, a swelling in the abdomen, not larger than in ordinary pregnancy at six months, was discovered fluctuating a little towards the left side; and, on deeper examination, a round mass like the placenta was felt between the umbilicus and pubes, and a harder projection to the upper and left border of the tumour. The cervix uteri was pushed up to the right side. The sound, penetrating three and a half inches, pointed to the right groin, and moved the round body felt in the abdomen. The recto-vaginal pouch was occupied by a hard rounded mass. On December 21st, a puncture with the aspirator was made, and a quantity of chocolate-coloured fluid mixed with white flakes was drawn off. Mr. Ross Jordan concluded that the case was one of extrauterine foetation. Two hours afterwards, complete collapse came on, and hæmorrhage into the cyst or abdomen was suspected. Five hours after the use of the aspirator, an incision four inches long was made in the abdominal wall down to the peritoneum, when the cyst, with the placenta under it, presented. A clot of blood having been removed, the cyst, with a foot near the external opening, was drawn forward; but the wall of the cyst being thin, it ruptured, and through this opening the foetus was extracted. The placenta was left undisturbed, and the openings of the cyst and the abdominal wall were brought together by sutures of carbolised catgut, leaving an open wound about two and a half inches long, which was covered with a layer of tenax, etc. The patient progressed favourably, and on January 1st and 2nd large fragments of placenta were discharged. On April 10th, she came to the hospital looking well, with the wound quite closed.

Diagnosis of Extrauterine Pregnancy.—By LAWSON TAIT, F.R.C.S.—The author thought that in these cases very little confidence should be placed in the statements of patients, if they were not in harmony with physical signs. He had, in consequence of the history of her case given by a patient, been led to make an erroneous diagnosis, mistaking a multilocular ovarian tumour for extrauterine foetation. The conditions with which extrauterine pregnancy may be confused before the death of the child were: displacement of the normally pregnant uterus during the early months; pregnancy complicated with fibro-myoma or cystic disease of the uterus; and, more rarely, pregnancy of one half of a double uterus. After the death of the child, diagnosis was more difficult. Auscultatory signs were of no use. The other conditions with which it might be confused were: pelvic hæmatocele, ovarian tumours, especially dermoid cysts, cancer, fibro-cystic disease of the uterus, hydatids of the uterus, and phantom pregnancy. The uterus in extrauterine pregnancy was always intimately associated with a tumour, and generally in front of it, movable to a limited extent, and enlarged. The most important point was that the cervix was always patulous. Under such circumstances, if a foetal heart were audible, the case was clear. If the case were seen after the death of the child, the tumour would be soft, and, besides obscure ballottement, possibly a part of the child might be made out by internal or external examination.

Gastrotomy for Supposed Extrauterine Gestation. By ALFRED MEADOWS, M.D.—The patient, aged 58, was admitted to the Hospital for Women, and had passed through the climacteric period nine years ago. She had great pain in the abdomen, which was enlarged by the presence of a tumour. Sixteen years since, she fancied herself pregnant, and in due time had pains like those she had felt in her first confinement; these, however, gradually declined, and no child was born. Since that time she had considered herself to be carrying a dead child. On admission, the abdomen was found to be occupied by a large tumour about the size of the uterus at term, tender to the touch, and apparently solid. The uterus was high up and its cervix very small; the sound passed upwards and forwards two and a half inches. It was determined to make an exploratory incision five inches in length between the pubes and umbilicus. A white friable mass was then discovered, having all the characters of malignant disease; it broke down readily, and two ounces of a thick brownish fluid escaped. It being found impossible to remove the mass, the abdominal wound was closed. Fifty-three hours after the operation, the patient died. Upon opening the abdomen, the mass of malignant disease was found to be the omentum, which overlapped the tumour, and was about an inch in thickness. The tumour itself, which was adherent in every direction, was a large fibro-cystic tumour of the uterus. The author cited this case to show the difficulty of diagnosing abdominal tumours. Even with the aid of an exploratory incision, a correct diagnosis of the character of the tumour had not been arrived at previously to death.

Extrauterine Foetation with Operation. By JOHN SCOTT, F.R.C.S.—The patient, aged 32, was admitted into the Hospital for Women on April 17th, complaining of pains in the right inguinal region. The uterus was found developed as in early pregnancy. On May 15th, a tumour could be distinctly felt above the pubes. On June 5th, the os could scarcely be reached, and the tumour felt more elastic. On August 7th, a feeling was communicated to the finger as of fluid between it and the uterus; the foetal heart could be heard. On January 6th, the tumour extended two inches above the umbilicus, and felt, *per vaginam*, like the tense bag of membranes. No foetal heart could be heard, and a hard body like the uterus was felt in front of the abdominal tumour. On January 15th, the sound was passed four inches, its point being felt in the body just mentioned. On the 29th, sudden and violent pains in the epigastrium came on, with restlessness, faintness, and sickness. The cyst was punctured by the aspirator, but no fluid could be withdrawn. On the 30th, in consequence of threatening symptoms, a free incision was made through the abdominal walls, when what appeared to be the enlarged uterus presented itself; but on extending the incision upwards, it proved to be an expansion of the uterine tissues. This was cut through, and on passing the hand into the cyst, the foetus was found lying with its head in the upper part. It was removed, the cavity sponged out, and the placenta left untouched. The upper part of the incision was closed by sutures and the lower left open, the whole being dressed with carbolised oil. The patient died thirty-one hours after the operation. The author gave a minute report of the cyst and its appendages, made by Dr. Snow Beck.—The PRESIDENT was not aware whether there was on record a case of primiparous extrauterine pregnancy; but he was struck with the fact that it generally occurred in women of mature age. He considered that it was easy to understand why it should be so, for puerperal pelvic peritonitis sets up salpingitis and inflammation, and so damages the delicate plicatures which line the oviducts, that the fertilised ovum cannot slip through them, even if

the uterine openings of the oviducts be not obliterated.—Dr. EDIS agreed that too much reliance should not be placed upon the subjective symptoms. In Dr. Meadows's case, the latter were so obscure and the former so precise, that the diagnosis arrived at was based principally upon them. In Mr. Lawson Tait's case, the fact of both ovaries being implicated and menstruation suspended, was a source of fallacy not usually met with.—Mr. LAWSON TAIT said that one point seemed in Dr. Meadows's case to have had its importance overlooked. He referred to the absence of retro-uterine fulness, or rather the absence of a solid tumour there. In his own case, where the history had led him astray, he had not made it sufficiently clear that menstruation had ceased for eight months, and then was resumed. In two other cases, where he had removed both ovaries, menstruation was not interfered with.—Mr. SPENCER WELLS had only seen one case of extrauterine foetation. It was remarkable, as being a twin pregnancy—an intrauterine and an extrauterine foetus going on together up to the full time, and the intrauterine foetus being delivered in the usual manner. He had seen several supposed cases of extrauterine pregnancy, but in nearly all the sources of fallacy was extreme thinness of the uterus and of the abdominal walls. He had not found irregularity or suppression of menstruation at all uncommon during the progress of ovarian disease; nor was it rare for disease of both ovaries to go on while menstruation continued with perfect regularity. In two cases, after removal of both ovaries, menstruation (or a periodical sanguineous discharge from the uterus) had returned at several successive months.—Mr. SCOTT agreed with Mr. Lawson Tait that a tumour in Douglas's space was a very important and constant diagnostic sign in extrauterine foetation. He believed it to be more generally of a cystic than a solid character. Should the foetal head or nates lie in the pelvis, the presenting tumour would be solid.—Dr. HEYWOOD SMITH remarked that, besides the solid or fluctuating swelling generally felt in the post uterine region, there was the sensation of an intermediate consistency when the placenta itself occupied Douglas's pouch, and could be easily felt there.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, FEBRUARY 14TH, 1873.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

Tumour of the Rectum.—Dr. JOHN BARKER showed a large cystic tumour, removed by Dr. Mullen from the rectum of a woman, aged 39, who was confined on February 2nd. She had suffered from diarrhoea for a fortnight, and had had piles. The tumour was removed with a single sweep of a bistoury, its pedicle having previously been tied close to the anus. The contents were sebaceous, with numerous short hairs, without bulbs. The walls of the cyst had in part become bony. The tumour resembled most closely an ovarian cyst.

Traumatic Tetanus.—Mr. T. E. KELLY detailed a case. A man received a compound comminuted fracture of the left leg. On the twelfth day, tetanic symptoms appeared; two days later spasms set in, the temperature rising to 104 deg., and the pulse to 135 deg., during the paroxysm. Fifteen minutes afterwards, the temperature had fallen to 99 deg., and the pulse to 98 deg. A spiculum of bone was removed from between the tibia and fibula. Sulphocyanide of potassium, in one-grain doses, reduced the number and intensity of the clonic spasms. The patient took thirty-two grains within twelve hours. Curara, in doses up to one-thirty-second of a grain, was also given. The man died on the fourth day. Rigor mortis was fully developed, and rapid decomposition had set in, four hours after death. There was much hypostatic congestion. The spinal theca was filled with fluid, and congested. Granular softening was found close to the posterior cornu of the grey substance at the cervical bulb, and in the dorsal region exudation between the pia mater and the cords, and granular softening of the posterior cornu, were the morbid appearances noted.—Dr. MORRISON (Newry), described a case of recovery from traumatic tetanus, consequent on amputation. Many years ago, a boy was injured in the right hand by the bursting of an old pistol. Two phalanges had to be amputated. On the tenth day, tetanus set in, and the boy was removed to the hospital. The vehicle on which he travelled was upset, and the injured arm suffered a compound fracture. On admission, he was in a state of profound collapse, and, on reaction setting in, violent hæmorrhage took place. Amputation was performed. The boy was treated by sedatives. On the fifth day, signs of relaxation of the muscles appeared, and he recovered.

Constitutional Eczema.—Dr. E. C. MAPOTHER contended that the symmetry, extent, tendency to relapse, and frequent occurrence in several members of a family, of many cases of eczema, proved a constitutional origin. The French applied the term, "dartrous diathesis." Dr. Mapother believed the cause of these forms of eczema to

be closely allied, if not identical, with that of gout. The presence of urates in the exudation, and their increase in the urine, the increase of fibrin in the blood, and its presence in the exudation, and the sites of the deposits of urates in the extremities and ears, were proofs of this view. Eczema was very often concurrent with gouty dyspepsia, and with rheumatic gout; both diseases broke out in spring and autumn, and they were about equally hereditary. Remedies of tried value in gout were nearly always successful in this kind of eczema. He advised lithia, in three-grain doses, with twenty drops of the wine of colchicum, thrice daily. The efficacy of arsenic, and of sulphur waters, was equally marked in obstinate eczema and in gout. Carbolic acid ointment was used externally. He advised a tepid bath daily, but a month since he had seen, at the St. Louis Hospital, in Paris, a case of universal eczema greatly served by baths, the water of which was thickened with potato starch.—Dr. CHARLES BENSON mentioned an instance of metastatic eczema, in an elderly gentleman, the subject of pronounced gout.

FRIDAY, MARCH 14TH, 1873.

JOHN DENHAM, M.D., Vice-President, in the Chair.

Specific Dactylitis.—Dr. JOHN MORGAN made a communication on this disease, the substance of which may be found in our report of the Dublin Obstetrical Society for March 8th.—Mr. CROLY alluded to the treatment of mixed cases of struma and syphilitic taint. He had used green iodide of mercury in combination with cod-liver oil and syrup of the iodide of iron, with marked benefit in such cases.—The CHAIRMAN had seen many scrofulous cases, where there was no suspicion of syphilis whatever, much benefited by a judicious mercurial treatment.—Dr. DARBY had frequently used grey powder in struma. He administered cod-liver oil simultaneously.—Mr. WHITE drew attention to the intermittent character often assumed by hereditary syphilis. He thought that the disease might die out, but medical art could not eradicate it, and when the patient fell into bad health from other causes, the old disease was likely to kindle again.—Dr. H. KENNEDY regarded the affection described by Dr. Morgan as strumous.

Repeated Hæmorrhages into the Sac of a Chronic Abscess.—A boy, aged 13, came under the care of Mr. H. G. CROLY on October 5th. Nine months before that time, a small swelling appeared over the left sacro-iliac synchondrosis. Pain followed, intense, and shooting down the thigh. The abscess was opened by a surgeon. A few days before Mr. Croly first saw the lad, violent hæmorrhage, apparently arterial, took place from the opening. Notwithstanding every effort, the bleeding returned several times, and was very profuse on each occasion. As the boy was now extremely anæmic, with a pulse of 130, jactitations, raving, and a sense of suffocation and blindness, Mr. Croly enlarged the opening, and applied the actual cautery freely to the sac. The hæmorrhage ceased for a time, but one day, enormous clots of blood were passed *per anum*. This internal hæmorrhage ceased, and the boy recovered perfectly. Mr. Croly believed that a surgeon should be very slow to open a chronic abscess, from a risk of hæmorrhage. It was better to treat these cases constitutionally, and, as a rule, to leave the abscess to take care of itself. There was no hæmorrhagic diathesis in the present case.—A discussion ensued, in which Dr. Morgan, Mr. White, Dr. H. Kennedy, and Mr. Richardson, took part.

FRIDAY, MARCH 28TH, 1873.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

Disease of Knee-joint.—A boy, aged 13, recently came under Mr. BUTCHER'S care for chronic disease of the knee-joint, from which he had suffered for eleven-and-a-half years. Resection was deemed inadmissible from the presence of extreme irritative fever, and from the extensive nature of the local changes. Resection in early life, also, often was followed by defective growth of the limb. Mr. Butcher amputated through the thigh-bone. All the cartilages and ligaments of the knee-joint had disappeared, and the hamstring tendons were permanently tense. It was found necessary to ligature eighteen or twenty vessels, which ramified over and around the seat of disease, and many of which were as large as the radial artery.

Luxation of Head of Femur into Sciatic Notch.—Mr. WHEELER detailed an example of this injury. Shortening was present to the amount of three-quarters of an inch. Pain and numbness were complained of, and there was much effusion round the hip-joint. Distinct crepitus also was heard and felt. Reduction was effected under ether, anæsthesia being kept up for forty-five minutes.—Mr. STOKES said that recently, in a case of dislocation on the dorsum ilii, left unreduced for about four weeks, grain doses of tartar emetic were given every five minutes, six grains in all being given. Complete relaxation of the muscles was thus effected.

Treatment of Transverse Fracture of the Patella.—Mr. W. STOKES read a paper on this subject. Four questions suggested themselves—1. What was the cause of the separation of the fragments? 2. Whether the original cause of this phenomenon continued to act? 3. Can bony union ever take place in this injury? 4. What was the safest and most effectual method of treatment for it? For the production of transverse fracture it was necessary that the limb should be flexed. The cause was, in fact, muscular contraction of the quadriceps extensor. This muscle did not remain in a state of contraction, so that the continued separation of the fragments seemed to depend on an internal hæmorrhagic weeping. Bony union, again, was delayed in consequence of but one side of the patella being covered with periosteum. Passing to the fourth question, Mr. Stokes said that Malgaigne's hooks were most useful, but in some cases the pain caused by them was extreme. The treatment which seemed most suitable and satisfactory was that proposed by Mr. Sanborn, of America. Two illustrative cases were cited by Mr. Stokes, in one of which he had succeeded in obtaining perfect bony union, and in the other the closest apposition of the fragments, by this method.—Mr. STAPLETON alluded to Mr. Hamilton's method, which closely resembled that described by Mr. Stokes, except that sticking-plaster was used to secure the apparatus instead of a bandage.—Mr. ORMSBY had a case under observation at the Meath Hospital; he found Malgaigne's hooks to answer admirably.—Dr. B. F. McDOWELL had employed Malgaigne's hooks, with Wood's splints, in four cases, three being very satisfactory. He referred to the risk of bandaging a limb after such an accident as fracture of the patella.—Mr. H. G. CROLY objected to the treatment described and recommended by Mr. Stokes, as likely to cause a V-shaped space between the fragments, by tilting forward their anterior edges.—Dr. MAPOTHER said that the cause of the continued separation of the fragments was not contractility, but tonic of the neighbouring muscular structures.—Mr. FLEMING had found Mr. Hamilton's method quite satisfactory.—Mr. E. HAMILTON thought the separation of fragments was not caused by blood; for, in cases of fracture by direct violence, the fragments often grated together, and these were the cases where bleeding was to be looked for. He considered the position of the patient at the time of the accident as very important in its bearing on the case.

Close of the Session.—The PRESIDENT delivered a valedictory address. He stated, that the fortieth session of the society terminated that evening. He mentioned that they had to deplore the death of two of their members, Dr. Gerald Oshrey, cut off suddenly indeed, but in a green old age; and of Dr. Henry Eames, who had fallen a victim, a few days since, to typhus fever, at the early age of thirty-one years. The session had furnished much valuable material, and the discussion on ether and chloroform at the earlier meetings had been of especial interest. He concluded by bidding the members present farewell.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, FEBRUARY 8TH, 1873.

HENRY J. SIBTHORPE, M.D., Vice-President, in the Chair.

Recurrence of Fibrous Tumour of the Uterus.—Dr. KIDD showed a specimen which he had removed the previous day from the uterus of a woman, from whom he had removed a similar tumour two years before. The mass, which weighed six ounces and a quarter, was attached close to the fundus uteri, on the right posterior wall. Dr. Kidd diagnosed the exact position of the tumour by the appearance of anteflexion of the uterus, caused by the anterior protuberance of the growth.

Inflammation of the Cervix Uteri.—Mr. T. MORE MADDEN read a paper on the intimate relation between the strumous diathesis and inflammatory affections of the os and cervix uteri. About one-tenth of the dispensary patients who had come under his notice at the Rotunda Lying-in Hospital suffered from chronic inflammatory uterine affections. There was a very close relation between struma and many chronic or subacute uterine maladies. In strumous ulceration of the cervix uteri, the ulcers were pale, flabby, sluggish, and unhealthy. Strumous inflammation was subacute, leucorrhœa being often the first symptom which attracted attention. Menorrhagia frequently, and sterility always, were concomitants. Antistrumous remedies and regimen were indicated. The preparations of iodine were very useful, a good combination being one-eighth of a grain of iodine with a quarter of a grain of iodide of iron. Non-strumous cases generally required mercury—one-twentyfourth of a grain of the perchloride—with bark. In the strumous class, mineral and thermal waters were also indicated—chiefly (1) iodate and bromate saline waters; (2) chalybeates, both simple and saline; and (3) sulphurous waters.

Warm or tepid baths (temperature 87 deg. to 96 deg. Fahr.) also exerted a sedative action in chronic uterine disease. The ordinary modes of treating hypertrophy of the cervix uteri—by caustics, such as liquor potassæ, etc.—were unscientific and unsurgical. The best local application in these cases was a solution of iodine and glycerine.—Dr. LALOR mentioned a case of dysmenorrhœa, in which there was a family history of rheumatism, and the uterine malady yielded to antirheumatic treatment.—Dr. JOHNSTON regarded endometritis and inflammatory affections of the os and cervix uteri as being much more frequently connected with derangement of the digestive organs than with the strumous diathesis.—Dr. KIDD said that some gynecologists regarded the constitutional state as the cause, others as the consequence of the local uterine disorder. He believed the truth lay between the two. Some cases of uterine disease depended on local causes; in these constitutional treatment would fail, while local measures would succeed. No doubt uterine disease was often due to constitutional ill-health, of strumous or other cachectic origin. Dr. Kidd regarded the use of caustic potash in neoplastic deposits in the uterine wall as beyond all doubt.—Dr. J. A. BYRNE thought that endometritis and endocervicitis were most frequent among the poor, the patients being worn out by repeated child-bearing and uterine excitement. Long standing was an exciting cause. Restraint from marital intercourse was most essential in the treatment.—Dr. H. KENNEDY believed in the constitutional origin of local affections of the womb; the constitutional methods of treatment by ammoniated tincture of guaiacum, arsenic, cantharides, etc., adopted by the old physicians, bore out this view. As regarded local treatment, he had often found the application to the sacrum of poultices, leeches, etc., of the greatest use, especially in cancer of the uterus.

SATURDAY, MARCH 8TH, 1873.

HENRY J. SIBTHORPE, M.D., Vice-President, in the Chair.

Spina Bifida.—Dr. HENRY KENNEDY, in the absence of Dr. Guinness Beatty, showed a case of spina bifida in a boy aged 12. The tumour was in the lumbar region, was diaphanous, and pressure upon it caused pain, referred to the head. When the boy coughed, a decided impulse was conveyed to the hand. The tumour was fluctuating.

Specific Inflammation (Dactylitis) of the Hands and Feet in Children.—Dr. MORGAN read a paper on syphilitic dactylitis. A married woman, originally infected by her husband, had suffered from various gummatous affections. A cast was shown representing the deformities of dactylitis in this case. There were two forms of specific dactylitis; in one the tumour was globular, not deeply seated, semi-elastic, and painless; in the other the deeper structures became affected, the tumour assuming a peculiar violaceous appearance, and becoming semi-fluctuating, a curdy pus being evacuated on incision, and the ordinary gummatous material being observed at the bottom of the wound. Treatment was by mild mercurials and the ordinary anti-syphilitic remedies. Dr. Morgan described several examples of the disease, in one of which the diagnosis was confirmed by the subsequent appearance of a cutaneous rash. In one case of inherited syphilis, the patient, a boy, now aged 13, had numerous scars of syphilitic ulcers, and a gummatous tumour on the leg. A drawing was shown illustrating syphiloma of the liver, gummatous ulceration of the ear, and large gummata of the labia, all occurring in a child aged only six weeks, born of a mother who contracted syphilis while pregnant, and who had herself suffered from various gummata. The specific dactylitis generally was met with on the first phalanx, but it might involve the second also. The peculiar globular swelling was more distinct on the dorsal than on the palmar aspect. The most successful treatment consisted of strapping, or painting with iodine and smearing with flexible collodion. The bichloride of mercury with bark was also very useful in many cases.—Dr. CROLY had attended the mother of one of the cases mentioned by Dr. Morgan. The first two children were perfectly healthy, while the third child suffered from dactylitis. A fourth child, since born, and now a year old, was quite healthy.—Dr. MACSWINEY alluded to an inquiry first instituted by the late Dr. Beatty, as to the possibility of a child being infected from a syphilitic father without infection of the mother; and of a mother becoming infected secondarily from a fœtus in utero.—Dr. HENRY KENNEDY regarded the tumours described by Dr. Morgan as being strumous rather than syphilitic. The success of mild mercurial treatment would not contravene this view.—Dr. MORGAN, in replying, said that the fact that, in some of his cases, he had used mercurial inunction with marked benefit, in his opinion proved the syphilitic nature of the affection.

Vesico-Vaginal Fistula.—Dr. KIDD alluded to the treatment of three forms of this affection. The first was where a fistula of moderate size

could be readily cured by simply paring and bringing together the edges; the second, where the opening was large and the fundus of the bladder protruded into the vagina. In this case the edges were split, and the flaps united by the quilled suture. Thirdly, there was the pin-hole fistula, in which the flap-operation was most successful: it had succeeded in every one of twelve trials which had been made of it in Dublin. Dr. Kidd described a case in which sloughing of the entire anterior vaginal wall had taken place. Two methods of treatment had been suggested in this condition. Jobert de Lamballe closed the vulva, and allowed the contents of the womb and bladder exit only through the rectum, the sphincter ani preventing involuntary passage of urine. There were decided objections to this procedure—the chief of them being the unsexing of the woman, the risk of hæmorrhage, and the liability to constriction of the rectum and cystitis consequent on entrance of fecal matter into the bladder. The making of a new urethra and of a new vesical floor, as suggested by the late Mr. Baker Brown, was the second procedure, and it had often been successful; but here there was no sphincter muscle. Modifications of this operation had been tried by Dr. Emmett of New York, and by Dr. Deroubaix of Brussels. By this method the urethra and bladder were restored, and the vagina left intact. Dr. Kidd explained an operation by which the patient, whose case he had brought forward, an unmarried woman, had been enabled to exert control over the bladder—retaining urine with the aid of a compressor, but emptying the bladder without a catheter—although she was not fitted to enter the married state. The operation consisted in almost completely closing the vagina, merely a long narrow passage being left just under the pubes, which might serve as an urethra.—After a short conversation, in the course of which Dr. Cranny said that he had seen Dr. George Johnston, master of the Rotunda Hospital, perform Dr. Kidd's operation in a similar case, the Society adjourned.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, FEBRUARY 8TH, 1873.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Aortic and Mitral Valve-disease: Sudden Hemiplegia: Aneurism of Right Ulnar Artery: Probable Embolism.—Mr. NIXON showed the viscera of a young man in whose case there was a history of rheumatic fever, and of attacks of cardiac palpitation. Some months ago, while at work, he suddenly felt a tingling in the right little finger. It spread up the arm and down the right side of the body into the leg, and the man immediately fell powerless. There was complete motor paralysis of the right side; the tongue was unaffected, and there was neither aphasia nor amnesia. There was no loss of sensation. A loud basic murmur, and a presystolic *bruit* at the apex, were heard over the heart. The area of præcordial dulness was enlarged, the apex-beat was in the normal position; the carotids beat visibly; and there was a hammer-pulse in the radial arteries. While the patient was in hospital, a traumatic aneurism of the ulnar artery appeared near the right elbow. Under compression, the pulsation ceased and the tumour diminished. On January 25th, the man was readmitted, in an anæmic state, with cough and hæmoptysis. Over the base of both lungs posteriorly, there were crepitus, and dulness on percussion. The urine was albuminous, of specific gravity 1025, but it contained no tube-casts. On February 2nd, severe hæmoptysis set in, pain over the heart was complained of, and the patient died next morning. The heart weighed thirty-one ounces, or without clots twenty-five ounces. The cavity of the right ventricle was diminished. The left ventricle was remarkably dilated; and the mitral orifice was much constricted. On the auricular surface of the mitral valve were deposits of beaded lymph, and large warty vegetations on the aortic valves. Some of the cardiac muscular fibres had undergone fatty degeneration. The liver was enlarged and fatty. The spleen was also enlarged, and both lungs were in either the first or the second stage of pneumonia. A dark clot of altered blood lay in the centrum ovale minus of the brain; there were discoloration and softening of the fissure of Rolando; but the optic thalamus had escaped pressure. Embolism of a branch of the right middle cerebral artery was probably the primary brain-lesion, although no trace of an embolon existed at the time of death. The vessel was, however, altered into a mere fibrous cord. The aneurism sprang one and a half inches below the bifurcation of the brachial artery from the inner side of the ulnar artery; it had pressed on the ulnar nerve.

Congenital Malformation of the Outer End of the Clavicle.—Dr. BENNETT showed a specimen from a case in which an enlargement had been noticed over the conoid tubercle of the left clavicle, but there was no difference in length between the bones of the two sides. On dissecting out the part after death, the acromial extremities proved to

be bifid, the plane of the clavicle near it was elevated, and its surface was irregular and enlarged to some distance inwards. The acromial articulation appeared quite healthy. Outside the conoid tubercle was a process ending in an articular surface an inch and a half long, with cartilage and a synovial membrane; it articulated with the upper edge of the spine of the scapula. The conoid ligament was normal, but the trapezoid ligament was much enlarged. The abnormalities were clearly congenital.

Waxy Degeneration of Kidneys.—Dr. QUINLAN presented specimens from a man of intemperate habits and dyspeptic. The urine had been scanty, highly albuminous, and contained abundant epithelial casts. Anasarca, coma, uræmia, and death followed in quick succession. The kidneys were normal in size, but had undergone extensive degeneration.

Recurrence of Fibrous Tumour of the Uterus.—Dr. KIDD showed a fibrous growth which had grown near the fundus uteri from the posterior wall, making the viscus appear prominent anteriorly. Two years ago, he had removed a similar tumour, weighing six and a half ounces, from the posterior wall of the uterus of the same patient.

SATURDAY, FEBRUARY 15TH, 1873.

GEORGE H. KIDD, M.D., President, in the Chair.

Ovarian Colloid Cancer.—Dr. HAYDEN presented a specimen from a woman, aged 53, married, without family, who had noticed a swelling in the right iliac fossa about six months ago. It was very painful, and grew very rapidly—the abdomen, at the end of six months, being as large as at the full term of pregnancy. The woman died of asthenia. The tumour was irregular in outline, generally elastic, but with fluctuating spaces, especially over its upper surface. It was connected with both ovaries, chiefly with the left. The uterus was of ordinary size. The fimbriated extremity of the right Fallopian tube was intimately connected with a multilocular cystic mass, many of the cysts being filled with colloid matter of the consistence of thick honey, while the contents of others were simply serous. The mesentery was studded with medullary carcinoma, coloured in places with pigment.

Abnormal Styloid Processes.—Mr. F. T. PORTER showed two specimens of long styloid processes attached to the temporal bones by cartilage. Neither stylo-hyoid muscles nor ligaments existed, and some of the neighbouring arteries were abnormal in their course.

Simulative Stricture of Urethra.—Dr. QUINLAN exhibited a drawing of a case in which a piece of skin had become stretched across the external opening of the urethra, which was enormously dilated. The defect was remedied by a simple operation.

Peculiar Amputation of the Foot.—Dr. R. W. SMITH showed the bones of the foot remaining after an operation which he had performed many years ago, on account of gangrene following a crush by a block of stone. The flap healed slowly. A year ago, Pott's gangrene set in in the other foot, and the patient sank. In the limb which had been operated on, the ankle-joint was perfectly sound. The only ankylosis was between the scaphoid and cuboid bones. The incision had detached the three cuneiform bones from the scaphoid. A cast of the stump was exhibited. The man had walked with absolute freedom from lameness.

SATURDAY, FEBRUARY 22ND, 1873.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Ovarian Medullary Sarcoma.—Mr. P. J. HAYES showed a large ovarian tumour, removed from the body of a woman aged 40. She had noticed the swelling for the first time about the end of October last. Its rapid growth was attended by much pain, constipation, and flatulence. On her admission in January, the abdomen was as large as at the sixth or seventh month of pregnancy. The tumour was firm and freely movable. On Feb. 15th, paracentesis with the aspirator was attempted, but only a little thick viscid fluid oozed out. A few days afterwards she died. From the peritoneal sac two gallons of fluid escaped. The tumour primarily consisted of a large cyst, engaging the uterine appendages on the right side, to which secondary cysts were attached. It contained a viscid fluid with brain-like substance. It was attached to the intestines posteriorly by a medullary mass; the large intestine was very tortuous, and flexed. The cavity of the uterus was very small, and its posterior wall was connected with the large ovarian cyst.

Death from Fright: Extensive latent Organic Disease.—Mr. CHARLES NIXON showed the viscera of an old woman, who had been startled a short time ago by hearing that her daughter was in typhus fever. Tremor set in, she became stupid, her tongue was paralysed, and on the eleventh day an attack of convulsions speedily proved fatal. The heart was partially fatty, especially in the neighbourhood of the

coronary arteries, the cavity of the left ventricle was diminished, the mitral orifice contracted, and the curtains of the mitral valve thickened and corrugated. There was atheroma in the aorta and coronary arteries. The venous plexus of the brain and spinal cord was much distended. The dura mater was closely adherent to the calvarium. There were laminated calcareous deposits in the falx and tentorium; small calcareous nodules in the vessels of the circle of Willis; and a small aneurism at the commencement of the middle cerebral artery. The lungs and spleen were softened, and connected with the latter was a large cyst; a similar cyst was found in the left kidney. The liver was in a state of fatty degeneration.

Typhoid Pneumonia.—DR. QUINLAN showed the lungs and abdominal viscera of a man, who had suffered from ague while a soldier in India. On February 17th, he was admitted to Hospital moribund. The lungs were in places studded with tubercles, and presented some small cavities. They were also the seat of typhoid pneumonia. The kidneys were fatty and congested.

Fungoid Cancer.—DR. QUINLAN presented a fungous growth removed by the écraseur from the leg of a man, from whose tibia a sequestrum had formerly been taken away at the same situation. The growth seemed to be cancerous.

SATURDAY, MARCH 1ST, 1873.

HENRY KENNEDY, M.B., Vice-President, and subsequently GEORGE H. KIDD, M.D., President, in the Chair.

Latent Scarlatina: Lobular Pneumonia: Suppression of Urine.—DR. A. W. FOOT exhibited the lungs, heart, and small intestines of a girl, aged 10. The lungs presented in various parts the appearances of the third stage of catarrhal or lobular pneumonia; the heart had old fibrinous thrombi softening in their centres and forming globular cysts with puriform contents. The small intestines had their mucous membrane as it were strewn with grains of sago, from enlargement of the solitary glands. The child had been exposed to the contagion of scarlatina, but was not supposed by its parents to have taken it. She was brought to Hospital moribund from lobular pneumonia and pleural effusion; she had suppression of urine for some days. During the six days of her life in hospital, the temperature ranged from 94.8 deg. to 97.2 deg. Fahr. until the day of death, when it rose to 101 deg. F. The foramen ovale was incompletely closed. The puriform cysts were in thrombi rooted among the muscoli pectinati of the right auricle, and in the anterior face of the left ventricle between the endocardium and the deepest strata of the coagula were applied against the walls of the cavity. The blood in all parts was disposed to form coagulation. The intumescence of the solitary glands existed from the orifice of the common duct to the termination of the ileum: none of the agminated glands were affected. The firm, whitish, bead-like granulations were as numerous on the valvulae conniventes as on the intervening membrane. None of them had ulcerated. The glands of the large intestine appeared healthy. There had been diarrhoea. The kidneys were normal. Dr. Foot considered the case to be one of latent scarlatina, in which death had ensued from pulmonary complications.

Fracture of the Skull: Luxation of Head of Humerus: Fracture of Coracoid Process.—DR. BENNETT said that a labourer, aged 35, had been admitted on February 7th, in a comatose state, into Sir P. Dun's hospital. Shortly before, he had fallen a height of 20 feet into the hold of a vessel, with his right hand in his breeches pocket. There were two parallel wounds over the right eye-brow, from which there was slight bleeding, as also from the right nostril, and the left ear. The right eye-ball was protruded. The head of the right humerus was dislocated into the axilla. The man was unconscious, and there was considerable dyspnoea, but no paralysis; and, although comatose, he was hyperæsthetic. The pulse was at first only 50 to 60, but before death it rose to 110. On opening the calvarium, evidences of pressure on the right cerebral hemisphere were found, caused by large clots in the anterior and middle fossæ of the cranium, between the dura mater and the bone. From a point corresponding to the external wound over the right external angular process of the frontal bone, a slightly depressed fracture ran to the lower end of the coronal suture on the right side, thence across into the orbital plate of the frontal bone, and through the sphenoid bone to the junction of the squamous and petrous portions of the left temporal bone. The fracture had injured the external auditory meatus and membrana tympani. There was no lesion of any internal portion of the brain-substance. There was no shortening of the dislocated limb. On raising the deltoid muscle, the hollow beneath the acromion was very marked. The infraspinatus and teres minor muscles were stretched across the glenoid cavity, but their fibres were not ruptured. The bursa beneath the deltoid was filled with a blood-clot. The great tuberosity of the humerus lay close to the coracoid

process. The tendon of the biceps was uninjured and entire, passing over the great tuberosity. The tendon of the subscapularis muscle was much strained, and extremely attenuated. The capsule of the joint had undergone a double rupture. Near the base of the coracoid process a fracture sprang, passing obliquely forward and outward from the point of attachment of the coraco-acromial ligament.

Acute Tuberculosis.—DR. GERALD F. YEO showed the viscera of a woman, who had died of this disease. The heart and pericardium were healthy. The surface of the lungs was studded with hard nodules, of the size of a pin's head. The lungs were of a purple-grey or lurid colour, their apices studded with small yellowish spots, some softened and broken down, others grey and semitranslucent. Smaller nodules of the same kind were plentifully scattered throughout the lower portions of both lungs. The spleen was large, with small yellowish grey spots throughout its parenchyma. The liver was in a state of fatty degeneration. The kidneys were normal in size, but in their parenchyma were small yellowish grey puncta, most remarkable in the pyramidal portions.

Fatty Tumour of Renal Capsule: Large Calculus.—MR. EDWARD HAMILTON, in the absence of Mr. BOOKEY, showed a tumour from the abdomen of a woman, aged about 60. It occupied the right lumbar region, resting on and causing atrophy of the psoas muscle. It consisted of the capsule of the right kidney in a state of extreme adipose hypertrophy. A large calculus was imbedded in the pelvis of the kidney. The ureter and bladder were healthy, and the other kidney was perfectly normal. The mass weighed 1lb. 6oz. and 2drs. No other abnormal development of adipose tissue was met with in the body.

SATURDAY, MARCH 8TH, 1873.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Acute Miliary Tuberculosis, with Meningitis.—MR. NIXON showed specimens from the body of a boy, aged 14, who died on February 28th, in the Mater Misericordiae Hospital. For some time he had complained of headache, and in the beginning of January he became dull and listless, and lost his appetite. On admission, his pulse was feeble, irregular, and frequent, and his tongue was thickly furred. There were slight cough, and some inequality in respiration in the left supraspinous fossa. Two days after admission, severe headache and vomiting set in. The urine was free from albumen and tube-casts, but freely deposited triple phosphate immediately after it was voided. Its specific gravity was 1012. The vomiting was relieved by blistering the head. The temperature in the axilla varying from 94 deg. to 97 deg. Fahr., until February 24th, when it rose to 102 deg., subsequently to the occurrence of ptosis and dilatation of both eyes; of right paralysis of motion, with rigidity of the left arm and leg; and of a postsystolic cardiac murmur. Convulsions supervened on the 25th, coma deepened, and the boy died in about forty-eight hours. The cranial sinuses were engorged with dark fluid blood. Deposits of beaded granular lymph were scattered over the free surface of the brain and pons Varolii, around the circle of Willis, and about the origin of the left third nerve. The arachnoid was opaque in many places, and the lateral ventricles were distended with a somewhat turbid serum. The heart was healthy, but its right chambers contained dark grumous coagula. The lungs were studded with miliary tubercles, and the liver, spleen, and kidneys, also contained similar deposits. The intestinal mucous membrane, of the lowest third of the ileum especially, was in the condition termed "psorenteric" by Dr. Harley. In the absence of any scarlatinal history, Mr. Nixon looked upon this change as due to infarction and ulceration of the solitary glands, consequent upon tuberculation.

Pleuropneumonia complicating Cirrhosis of the Liver.—DR. A. W. FOOT shewed a well-marked specimen of a cirrhotic liver, taken from a boy aged 7. He had been tapped thirty-four hours before death, when eighty-one ounces of clear greenish serum, of specific gravity 1006, were removed, with apparent relief. Twelve hours after the operation he began to moan, and fell into a semi-comatose state, in which he died. The tapping was necessitated by the aggravation of dyspnoea, which an acute attack of pleuropneumonia of the left lung induced. There was not a trace of recent peritonitis. The liver weighed 35½ ounces, and measured from right to left 7½ inches, from thick to thin border (vertical measurement), 5½ inches, its thickest part being 3 inches deep. The condensed peritoneal investment presented milky opacities, surrounding the prominent islets of parenchyma, and was as if extensively smeared over the convex surface in particular; the callous web at the extreme left margin was in process of formation, the ligaments were vascular. The adhesions were numerous; the substance of the gland was tough, granular, and of a dull orange colour. The gall-bladder was small; it contained viscid

orange-coloured bile. The spleen weighed 3 ounces, was $3\frac{5}{8}$ inches long, and $2\frac{5}{8}$ inches broad. The left lung was in a condition of red hepatisation, and the left pleura was violently inflamed. The fibrinous exudation was peculiarly red. There was nothing abnormal in the brain. The child was a lean, sallow, melancholic looking object, but had a large amount of adipose tissue connected with the intestinal canal.

Rupture of the Aorta.—Dr. GERALD YEO exhibited the heart and aorta of a blacksmith, aged 44, of intemperate habits, the subject of syphilis. For two years he had suffered from dyspnoea, pain over the heart, occasional hæmoptysis, albuminuria, and œdema of the lower limbs. Loud bronchial *râles* were generally audible over the chest, and there was a well-marked basic double murmur. To this a third, postdiastolic bruit became added. After severe attacks of angina, he died suddenly, while sitting up in bed. The lungs were œdematous. In the pericardium lay about a pint and a quarter of soft dark clots, besides a pint of dark fluid. Blood was freely extravasated into the subserous areolar tissue over the front of the right auricle and great vessels. In the anterior wall of the aorta there was a transverse slit, three-quarters of an inch long. The auricles were small, the ventricles dilated, the left being considerably hypertrophied. Both the aortic and pulmonary orifices were greatly dilated, but their valves were sufficient. One of the aortic valves measured an inch and three-quarters. The rupture of its middle and internal coats extended across the immensely dilated aorta, just above two of the aortic semilunar valves. The coats of the vessels were, however, generally healthy and elastic. The liver was hard and small, showing some old traces of perihepatitis on its upper surface.

Transposition of Viscera.—Mr. NIXON gave a remarkable example. A boy, aged about 15, died of double pleuritis, on March 7th. The systemic portion of the heart was situated to the right, the pulmonary portion to the left. The arch of the aorta crossed from left to right, passing over the root of the right lung, and the vessel passed down to the right of the œsophagus. The branches were the arteria innominata, right carotid, and right subclavian. The arteria innominata divided into the left carotid and left subclavian at the left sterno-clavicular articulation. The superior vena cava passed in front of the root of the left lung. The left lung was divided into three lobes, the right into two only. The pneumogastric nerves were reversed also, the right supplying the anterior surface of the stomach, the left its posterior surface. The right recurrent laryngeal nerve was given off at the right side of the ductus arteriosus, which sprang from the right and shorter branch of the pulmonary artery. The liver occupied the left hypochondrium, its greater lobe being on the left side. The œsophagus terminated in the right hypochondrium, where the cardiac end of the stomach and the spleen were also found. The intestines, and the vessels and nerves of the abdomen, were all similarly misplaced.

Chronic Latent Pericarditis and its Consequences.—Dr. A. W. FOOT showed a specimen, taken from a lad aged 19, who came into the Meath Hospital with a history of seven weeks' ailment, referred to the left side of his chest. On admission, the right pleura was full of fluid. Soon afterwards, the pericardium was found to be also filled with fluid, the area of præcordial dulness extending from one nipple-line to the other, and from the second rib above, until it was merged below in the left lobe of the liver, which was displaced downwards. There was no impulse. The sounds were distant and feeble. The pulse, which could seldom be counted at the wrist, averaged 150 per minute. Dyspnoea was constant, and often extreme. There was œdema of the feet and legs. The pleural effusion was recent, the result of exposure to cold. The pericardial effusion, and the inflammatory deposit in the left lung, existed before his admission. Stimulants afforded temporary relief. The chest was tapped late, and 105 ounces of a clear greenish amber-coloured serum were withdrawn, with very trifling relief, and he died quietly, sixteen hours after the operation. The right pleural cavity presented no traces of inflammation, but its walls were bestrewn with miliary granulations; opaque whitish tubercles, like boiled sago, were disseminated through the right lung. In the summit of the lower lobe of the left lung was an inflammatory greyish yellow deposit, of the size of a date, covered, where it came to the surface of the lung, with pleuritic adhesions and exudation, of pappy consistence, in the central parts, surrounded by a redder and firmer belt of albuminous exudation. Through this lung also were numbers of sago-like tubercles, most numerous in the vicinity of the deposit. The pericardium contained 33 ounces of brownish serum, was half-an-inch thick, leathery, gristly, and coated with dirty whitish exudation; the epicardial deposit was everywhere at least half-an-inch thick. There was extreme hypertrophy of the left ventricle, which, in the absence of valvular disease, atheroma of the aorta, or granular kidneys,

was no doubt due to an effort to overcome the load of superincumbent solid and liquid exudation. The retrobronchial glands were greatly distended; the diaphragmatic and mediastinal pleuræ were sown with miliary tubercles. The splenic peritoneum was roughened with minute nodules, giving to the finger the sensation of the finest sand.

ASSOCIATION INTELLIGENCE.

SOUTH MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Council Chamber at the Town Hall, Northampton, on Thursday, June 5th, at 1 P.M.; Dr. BRYAN, President, in the Chair.

Dinner at the George Hotel, at 4 P.M. Charge, 5s. 6d., exclusive of wine.

Gentlemen who intend to read papers, and those who wish to dine, are particularly requested to communicate, as early as possible, with the Honorary Secretaries.

J. M. BRYAN, M.D. } *Honorary Secretaries.*
WM. MOXON. }

Northampton, May 6th, 1873.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE next meeting of the above district will be held at the Board Room of the Infirmary, Chichester, on Friday, June 6th, at 2.45 P.M. precisely.; Dr. TYACKE in the Chair.

The dinner will take place at the Dolphin Hotel, at 4.45 P.M. Charge, 5s., exclusive of wine.

All members of the South-Eastern Branch are entitled to attend, and to introduce friends.

Papers have been promised by Dr. Fussell of Brighton and Dr. Paxton of Chichester.

Any other member desirous of reading papers or bringing forward cases, is requested to communicate forthwith with the Honorary Secretary.

WM. J. HARRIS, *Honorary Secretary.*

13, Marine Parade, Worthing, May 19th, 1873.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES.

THE combined annual meeting of the above Branches will be held at the Town Hall, Great Yarmouth, on Friday, June 20th, at 2 P.M.; J. C. SMITH, Esq., President, in the Chair.

Dinner at the Royal Hotel, Great Yarmouth, at 5.30 P.M. Tickets, 12s. 6d. each.

Members wishing to read papers, or to join the dinner, are requested to communicate, as early as possible, with one of the Honorary Secretaries.

B. CHEVALLIER, M.D., Ipswich. } *Honorary Secretaries.*
J. B. BRADBURY, M.D., Cambridge. }
J. B. PITT, M.D., Norwich. }

May 19th, 1873.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting of this Branch will be held in the Museum, Warrington, on Tuesday, June 24th, at One o'clock; CHARLES WHITE, Esq., President-elect.

The dinner will be provided at the "Mess House", at Five precisely. Tickets 7s. 6d., exclusive of wine.

The following communications are promised:—Dr. Noble: Some Particulars of Treatment in a Case of Pneumothorax. Dr. Lyster: A Case of Intermenstrual Uterine Pain. Dr. Steele: Note on the Inter-uterine Injection of Perchloride of Iron in *Post Partum* Hæmorrhage.

Notice of communications should be sent to the undersigned at once.

A. B. STEELE, *Honorary Secretary.*

54, Rodney Street, Liverpool, May 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Great Western Hotel, Birmingham, on Tuesday, June 24th, at 3 P.M.

An address will be delivered by the President, FURNEAUX JORDAN, Esq., F.R.C.S.

The annual dinner will be held at 5 P.M., for the convenience of country members.

Dinner tickets, including waiters and dessert, 7s. 6d. each.

Members intending to be present at the dinner, are requested to communicate with the Honorary Secretaries on or before June 20th, in order that suitable arrangements may be made.

T. H. BARTLEET, F.R.C.S. }
BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*

Birmingham, May 20th, 1873.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETING.

A MEETING of this Society was held on Thursday, April 10th, at the Cock Inn, Sutton. Dr. HEARNDEN presided, and eighteen members and visitors attended.

Papers, etc.—1. Dr. PHILPOT read a paper on a certain form of Nervous Headache.

2. Dr. LANCHESTER read the notes of a case of Acute Hydrocephalus, with remarks.

The Dinner took place at 6 P.M.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETING.

THE fourth meeting of the sixteenth session was held at Dartford on May 13th; RICHARD H. HUNTER, Esq., in the Chair.

The Secretary was re-elected.

The Next Meeting was appointed to be held at Rochester in September; and Dr. James V. Bell was chosen chairman.

Communications.—The following were read:—

1. Case of Fracture of Pelvis and Compound Fracture of Leg: Severe Collapse: Recovery. By R. H. Hunter, Esq.

2. Case of Albuminuria and Convulsions in a primipara in her third month of pregnancy: Recovery. By Thomas Churton, Esq.

3. Specimen of a Fetus at the fifth month born with a full-time twin. The mother had had a fall three months before labour. By C. J. White, M.D.

4. Specimen of the Intestines of a woman who died of Peritonitis. By N. W. Barrington, M.D. There was an omental umbilical hernia of thirty years' duration, but there was no strangulation.

5. Arrest of Epistaxis by the use of Matico locally. By W. P. Hoare, Esq. The author stated that he was the first who gave matico internally for hæmatemesis and other hæmorrhages.

6. Observations on the Treatment of Burns and Scalds by equal parts of resin cerate and zinc ointment, with one-fortieth of carbolic acid. By W. P. Hoare, Esq.

Dinner.—The members and visitors dined at the Bull Hotel.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE sixth ordinary meeting of the session was held at the York House, Bath, on Thursday evening, May 22nd. Present: T. G. STOCKWELL, Esq., President, and forty-three members.

New Members.—G. K. Sproule, Esq. (Frome), and George Home, Esq. (Westbury-on-Trym), were duly elected members of the Association and of the Branch.

Papers.—The following were read.

1. Mr. Joseph Hinton read a paper on Animal Poisoning.—Messrs. Mason, Stockwell, and Spender made remarks.

2. Mr. W. M. Clarke read a paper on Arsenical Colours and Papers.—Dr. Hensley and Mr. Fowler made remarks.

3. Dr. E. L. Fox read a paper on Certain Pathological Conditions of Nervous Centres, illustrated by numerous microscopical specimens.

4. Mr. A. Waugh narrated two Cases of much Surgical Interest.

5. Mr. Joseph Parsons narrated a case of Abdominal Abscess, unsuspected during life, and causing Sudden Death; on which Dr. E. L. Fox and Mr. Clarke made some observations.

OBITUARY.

JAMES INGLIS, M.B., C.M. Aber.

WE regret to have to record the death on January 4th of this promising gentleman, at the early age of twenty-two. His death occurred on board ship, while on his way to Australia, whither he was going for the benefit of his health. Mr. Inglis served at Beaumont and Saarbruck during the Franco-Prussian war; and during the small-pox epidemic in Aberdeen, he acted as resident medical officer to the temporary hospital. His career at the University of Aberdeen was a distinguished one. He did well what he undertook, and his personal qualities were such as to secure for him a welcome reception from all.

THOMAS ROBINSON, M.R.C.S., L.S.A.

MR. THOMAS ROBINSON, surgeon, died at Alton in Staffordshire, on April 13th, of pneumonia (which lasted acutely only a week), in his fifty-fifth year. He studied at University College, and afterwards in Paris. Mr. Robinson resided and practised at Alton thirty years, during the whole of which time he held the appointment of Poor-law Medical Officer of a large district. A most sincere and unusual regret has been felt by the people of the whole neighbourhood of Alton at the loss sustained by them in his death. Few have been known where he lived so worthy of respect or so deeply mourned.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

DALLINGTON.—Mr. A. H. Hackney has been appointed Medical Officer of Health for the Dallington Parish of the Battle Union, Sussex.

BRADFORD-ON-AVON.—Mr. C. S. Barter (Medical Officer of Health for Bath) has been appointed Medical Officer of Health for Bradford-on-Avon, at a salary of £30.

WESTMORLAND.—Dr. David Page, of Kirkby Lonsdale, has been elected Medical Officer of Health for the county of Westmorland and the districts of Ulverston (Lancashire) and Sedbergh (Yorkshire), at a salary of £600.

KIRKBURTON.—At a special meeting of the Kirkburton Urban Sanitary Authority, it was resolved to combine with the urban sanitary districts of Lepton, Farnley Tyas, Shelley, Shepley, Cumberworth, and Cumberworth Half, in the appointment of a medical officer of health, if the sanction of the Local Government Board can be obtained.

HUDDERSFIELD.—The proposed appointment of one medical officer of health for all the sanitary districts within the area of the Huddersfield Union having been found to be impracticable, it has been determined to combine the urban sanitary districts of Marsden-in-Almond-bury, Marsden-in-Huddersfield, Slaithwaite, Linthwaite, Golcar, and Scammonden; and any adjoining sanitary districts are to be allowed to join, on signifying their desire within a month.

HUNTINGDON.—Dr. E. J. Syson, late Medical Officer of Health for Salford, has been appointed by the Guardians and Town Council Medical Officer of Health for the Huntingdon District, at a salary of £800.

ADULTERATION OF FOOD AND DRINK.

ADULTERATION OF MILK.—On May 14th, Frederick Johnson, milkman and dairyman, of 27, Highbury Vale, was summoned, on behalf of the Vestry of St. Mary, Islington, for having, on the 4th day of April, unlawfully sold some milk, knowing the same to have been mixed with another substance, with intent fraudulently to increase its bulk. It was proved that a quart of milk was purchased at the defendant's dairy, for which fourpence was paid. It was then submitted to Dr. Tidy, the analyst for Islington, who deposed that the analysis showed that the bulk of the milk was one-third water. The magistrate imposed a penalty of £5 and costs.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

MEDICAL ACT (1858) AMENDMENT BILL.—Petitions in favour of this Bill have been presented during the last and present week, from Bangor, Standishgate, Middlewich, John Proctor and others, Crewe, Oswestry, Bacup, Blackburn, Ashton-le-Willows, Liverpool (two), West Somerset, Burnley, Birkenhead, Southport, Bootle, West Derby, Widnes, Lincoln, Oldham (two), South Durham, Shropshire, Ennis, Brynsiencyn, North Wales Branch of the British Medical Association, Croydon, Bothwell, Dundee, Lichfield, Northampton, Macclesfield, British Medical Association (two), Brighton, Rochdale, Bury, Hull, Todmorden, Chester, Newhaven, Sunderland, Worthing, Wednesbury, Norwich, Abergavenny, the President and Council of the Lancashire and Cheshire Branch of the British Medical Association, Reigate, Manchester, Ashton-under-Lyne, Leeds, Accrington, Charles Chadwick and others, Staffordshire, London, Leicester, Forfarshire, Aberdeen Branch of the British Medical Association, Shrewsbury, Holywell, Rhyl,

Wrexham, University of Durham College of Medicine, York (two), Ruthin, Leicester, Liverpool, Birmingham, South Shields, London (two), Frodsham, Worthing, Swansea, Tiverton, Whitehaven, Stafford (two), Teignmouth, Reading, Southport, Saffron Walden, Greenwich, Windsor, Dudley, Tipton, Market Harborough, Torquay, Southport, Llanfairfechan, Dublin, Pershore, East Sussex, Newport, and Southam.

Petitions against the Bill have been presented from Nottingham, Sheriff Hutton, Kingston-on-Hull (two), King's and Queen's College of Physicians in Ireland, Tipton, Derby (three), Coventry (two), University of Edinburgh, Accrington, Birmingham (five), Liverpool (two), Hull, Manchester (four), Morley, Mountsorrel, Malpas, Woodley, Plaistow, Nantwich, Leeds (two), Dairycoates, Cleckheaton, Bingley (two), Schofield, Heckmondwike, Boston, Harleigh, Stockport, Whitechapel, Leicester, Halifax (three), Bolton, Bradford (five), Mossley, Henry Newton, James Platt, Malton, George Willoughton, Willenhall, York, Bedford, Henry Bradsworth, Sheffield, Bishop Auckland, Samuel Matthews, Edward Foster, Heywood, and Kersley.

Dr. Lush has given notice of motion on the second reading of the Bill on Wednesday, July 3rd—"That it be read a second time on this day six months."

PUBLIC HEALTH BILL.—Petitions for alterations have been presented from the British Medical Association (two), Taunton, Charles Cornish, Brighton, Holyhead Union, Northampton, Epsom, and Augustus Bath and others.

Mr. Corrance has given notice that, on the order for going into committee on the Public Health Bill being read on Thursday, June 5th, he will move that the order be discharged.

REGISTRATION OF BIRTHS AND DEATHS BILL.—On Tuesday, May 27th, a message was received from the Lords, that they had passed a Bill, intituled, "An Act to amend the Acts relating to the Registration of Births and Deaths in England, and to consolidate the law respecting the Registration of Births and Deaths at Sea." The Bill was read a first time; and the second reading was fixed for Friday, June 6th. Mr. Donald Dalrymple has given notice of his intention to move the following clause in Committee. "Every registered medical practitioner shall be entitled to demand and receive for each certificate of death or still-birth, furnished under the provisions of this Act, a payment of not less than one shilling and sixpence when such certificate is delivered from his residence; and when summoned to a distance of one mile and under two miles from his residence, for the purpose of preparing such certificate, he shall be entitled to a fee of not less than two shillings; and when the distance exceeds two miles, to a fee of not less than three shillings, such distance being measured according to the existing public carriage road; but nothing herein provided shall entitle the medical officer of any public hospital or charitable institution to demand payment for a certificate of death or still-birth."

HABITUAL DRUNKARDS BILL.—At the second reading on Thursday, June 12th, Mr. Goldsmid will move "That it be read a second time on this day six months."

NOXIOUS BUSINESSES.—On Tuesday, May 27th, Mr. Headlam moved for a "return of all persons licensed to carry on any of the following trades within the limits of the metropolitan district: blood-boilers, bone-boilers, fellmongers, slaughterers of cattle or sheep, soap-boilers, tallow-melters, tripe-boilers; with the name and address of each person so licensed, and the particular trade for which he is licensed."

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, May 15th, 1873.

Williams, Trevor William Wynn, Montagu Square

As Assistants in compounding and dispensing medicines.

Armitage, J. S., Kentish Town
Clifford, T. A., Bayswater
Mager, W. K., Westmeon

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 13th, 14th, and 15th of May, the following candidates obtained the License to practise Medicine.

Annesley Charles Castriot De Renzy, John M'Creery, Michael Power O'Connor, William Taylor, and Thomas John Tighe.

The following candidates obtained the Midwifery Diploma.

Annesley Charles Castriot De Renzy, George William Joseph, John M'Creery, William Taylor, and Thomas John Tighe.

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BILLERICAY UNION**—Medical Officer and Public Vaccinator for the Mountnessing District: £30 per annum, and fees.
- BILLESDON, BLABY, HINCKLEY, and LUTTERWORTH Rural Sanitary Districts**, and Melton Mowbray Urban Sanitary District, combined—Medical Officer of Health: £450 per annum; to be increased, if other districts join: maximum, £800.
- BLOOMSBURY DISPENSARY**, Great Russell Street—Resident Medical Officer.
- BRIGHTON AND HOVE DISPENSARY**—Two Resident House-Surgeons: £100 per annum, furnished apartments, coal, gas, and attendance.
- COUNTY DOWN INFIRMARY**—Resident Registrar and Assistant-Surgeon: 60 guineas per annum, board, apartments, and washing.
- COUNTY OF CARMARTHEN INFIRMARY**—House-Surgeon: £100 per annum, lodging, coal, and candles.
- CUMBERLAND and WESTMORLAND LUNATIC ASYLUM**, Carlisle—Resident Medical Superintendent.
- DURHAM, County of**—Public Analyst: £100 per annum, and 6s. for each analysis. Applications to John Watson, Esq., North Bailey, Durham.
- FYLDE RURAL**, and several Urban Sanitary Districts, combined—Medical Officer of Health: £500 per annum, to include travelling and all other expenses.
- GRANTHAM RURAL and URBAN**, and several other Sanitary Districts, combined: £650 per annum for three years. Applications to the Clerk to the Grantham Union, Grantham.
- GREAT INDIAN PENINSULAR RAILWAY**—Resident Medical Officer at Lanowlee: 500 Rs. per mensem for three years. Applications to T. R. Watt, Esq., 3, New Broad Street.
- GREAT YARMOUTH HOSPITAL**—House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
- HEADINGTON UNION**—Medical Officer for the Otmoor District.
- HUDDERSFIELD UNION**—Medical Officer for the Golcar District: £20 per ann.
- INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST**, Margaret Street, Cavendish Square—Visiting Physician.
- KELLS UNION**, co. Meath—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Moynalty Dispensary District: £120 per annum, and fees. Applications to John Keating, Esq., Moynalty.
- LONDON TEMPERANCE HOSPITAL**, Gower Street—Two Physicians and a Surgeon.
- LUNESDALE UNION**, Lancashire—Medical Officers for Districts 3 and 4: £12 and £15 per annum, respectively.
- MIDDLESBROUGH URBAN SANITARY DISTRICT**—Medical Officer of Health: £150 per annum.
- NEWBURY UNION**, Berks—Medical Officer for District No. 1: £170 per ann.
- NORTH LONDON CONSUMPTION HOSPITAL**—Physician.
- NORWICH DISPENSARY**—Resident Medical Officer: £120 per annum; £12 for coal, etc., and residence. Applications to Robert Chamberlin, Esq., Catton House, Norwich.
- PRESTON UNION**—Medical Officer for the Longton District: £65 per annum, and fees. Applications to G. Dixon, Esq.
- ROYAL UNITED HOSPITAL**, Bath—House-Surgeon: £60 per annum, board, and residence.
- SALISBURY URBAN SANITARY DISTRICT**—Medical Officer of Health: £60 per annum.
- SHEFFIELD GENERAL INFIRMARY**—House-Surgeon: £140 per annum, board, lodging, and washing.
- SHEFFIELD PUBLIC HOSPITAL and DISPENSARY**—Physician.
- SLIGO UNION**—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Riverstown Dispensary District: £100 per annum, and fees. Applications to Henry McLoughry, Esq., Riverstown.
- STOCKTON UNION**—Medical Officer for the Norton District: £50 per annum, and fees.
- TORRINGTON UNION**, Devon—Medical Officers for the Great Torrington and Winkleigh Districts: £70:11 and £17:18 per annum, and fees, respectively; also, a Public Vaccinator for the Winkleigh District.
- TYNEMOUTH RURAL SANITARY DISTRICT**—Two Medical Officers of Health: £50 for one year, each.
- VICTORIA HOSPITAL FOR SICK CHILDREN**, Queen's Road, Chelsea—Assistant-Physician.
- WAKEFIELD RURAL SANITARY DISTRICT**—Medical Officer of Health: £140 per annum.
- WARRINGTON RURAL SANITARY DISTRICT**—Medical Officer of Health: £200 per annum. Applications to James C. Sutton, Esq.
- WARRINGTON URBAN SANITARY DISTRICT**—Medical Officer of Health: £100 per annum. Applications to James C. Sutton, Esq.
- WEST BROMWICH DISTRICT HOSPITAL**—House-Surgeon.
- WEST FIRLE RURAL SANITARY DISTRICT**—Medical Officer of Health: £50 per annum.
- WEST HERTS INFIRMARY**, Hemel Hempstead—House-Surgeon and Assistant Secretary.
- WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL**—House Governor, Secretary, and Collector: £120 per ann., board and residence.
- WORCESTER INFIRMARY**—Resident Surgeon, Dispenser and Secretary: £150 per annum, furnished apartments, coal, gas, and attendance.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

- BRACEY.**—On May 24th, at 46, Bristol Street, Birmingham, the wife of *Arthur Bracey, Esq., Surgeon, of a son.
- PARKINSON.**—On May 26th, at Brotton, near Saltburn-by-the-Sea, Yorkshire, the wife of J. Taylor Parkinson, M.B., of a son.

DEATH.

- EMPSON**, Edwin, Esq., Surgeon, at Crediton, Devon, on May 10th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. George Roper, "On a Case of Hypertrophic Elongation of the Cervix Uteri at the full term of Pregnancy"; Dr. Eardley-Wilmot, "On the Fillet as an Obstetric Aid"; Dr. Wiltshire, "On the Common Skin-diseases of Children."—Royal Microscopical Society, 8 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

ERRATUM.—In the list of prizemen at University College, published in last week's JOURNAL (p. 595), the name of the gold medallist in medicine should have been given as D. N. Parakh.

MR. WARD JACKSON.—We cannot undertake to reply by letter to communications addressed to the Editor.

THORAX.—(1) "Urine," *A Guide to the Examination of the Urine*, by Dr. Wickham Legg. (2) "Stethoscope," *Introduction to Clinical Medicine*, by Dr. Hughes Bennett; and a work with the same title by Dr. Octavius Sturges.

POSITION OF THE FŒTUS IN UTERO.

SIR,—In the course of my obstetric practice, a few days since, I met with the following case. A woman in her fourth confinement, whom I was attending, was safely delivered of one child, with a head-presentation. On examining externally, I found a larger mass than usual, which led me to make a vaginal examination. In doing so, I felt a second fœtal head, which was soon expelled and the usual placenta combined came away in a few minutes. This is my first case of twins with two head presentations. I shall be glad to know if it is usual.

I am, etc., J. HARRY ASHWORTH, L.R.C.P., etc.
Kettering, Northamptonshire, May 22nd, 1873.

* * Dr. Arthur W. Edis, to whom we have referred this communication, writes: Few authors refer to it, beyond stating that "The most frequent presentations are, the one cranial, and the other pelvic or footling." Ramsbotham concludes, "it is more usual for both the heads to offer themselves downwards." Campbell also states that, from a register of his cases, "he finds both fœtuses have almost always presented the vertex." Milne says, "in 1615 cases reported, there were 1084 cranial, 498 pelvic, and 33 transverse."

DR. GIBSON'S request has been handed to the General Secretary, Mr. F. Fowke, 37, Great Queen Street, W.C., to whom all communications concerning changes of address, advertisements, or other business matters, should be addressed.

DENGUE.

SIR,—In this week's *Notes and Queries*, it is stated that the above fever obtained its name from having been first noticed among the troops at Aden, where it was known as "Aden Ague"; the first letter of each word was subsequently dropped, and the remainder of the words joined—hence the term "Dengue". I have referred to Aitken's *Practice of Medicine*, but find no explanation of the origin of the term. It would be interesting to know the date of its first appearance.

I am, etc., GEO. CHAS. COLES.
20, Great Coram Street, W.C., May 17th, 1873.

DR. GIDLEY.—The preparation of lentil called *Celenta Ægyptia*, as prepared by Messrs. Hill of Bishopsgate Street, is finely ground lentil flour, which, stirred with milk and boiled, makes a much more agreeable and not less nutritious and digestible food than *Revalenta Arabica*.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

A MEDICAL STUDENT.—The "St. Thomas's Microscope", made by Pillischer of New Bond Street, is a very efficient instrument, and would no doubt answer the purpose.

A CORRESPONDENT asks to be furnished with the names and the addresses of the officers of any provident medical dispensaries in the West of England. Perhaps he had better communicate with Dr. Nankivell of Torquay, who could, we think, give him the required information.

CEREBRO-SPINAL MENINGITIS.

AN inquisitive person lately gave an apothecary a bad headache by wanting to know "what this new disease—this Cerro-gordo—final—Macginnis that one hears so much about, can be?" Perhaps it is the complaint alluded to in one of the queerest obituaries that ever appeared in an American journal, and that is saying a great deal. A Philadelphia paper publishes the following from a Pennsylvanian pen:—

Our little Sallie did to heaven go,
Baby life so fleet is;
She was afflicted with the cerebro-
Spinal meningitis.
'Tis hard to lose our Sallie so,
But the reflection sweet is,
That she's gone were there's no cerebro-
Spinal meningitis.—*The Echo*.

UNQUALIFIED ASSISTANTS.

SIR,—I should be glad to have your opinion on the following case:—A medical man, a member of the Association, residing four miles from this, has placed an unqualified man in this village to take charge of a branch practice, with little or no control. The said assistant goes for some considerable distance into a part of the country, where the principal never does. If, as sometimes happens, a patient dies, the certificate is filled up by the principal without his having ever seen the patient. The assistant practises in every branch of our art, attending midwifery, vaccinating, etc., his employer making his own qualifications do double duty.

I think I have a right to complain of what would not be tolerated in any other profession, and it is my wish to call attention to this glaring evil, which appears at present to be on the increase, and without a remedy.

I am, etc.,
SCRUTATOR.

Insurance forms are filled up in the same way as the death certificates.

* * The practice of employing unqualified assistants—except, perhaps, under the immediate and constant superintendence of the principal—is one of which we strongly disapprove; and, if the facts of the case as stated by our correspondent be correct, the practitioner to whom he refers is acting in a very reprehensible manner.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, May 24th; The Manchester Guardian, May 28th; The Aberdeen Daily Free Press, May 24th; The Bath Express, May 24th; The Birmingham Daily Post, May 28th; The Herts and Essex Observer; The Yorkshire Post and Leeds Intelligencer; The Birmingham Daily Mail; The Sussex Daily News; The Kendal Mercury; The Hull Packet; The Roscommon Journal; The Melbourne Argus, March 14th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Dr. Brunton, London; Dr. C. Handfield Jones, London; Mr. T. H. Bartleet, Birmingham; Mr. J. F. Streatfeild, London; Our Dublin Correspondent; Dr. A. B. Steele, Liverpool; Mr. Maunder, London; A Correspondent; Mr. Dalby, London; Dr. Ballard, London; Mr. Joseph Bell, Edinburgh; Dr. Gibson, Cupar Fife; Mr. Hackney, Dallington; Mr. Ward Jackson, Clifton; Mr. F. Gull, Coddensham; Dr. G. H. Philipson, Newcastle-upon-Tyne; Dr. Reeves, Carlisle; Mr. Southam, Manchester; Mr. Headlam, M.P., London; Mr. Biddle, Merthyr Tydfil; Mr. Fowler, Bath; M.R.C.S. Eng.; Mr. Erichsen, London; Dr. Murchison, London; Mr. Kesteven, London; Our Paris Correspondent; Captain Trotter, Gosport; Mr. Evershed, Brighton; An Associate; Mr. D. Dalrymple, M.P., London; Surgeon-Major Manifold, Dublin; Dr. Burdon Sanderson, London; Mr. Wheatley, London; Dr. Orange, Broadmoor; Mr. Gaskoin, London; Dr. Copeman, Norwich; The Principal of King's College, London; Mr. Balmanno Squire, London; Mr. Moore, Petersfield; Our Birmingham Correspondent; Dr. Allbutt, Leeds; Mr. P. H. Holland, London; Dr. Whitmore, London; Mr. W. J. Harris, Worthing; Dr. Handsell Griffiths, Dublin; Dr. Bryan, Northampton; Dr. B. W. Foster, Birmingham; M.D. Ed.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Clinical Society; Dr. W. Roberts, Manchester; Dr. Falconer, Bath; Dr. J. B. Bradbury, Cambridge; Mr. S. M. Bradley, Manchester; Dr. J. W. Moore, Dublin; Dr. R. S. Hudson, Redruth; Mr. J. Woodman, Exeter; Mr. G. F. Hodgson, Brighton; Mr. J. Marshall, Dover; Dr. J. McCrea, Belfast; Our Edinburgh Correspondent; Mr. A. Bracey, Birmingham; Mr. G. B. Robathan, Croydon; Mr. R. Cuffe, Horncastle; Dr. Troup, Auchtermuchty; Dr. Stewart, Whitby; Dr. Drysdale, London; Mr. V. Jackson, Wolverhampton; Dr. Cotting, Boston; Dr. Embleton, Newcastle-on-Tyne; Dr. Dwight, Maine; Dr. Edis, London; Mr. J. Croft, London; Mr. Owen, London; Mr. Bennett, West Bromwich; Dr. Trollope, St. Leonards; Mr. Balding, Royston; Mr. Michell Clarke, Clifton; Mr. Walford, Reading; Mr. A. B. Vise, Holbeach; Dr. Sawyer, Birmingham; Dr. Cunningham, Cambeltown; Dr. Phillips, London; Dr. Dyce Duckworth, London; Mr. Richard Davy, London; etc.

CLINICAL LECTURE

ON A CASE OF

COMMUNUTED FRACTURE OF THE CLAVICLE,
WITH COMPRESSION OF THE SUBCLAVIAN
VEIN BY ONE OF THE FRAGMENTS.*Delivered at University College Hospital, London.*

By JOHN ERICHSEN, F.R.C.S.,

Surgeon to the Hospital, and Holme Professor of Clinical Surgery.

GENTLEMEN,—The case to which I wish to direct your attention to-day is one of a comminuted fracture of the clavicle from direct violence, accompanied by compression of the subclavian vein by one of the fragments, which resulted in gangrene of the arm.

William Anstis, aged 27, a married man, who had always enjoyed a good health, and was of temperate habits, whilst assisting in moving some timber, received a severe blow, from a large mass of it falling on his shoulder, on Thursday, March 20th, 1873; and, finding the arm powerless, he applied to a medical man, who adjusted a sling, and sent him to University College Hospital. There it was found that the clavicle was broken and comminuted about the middle; several movable and depressed fragments being felt beneath the skin. As some fulness of the veins was noticed, the fingers and thumb were separately enclosed in a bandage, and this was carried up the forearm and arm as high as the insertion of the deltoid, after previously flexing the elbow. A pad made of tow covered by a bandage was then placed in the axilla, and the arm was fixed to the side by turns of a roller applied round the body, and was then supported by a sling. He left the hospital at 7 P.M., with injunctions to come again on Saturday morning, if all remained comfortable, but immediately if any uneasiness occurred in the limb. He walked home, and after going to bed at 10 P.M. passed a pretty good night, though feeling some pain at the seat of fracture; but on Friday, March 21st, about noon, the arm began to swell, and at some parts, where the turns did not quite meet, he noticed bullæ, which burst during the evening, discharging a bloody serum and leaving the skin of a dark purple colour beneath them. The fingers soon became numb and cold, and this feeling extended to the arm, in which there was sufficient pain to prevent sleep that night; nevertheless, he did not return to the hospital till Saturday, the 22nd, at noon, or forty-one hours after leaving it.

On removing the bandage, a dark purple discolouration was seen to extend from the fingers to the axilla, mottled here and there with paler and redder patches, and scattered over the surface were numerous bullæ, some of which contained a yellow, and others a dark purple serum. There was no sign of constriction at the elbow, and no tension of the skin, and, though somewhat œdematous and doughy to the touch, the limb was about of normal size. It was distinctly colder than the other, and there was no sensibility in the fingers and no power of localising sensations in the forearm. No change of colour took place on squeezing the finger-nails, and the thumb was almost white, but the circulation was still present in other parts.

He was immediately put to bed, the arm being supported on a pillow above the level of the shoulder, and loosely wrapped in cotton-wool. No material change took place during the first few hours after admission, but in the course of the evening the whole limb began to swell with extreme rapidity, while fresh bullæ appeared on the surface; the parts in the neighbourhood of the elbow soon reached nearly double the natural size, so that a bandage which had been loosely applied over some cotton-wool, became tense, and had to be released.

At 11.30 P.M., I was called to see him on account of the formidable rapidity of the swelling, and, after chloroform had been administered, I made twelve incisions, each of which was from one and a half to two inches in length in the part where the tension was greatest (*i.e.*, from four inches below the elbow to the insertion of the deltoid), but confining them to the aspect of extension of the limb; hot fomentations were then applied over the area occupied by the incision, while the rest of the forearm and hand were enclosed in cotton-wool.

During the next two days the patient's general condition was not unfavourable, his appetite remaining fairly good and his tongue moist; but, though the strangulation of the arm had been relieved by the incisions, the left hand remained distinctly colder than the right, and on the 24th it was doubtful if there was any heat in it that could not be accounted for by the warmth of the fomentations. No change of colour occurred on pressing the fingers and hand; and, though it was evident

that some circulation remained in parts of the forearm, an indefinite line of separation appeared to be forming three inches below the elbow, while above this the parts remained in a state of acute inflammation, and there was apparently no sensibility below the insertion of the deltoid, at which level there was a somewhat abrupt limit to the inflamed area.

During the next fortnight there was no very marked alteration in the patient's constitutional condition; he continued to take his food well, and, with the assistance of an occasional opiate, slept moderately, and there was a gradual fall of pulse and temperature, followed, however, at last by a somewhat sudden rise. In the forearm sloughs of large size became apparent, their edges being sharply defined from the rest of the skin, which was now much inflamed and very brawny and œdematous; and from beneath them, as well as from the incisions, there was a copious discharge of very offensive pus, the emanations from which were corrected as much as possible by oakum poultices frequently changed. The largest of these sloughs involved almost the whole of the skin of the front of the forearm; and on its separation it was seen that all the superficial muscles had broken down into a yellow pasty material, amongst which the radial artery and median nerve were freely exposed for several inches. The tips of the fingers became dry and black, but, strange to say, circulation returned in the skin at the back of the hand and proximal phalanges of the fingers.

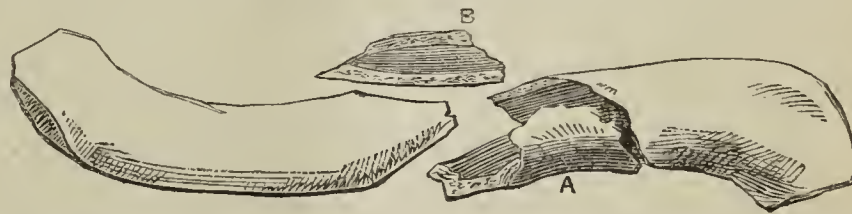
On March 31st, rather copious hæmorrhage occurred from a vein of some size in one of the incisions, which was promptly arrested by Mr. Skerritt, the house-surgeon, by ligaturing both ends of the vessel.

On April 3rd, two more incisions were made by Mr. Hill, who took charge of the case in my absence, in the brawny tissue about the elbow; and on April 6th, the inflammation in the arm having by this time somewhat subsided, and imperfect sensibility having returned to within an inch of the elbow, it appeared that the most suitable period for amputation had arrived; and this was accordingly performed by Mr. Hill, who removed the limb at the shoulder-joint. The flaps were extremely vascular, and a large number of whip-cord ligatures were applied; they were brought together by silver wire sutures, and the stump was dressed with dry lint fixed in position by a bandage.

An examination of the limb after removal showed more or less complete destruction of all the muscles of the forearm, and of all the tissues beneath the skin in the hand, while separate gangrenous patches existed in the lower part of the triceps and brachialis anticus; and there was necrosis of part of the ulna, and one or two of the metacarpal bones. The vessels presented a quite normal appearance, except only where they had come into contact with the sloughs.

On the day after the operation there was a transitory rise of temperature, but the general health seemed but little affected, and the stump promised to do exceedingly well. But on April 10th, a prolonged rigor occurred, and very soon unmistakable symptoms of pyæmia set in, which ran a typical course; and, together with the effects of some secondary hæmorrhage on April 16th, which necessitated the opening up of the flaps, terminated the patient's life on the morning of April 17th.

POST MORTEM EXAMINATION.—A large and abominably foetid clot was found in the wound, extending downwards into the axilla and upwards into a cavity beneath the coracoid process; and, on cutting down on the clavicle, the ends of the fractured bone, which were extensively comminuted, were seen to lie in the sac of an abscess, but whether this communicated or not with the cavity of the wound was not accurately ascertained. The nature of the fracture was remarkable. The anterior surface of the bone was broken across irregularly at a distance of



two-and-a-half inches from the acromial end; and a splinter (A), one inch long, almost separated from the outer fragment, lay in front of the inner one. But at this point also a piece of bone (B), one-and-a-half inch long, and in thickness about equal to half that of the clavicle, had been split off from the posterior aspect, and occupied exactly the position of the subclavian vein, upon which it must have inevitably exercised considerable pressure, when the arm assumed the position which is almost invariable after fracture of this bone. No bruising or injury of the vein was, however, to be discovered at this point; but it must be remembered that twenty-eight days had elapsed since the time of the accident. The lower part of the vein presented a soft clot, which was suppurating and breaking down; and numerous secondary abscesses existed in the lungs.

The clavicle, from its position as the only bony communication between the upper limb and the body, is most frequently broken by violence indirectly applied during the transmission, through it, of the shock which is caused by a fall on the hand or shoulder. Under such circumstances, it generally gives way near the great convexity, and the fracture is usually oblique, and almost always simple, while the subjacent structures escape without injury; but when, as in the present case, the bone is broken by direct violence, the fracture may be transverse, or comminuted, or both, and any amount of damage may be done to the parts beneath. The most common form of injury which it may give rise to is compression or laceration of the subclavian vein—the latter being exceedingly rare, though a case of the kind occurred in this hospital some years ago, and, as is well known, the late Sir Robert Peel died of this accident. The artery appears always to escape. I know of no case in which it has suffered (if gunshot injuries be excluded); but the brachial plexus has been interfered with, the first rib has been fractured, and laceration of the pleura has taken place.

Here the fracture was undoubtedly caused by direct violence. It was put up in the usual way, but on the next day the arm began to swell beneath the bandages; and before forty-eight hours had elapsed from the time of injury, it was much swollen and very œdematous, and threatening gangrene. For this condition of things two explanations are possible. 1. The subclavian vein had been contused or lacerated; 2. The axillary pad and bandage had been too tightly applied. And, after careful examination, it appeared that the mischief was most probably the result of some injury of the vein, while at the same time there was no sufficient ground for thinking that it could be due to any fault of the apparatus applied, and that for the following reasons.

1. There was no evidence that the bandage was too tight.
2. It was quite certain that the elbow was flexed before the arm was bandaged.
3. The axillary pad was unusually soft; and I must add that, though harder ones are commonly used, I have never seen any mischief result from their employment.

One of the most remarkable features of the case is, that although on admission there was a condition approaching to gangrene, yet there was no very great amount of swelling until the arm had been entirely liberated for some hours, when it became so excessive that the bandage, loosely applied over some cotton-wool, had to be released. This state of the limb might have been brought about in either of the following ways.

1. If the subclavian vein had been compressed, irritated and plugged, it is clear that no great amount of swelling could occur from the obstruction of the return of blood to the limb until the enclosing bandage was removed.
2. A sort of inflammatory œdema may have extended through the limb, something like that which occurs in traumatic gangrene; and I am disposed to think that such was the case here—a kind of cellulitis setting in, with great effusion of sero-plastic fluid, and tension of the skin; for, in the first place, the swelling was very extensive above the elbow, where there was no retardation to the blood-flow; and, secondly, on making the incisions, the cellular tissue was found to be much infiltrated with serous fluid, without any very remarkable distension of the veins; but, with the view of avoiding the latter as much as possible, the incisions were confined almost entirely to the outer aspect of the limb.

This case serves to illustrate a particular danger that may follow fracture of the clavicle; and the question presents itself, What ought to have been done if the condition of things had been diagnosed? In cases of fracture from direct violence, I should not employ the axillary pad, or even apply a bandage at all, but simply put the patient to bed and support the shoulder. I should leave the parts quite alone, and let the fragments unite as they best can, moulding them afterwards as opportunity offered. The plan of bandaging the fingers separately, and then the arm as far as the lower border of the axillary pad may be followed by bad results, for if there be congestion it may escape notice, and such congestion may go so far as to strangle the limb under the bandage. If, then, the fingers, hand, and forearm be bandaged at all, it should be done lightly and openly, so that you may not be prevented from seeing what is taking place in the limb.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting held on Monday, June 2nd, 1873, the following officers were elected:—*President*: John Denham. *Vice-President*: Robert W. Smith. *Secretary to the College*: William Colles. *Council*: R. Adams, W. Colles, F. Kirkpatrick, Richard G. H. Butcher, Alfred H. McClintock, Alexander Carte, G. H. Porter, J. H. Wharton, B. McDowel, A. J. Walsh, E. Hamilton, E. Ledwich, R. Macnamara, R. McDonnell, J. Morgan, G. H. Kidd, E. D. Mapother, A. H. Jacob, H. G. Croly.

THE ACTION OF DRUGS AND OTHER MEDICINAL AGENTS UPON THE TISSUES OF THE LOWER ORGANISMS.

By W. AINSLIE HOLLIS, M.D.,

Medical Registrar and Casualty Physician to St. Bartholomew's Hospital.

I.

A SHORT time has only elapsed since the publication of three valuable series of lectures illustrating the action of drugs on the animal economy. Two of these courses have been, or, I may perhaps say, still are being, published at intervals in this JOURNAL—I allude to those by Drs. Brunton and Fraser (see JOURNAL for 1871 and 1872); the third has appeared in the pages of a contemporary from the pen of Dr. Rutherford. It is with some diffidence that I commence a series of papers on what may, at first sight, appear to be exhaustively treated by one or other of the above-named gentlemen; but I hope, however, to show that I shall not seriously encroach on the subject matter investigated by them, inasmuch as my experiments will be strictly confined to the invertebrate animals, and specially to the operation of medicinal agents on those lowly organised beings in whom the energy inherent in their plasma is untrammelled by nervous or vascular influence. Since the valuable treatise of Kühne (*Untersuchungen über das Protoplasma*, Leipzig, 1864) has been published, Binz, Stricker, Recklinghausen, Cohnheim, and others, have investigated the action of certain drugs on different forms of amœboid life; and lately Rossbach (*Die Rhythmische Bewegungserscheinungen der einfachsten Organismen. Verhand. der Physik-med. Gesellsch. Würzburg*, 1872) has carefully recorded his observations of heat and various chemico-physical agents on the movements of the contractile vesicles and cilia of certain infusoria and vorticellæ. In the following researches, my constant aim has been to elucidate by experiments the molecular changes which may occur after the exhibition of medicinal agents in the tissues of animals, irrespective of any influence induced by the operation of nervous or vascular systems. With such views before me, I shall attempt in each case to show the action of the peculiar agent employed; first, upon the vitalised, and to some extent independent, components of the animal under observation; secondly, its action upon the animal itself. By this method I hope to eliminate those operations which depend on the mutual relations of the various components of an organised mass from those which are unconnected with any such dependence; at the same time that we ascertain the connection (if any) which exists between the molecular changes of the components and the functional or other phenomena of the aggregates.

In order fully to illustrate this inductive method of observation, I have selected for the first series of experiments the lowly organised actinæ; and this has been done partly from the readiness with which such animals can be examined during the course of the investigations upon them, and partly from the great persistence of life exhibited by their component molecules (*Journal of Anatomy*, vi, p. 382) when removed from the body, as this property permits the exhibition of various chemical agents to them without destruction to their life.

The first experiments noticed will show the effect of increments of temperature on the above-named organisms, both as respecting their molecular constituents and in the aggregate. They were made on the pulsatile corpuscles, elsewhere described by me (*Ibid.*), and were performed with the assistance of a modification of Stricker's hot stage (kindly lent to me by my friend Dr. Lauder Brunton), a spirit-lamp, and a microscope. The results are tabulated.

TABLE I.—Application of Heat to the Pulsatile Corpuscles of Actinæ.

Degrees. Cent.	a. Pulsations in 10"	b Pulsations in 10"
5		18
10	7	20
15	18 (strength increased)	23
18	24	26
20	28? (feeble)	26*
23	Very feeble	30? (feeble).
24	None	
25		32?
28		35?
30		A tremor; motion almost ceased.

The results in the third column of the table were obtained from the pulsations of a corpuscle extracted from a more vigorous actinia than

* The rapidity of the pulsations above 26 in 10" is so great that it may be doubted whether the subsequent numbers are correct. Practice has, however, enabled me to place the contractions with tolerable, if not perfect, certainty, as recorded.

in the case of "a"; and this may possibly account for the difference in the rapidity of the motion of the two bodies at the same degrees of temperature. In each case, the drop of sea-water enclosing the pulsating bodies (which were carefully selected for the regularity of their contractions) was held between two thin glasses, a smaller one undermost and a larger one above: the latter, when placed in position over the well of the hot stage, acted as a cover to this part of the apparatus, and prevented evaporation to any appreciable extent. The effect of heat on these bodies appears to be similar to that on the contractile vesicles of amœbæ, infusoria, etc., as noticed by Rossbach (*Opus cit.*, pp. 203-4, and p. 234); and between certain ranges of temperature, to those on the hearts of frogs (Cyon, *Ludwig's Arbeiten*, 1866, noticed by Brunton, *St. Bartholomew's Hospital Reports*, vii, p. 216; and Panum, *Bibliothek for Læger*, Bd. x, p. 46; noticed in Schmidt's *Fahrh.*, Bd. c, pp. 149-156) and mammals (Brunton and Panum, *op. supra citat.*) Although in the last cases the influence of the nervous system must be considered, we still have the fact that, so far as experience carries us, within certain limits of temperature, increments to their specific heat increase the rapidity of the contractions of living pulsatile elements.

The Influence of Heat on the Bodies of Actiniae.—In the following cases the animals themselves were exposed to a gradually increasing temperature. The experiments (eight in number) were conducted in three different methods; in two, the covered well of Stricker's hot stage was filled with sea-water, which was heated in the usual way after receiving two baby-anemones; in four other cases, the animals were placed in a beaker-glass half filled with sea-water of a known specific gravity, and heat was applied by means of a sand-bath. In the last two cases a similar apparatus was used, with this difference, that the heat was applied by placing the beaker-glass in a larger one containing hot water at a high temperature. The increments of temperature were in all cases gradual, varying from about 1 deg. centigrade to 2 deg. centigrade in a minute of time; at 5 deg. centigrade, of the eight animals, five were more or less expanded, three fully so; at 20 deg. centigrade, only three were expanded, and two of those were gradually shrinking; at 30 deg. centigrade, two only were partly open, and these were shrunken; at 41 deg. centigrade, the only animal subjected to the heat was shrunken, perfectly inactive to stimuli, and without any hold on the tank. The temperature in this case was subsequently raised to 46 deg. centigrade, but with no apparent effect: the animal was probably dead at the lower temperature. Six of the anemones recovered, none of which had been subjected to a higher temperature than 35 deg. centigrade.* I have tabulated the results in the last two cases.

TABLE II.—Time occupied by Experiments 16'.

Degrees. Cent.	Actinia "a" (half-inch diam.)	Actinia "b" (a baby anemone).
10	Fully expanded	
15	Ditto	
20	Contracting somewhat	Fully expanded.
22	Smaller; shrinking	Contracting.
27	Still shrinking	
30	Tentacles much shrunken; stomachal orifice protruded	Smaller.
32	Stomach everted; tentacles shrunken	A few tentacles expanding and in motion.
38	Smaller generally	Tentacles curling and shrinking; has lost its hold of the tank.
41	Much shrunken generally; no reaction to stimuli; the animal has lost its hold on the tank	} Removed from the tank.
46	Dead	

The shrinking of the anemone tissue must not be confounded with the contraction of the healthy animal, as the two processes, although they are frequently observed to take place simultaneously, are quite distinct in their nature. Contraction almost invariably takes place first in the tentacles and tentacular ring. The shrinking caused by a high temperature, on the other hand, may take place without the withdrawal of this portion of the animal, or at all events with only a feeble contraction of it: shrinking is also accompanied with a general corrugation of the integument, which is not usually observed in contraction. The specific gravity of the water before and after the experiments was not appreciably altered; therefore the results recorded were not due in any way to osmosis. I believe we must consider the shrinking in such cases as due (curious as it may at first appear) to increased molecular activity of the component parts. The eversion of the stomach in "a" (Table II), and the motion of the tentacles in "b" at a high temperature, point to this; and although these phenomena were not observed to take place in the other cases, we must not overlook them on that account.

* Kühne (*o. c.* p. 43) states that sea-water amœbæ died at about this temperature in his early experiments; latterly he found death took place in amœbæ generally between 40 deg. and 45 deg. centigrade (p. 46 *idem*) "without doubt".

The shrinking, accompanied as it necessarily is with the expulsion of most of the contained water in the animal, denotes a rapid and general concentration* (if I may so call it) of the molecules, which differs from voluntary contraction in displaying a want of muscular co-ordination. The next experiments show the effect of carbonic acid gas and chloroform vapour upon the same animals. I class these experiments together, as the effects of the two agents appeared to be very similar in kind, although not in degree.

The Action of Carbonic Acid on the Pulsatile Corpuscles.—When the freshly pulsating corpuscles of an actinia mesembryanthemum are placed in an atmosphere of carbonic acid gas, their movements are rendered slow and rapidly cease. If, however, after this arrest of all motion has continued for several minutes fresh air be admitted to them, the pulsations soon commence again without perceptible loss of power. At the moment when the pulsations cease, the corpuscles are uncontracted.

The Action of Carbonic Acid on Actiniae.—An actinia mesembryanthemum, when removed from a tank in an expanded condition, was placed in an atmosphere of carbonic acid gas. The first effect was a partial contraction of the tentacular ring; the second, about ten minutes later, a general œdema of the same, with flaccidity of the tentacles. After an exposure of about forty minutes, there was no reaction to stimuli, such as that produced by irritating the integument with a steel style; the general appearance of the animal was the same as previously noticed. For three days after this experiment the animal, although placed for that period in a tank of sea-water, was throughout in a very sluggish and closely contracted state.

The Action of Chloroform-Vapour on the Pulsating Corpuscles.—The vapour of chloroform induced a rapid cessation of motion in pulsatile corpuscles when they were exposed to its influence. This phenomenon was usually preceded by a marked slowness of the movements, with an irregular jerking of the corpuscles at intervals of every few beats. When all motion had ceased for some time, the contractions were readily renewed upon exposing the corpuscles to the atmosphere.

The Action of Chloroform-Vapour on Actiniae.—The vapour of chloroform has a very powerful action on actiniae. A fully expanded anemone (*A. mesembryanthemum*) was removed from the tank on one occasion at 12.55 P.M., and at once placed under the influence of the vapour.† The immediate effect was an imperfect attempt at contraction. After remaining under its influence for half a minute, the creature, in a half contracted state, was perfectly insensible to the action of stimuli; its colour had also changed from a dark red to a bluish hue. When replaced in the sea-water, sensibility began to return in a quarter of an hour; and in an hour and a half the creature was natural in colour and fully expanded, although the tentacles were somewhat slow to react when irritated. In some cases I have found an œdema of the integument to occur during the action of the anæsthetic; in others, some corrugation. The acidity of the muciform fluid which exudes from the integument appeared to be increased in some few cases; and the quantity of this fluid was always augmented when the vapour was unmixed with air. In almost pure chloroform-vapour an actinia will remain for five minutes, and afterwards recover when removed from its influence.

From the results of the preceding experiments with carbonic acid gas and chloroform, I am inclined to consider that these agents act on actiniae and their corpuscles in a similar manner. In both cases we have slowness of the contractions of the pulsating corpuscles, with subsequent cessation of all motion. Again, movement, if the stoppage be not too prolonged, can be renewed by simply placing the corpuscles in favourable conditions for the absorption of air. In both experiments, actiniae, after a partial attempt at contraction, lose their power of motion and their sensibility, and yet may subsequently be revived by similar means to those adopted in the case of the pulsatile corpuscles. I believe that the cessation of motion in such cases depends probably upon the absence of oxygen; and this observation coincides with that of Rossbach (*Opus supra cit.*, p. 233) on infusoria and vorticellæ—namely, that all movements in such animals depend on the presence of oxygen. No coagulation of the contents of the pulsatile corpuscles was observable, as was noticed by Kühne (*Opus supra cit.*, p. 53) in amœbæ, when they were similarly deprived of oxygen; nor is it probable, from the possibility of their subsequent revival, that any such change occurred in the actiniae or in their corpuscles in the above experiments.

The Effect of Oxygen Gas upon the Pulsatile Corpuscles.—The next experiments showed the action of oxygen upon the pulsatile corpuscles.

* I do not think the shrinking is due to coagulation of the plasmic fluids of actiniae, as similar phenomena occur under conditions which preclude such an opinion. See for instance the experiments with chloroform. It is, possibly, the "heat-tetanus" of German physiologists.

† The vapour in this case was greatly diluted by air; unfortunately, I was unable to ascertain the precise proportions of the two fluids.

I may here state that I used the modified Stricker's stage (above noticed) whilst investigating the action of gases on these bodies. When a rhythmically pulsating corpuscle is placed in a current of pure oxygen gas, its contractions are rapidly rendered slow, and after ten minutes' exposure, cease altogether. The pulsations cannot subsequently be renewed by the admission of air; in other words, death has taken place coincidently with the cessation of motion.

The Action of Pure Oxygen on Actinia.—An actinia mesembryanthemum in a contracted state was submitted to the action of a stream of pure oxygen gas for about ten minutes.* This experiment was performed by placing the animal in a glass tube, two inches in calibre, and closed at each extremity by corks, with the exception of a small perforation large enough to admit a quill, one at each end. Into these openings glass tubes were tightly fitted, one of which was connected with an apparatus for generating the gas. Upon using the apparatus, a continuous current of oxygen gas was readily made to pass over the surface of the animal. At the termination of the experiment, the anemone was observed to have changed colour from a brownish-green to a dead yellow, but its shape was unaltered. Upon touching the creature with a style, shreds of tenacious muciform fluid were easily detached; these had no distinct reaction with litmus, and under the microscope were seen to be mostly composed of bacillar corpuscles, with a few spheroidal ones intermixed. Upon replacing the creature in sea-water, and after carefully removing the adherent mucosity, I noticed that the subtegumentary tissue was bared in many places, and that the outer layers were disintegrated at those spots. The animal remained in a contracted state for many days afterwards. In a subsequent experiment, the anemone was partially expanded when the investigation began; it however speedily contracted itself under the influence of the oxygen, and the integument became somewhat corrugated after seven minutes' exposure. In both cases the tentacular ring was extremely contracted. The evolution of mucous shreds was much less in the second animal than in the first; this I ascribe partly to the greater vitality of the earlier specimen, the second one being evidently very feeble when operated upon. Contrary to what we might expect from the preceding experiments with carbonic acid gas and chloroform, the action of oxygen upon actiniae appears in some respects to resemble these agents. It induces slowing of the corpuscular pulsations; but the contraction with the tegumentary corrugations of the entire animal is far more marked in the oxygen gas than in the two preceding cases; and in this respect the last agent resembles in its effects rather those due to a high temperature than such as result from an exposure to either of the above-named fluids.

The Operation of Ammonia on the Pulsating Corpuscles.—Gaseous ammonia acts with great violence on the pulsating corpuscles of actiniae. When these bodies are exposed to the influence of this gas, their pulsations immediately cease. When an atmosphere containing only one-eighth part of the gas was brought into contact with them, their pulsations were greatly increased in rapidity, and in some cases they became irregular. To obtain a mixed atmosphere containing a known volume of any special gas, I used a graduated glass syringe, which was filled with air to a graduation. The known space left was next filled with the gas required in the mixture by inserting the nozzle of the syringe into the gas-generator: the mixed gases were then forced in a gentle stream through the Stricker's stage, as in other cases.

The Operation of Ammonia on Actinia.—Upon exposing two specimens of actinoloba dianthus to an atmosphere of gaseous ammonia after removal from the tank, they immediately contracted, partially; subsequently (in the course of a few minutes), slight oedema of the tentacular rings occurred, with the evolution of a large quantity of alkaline mucosity. After repeated washings with sea-water, the mucosity still retained a strong alkalinity. On the following day, the smaller of the two animals (pedicle about a quarter of an inch in diameter) was dead and partially disintegrated; the other (pedicle half an inch in diameter at base) was covered with a tenacious alkaline mucosity, the pedicle much contracted and corrugated, tentacles somewhat expanded. The sensibility, which immediately after the experiment was much impaired, if not entirely lost, in this animal, had somewhat returned, although its reaction to stimuli was sluggish. Its colour, which had been a pink, became a yellowish-white. The oedema about the tentacles continued to a slight extent. The pedicular contraction lasted for many days. Ammonia in its effects more nearly resembles a high temperature than even oxygen does, for in small quantities it increases the rapidity of the corpuscular pulsations, whilst the latter gas renders them slow. Its operation on the body of the animal is also closely similar to that of a temperature of about 30 deg. centigrade—namely, great shrinking and

corrugation of the pedicle. The slight oedema of the tentacular rings observed when the animals are exposed to this gas serves possibly to distinguish the effects of the two agents from one another.

A CASE OF POST PARTUM HÆMORRHAGE: TRANSFUSION.

By THOMAS SAVAGE, M.D., F.R.C.S.,

Surgeon to the Hospital for Women, and to the Lying-in Charity, Birmingham.

MRS. J., aged 38, in her third confinement, was attended by Mr. Turner, of this town, on December 30th. The child was born at 8 P.M., after a natural labour, and about 8.30 the placenta had to be removed. She was left, but Mr. Turner was sent for shortly afterwards, as she was very faint and ill. He found her about 10 P.M. very faint, and sent for the nearest local surgeon, who saw her, said her case was a hopeless one, and prescribed a diffusible stimulant. As she was now growing worse, I was sent for. I saw her at 11 P.M. She was very faint and restless; lips blanched, and countenance anxious. I suggested internal hæmorrhage as a probable cause of her condition, as Mr. Turner told me there had been very little external loss during the labour. Externally, I felt a soft swelling extending to just above the umbilicus. Here she complained of constant pain. The vagina was full of blood-clot. I introduced my left hand and arm, and, with my right on the abdomen, I extracted a quantity of clots, together with a piece of placenta, perhaps one-twelfth in size of a normal placenta. I then passed a long tube and injected into the anterior of the uterus a pint of cold water, in which had been mixed an ounce of the stronger solution of perchloride of iron. This immediately caused uterine contraction, and no more bleeding followed.

As she did not rally, but appeared to be gradually sinking, I suggested transfusion. Her condition was now as follows: pulse quite imperceptible, pupils dilated, breath cold, skin clammy; and she was moaning and jactitating about the bed. I sent for the assistance of my friend Mr. Thomas. We then placed her on her back, with dry clothes round her, and an abdominal bandage, on the left side of the bed. The only available blood-donor was a young woman, a shop-assistant, who volunteered it; she was small, thin, but healthy. She sat upright in the chair, to the left of the patient, and eighteen inches from the side of the bed, with her back to the bed's head. I exposed the median basilic vein of the patient's left arm, by transfixing the vein and passing a probe under the vein. Mr. Thomas then made an ordinary venesection incision into the median cephalic vein of the donor, and with Aveling's syringe tried to insert the nozzle, but it did not seem to go in very easily, and the blood also did not flow out readily. I then exposed the median basilic in the same way that I had done in the patient, punctured it, and inserted the nozzle. The contrast between the distended vein of the donor, and the flaccid perfectly empty vein of the patient, was very remarkable. The syringe had been previously filled with lukewarm water. I then punctured the patient's exposed vein, and easily inserted the other nozzle. I sat by the patient's head and took charge of the expanded portion of the syringe. Mr. Thomas sat opposite to me, the syringe being between us, and worked the valve action with his fingers. Mr. Turner guarded the nozzle in the donor's vein. Mr. Thomas and I worked in concert, and we pumped in fifteen syringes full of blood, or about five ounces; when, as the donor was becoming faint, the apparatus was removed. The patient was now very restless, throwing herself about, declaring herself to be sinking, and rubbing her chest, where, she said, the oppression was greatest. We thought her dying; the respirations were very hurried; in a few minutes, the pulse at the wrist was felt feebly beating, and we fancied the carotids and brachials were beating with more force; the heart-sounds were very feeble, especially the first, and at times seemed scarcely audible on account of the hurried breathing sounds; the breath was cold, and also the extremities, back, and chest. She very slowly rallied; we gave her brandy and ammonia. The operation was done about 12.30, and I stayed with her until 4 A.M., when she was decidedly better, she said so herself; her voice returned, and the pulse was felt. She gradually improved, became quite cheerful, and took abundance of nourishment. On the sixth day, there were evident signs of septicæmia, which terminated fatally on the 9th instant, *i.e.*, ten days after transfusion.

The operation of transfusion by means of Aveling's syringe is all that can be desired; its great simplicity being its chief recommendation. There is no doubt at all in the minds of myself and of the two gentlemen who assisted me, that the operation, *per se*, was a complete success.

* I reckon from the time when oxygen gas commenced to pass through the whole apparatus.

THE INFLUENCE OF AGE IN THE CAUSATION OF SKIN-DISEASE.

By BALMANNO SQUIRE, M.B.Lond., F.L.S.,
Surgeon to the British Hospital for Diseases of the Skin.

I HAVE on a previous occasion referred in the columns of this JOURNAL to the question of *race* as bearing on the etiology of cutaneous diseases; and I have done so, because I believe that attempts to elucidate the at present obscure etiology of this common class of diseases are the best means by which permanent improvements in their therapeutics are eventually to be arrived at; that, in short, in this as in other matters, the discovery of the cause is the real key to the cure. I conceive that the best mode of opening so wide and so important an investigation is by deciding, in the first instance, such broad and general questions as the influence of race, age, climate, etc. I accordingly now offer to the readers of the JOURNAL the results of a comprehensive study of five thousand consecutive cases of cutaneous disease (taken from the carefully kept Register of the British Hospital for Diseases of the Skin), in their bearing on the influence of *age* in the causation of skin-disease; and, for the more ready comprehension of the subject, I have exhibited my results by means of a series of tables.

The following tables will serve to show the effect of age in the causation of skin-disease, as ascertained by the analysis of five thousand consecutive cases taken from the Hospital Register.

In each table the range of life from birth to ninety years of age has been divided into eighteen equal periods of five years.

In the *first* table, the five thousand patients of each sex are distributed, according to their age at the time of their application, amongst these several periods.

In the *second* table, the results given by the first are corrected and checked by sorting the cases in a somewhat different manner—viz., by distributing the same patients amongst the same periods, but according to the age they had attained when their disease first commenced, instead of their age at the time of their application.

The two tables taken together afford a result which is compounded of the age at which, in each individual, the disease commenced, and at a later age at which, in the same person, the same disease was known to be still existing. Thus a more accurate view is presented of the effect of age in the causation of skin-disease than could be derived from either of the tables separately.

Of the five thousand cases, two thousand six hundred and eighty-six were males, and two thousand three hundred and fourteen were females.

Of the five thousand cases, at the time of application at the hospital, the age of the youngest male was six weeks, and of the youngest female one month; the oldest male was eighty-nine, and the oldest female eighty-two years.

Of the five thousand cases, at the time of the commencement of the disease, the age of the youngest male was one week, and of the youngest female two weeks; the oldest male was eighty-eight years, and the oldest female eighty years.

It is clear, however, that the above tables, even with the assistance afforded by the binocular view which they present of the effect of age as influencing skin-disease, are yet incapable of themselves of showing what periods of life are most obnoxious to cutaneous disorders. For example, it would not appear from these tables that skin-disease in the male is commoner at the age of seventy than it is at the age of five, since (although the tables, as will be seen, produce that result) a superficial glance at them would rather convey the very opposite impression.

To arrive at a practical conclusion, it is necessary first to know the proportion of persons living at each of the several periods of life, amongst

TABLES SHOWING THE INFLUENCE OF AGE IN THE CAUSATION OF SKIN-DISEASE.

TABLE I.

Age at the time of application to the Hospital.	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 to 90	90 to 95	95 to 100	100 and upwards.	Total of all Ages.
Males	263	116	133	241	354	329	284	209	194	136	153	72	85	41	45	21	7	3	..	..	..	2686
Females	209	169	130	264	274	286	227	157	171	104	120	63	62	41	26	8	3	..	..	..	..	2314
Both sexes	472	285	263	505	628	615	511	366	365	240	273	135	147	82	71	29	10	3	..	..	..	5000

TABLE II.

Age at commencement of Disease.*	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 to 90	90 to 95	95 to 100	100 and upwards.	Total of all Ages.
Males	315	134	184	324	374	300	231	198	155	123	121	69	67	36	31	17	5	2	..	..	..	2686
Females	281	168	191	298	276	294	180	149	130	93	97	50	42	36	23	3	3	..	..	..	..	2314
Both sexes	596	302	375	622	650	594	411	347	285	216	218	119	109	72	54	20	8	2	..	..	..	5000

TABLE III.—Census (taken on April 8th, 1861) of the Population of London, as published by the Census Office, July 1st, 1863.

Both Sexes.	Males and Females.	Under 5	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85-	90-	95-	100 and upwards
London : 2,803,989	M...1,307,731 F...1,496,208	180,893 181,403	149,335 150,924	130,799 133,550	119,949 139,206	122,548 154,841	111,668 140,367	102,755 122,012	88,336 102,151	82,068 93,832	62,782 71,408	51,497 61,231	34,985 43,202	30,438 40,878	17,614 25,322	12,241 18,862	6,133 10,061	2706 4821	779 1615	183 412	38 93	4 17

TABLE IV.—In which the Statistics of the Population of London (reduced to a total of five thousand) are contrasted with the Statistics of Five Thousand Persons affected with Skin-Disease.

	Males and Females.	Under 5	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85-	90-
Affected with skin-disease.....	Males .....2,686	289	125	159	283	364	315	258	204	174	129	137	70	76	38	38	19	6	2	..
Population of London (reduced)	Males .....2,332	323	267	233	214	219	199	183	158	146	112	92	62	54	31	22	11	5	1	..
Affected with skin-disease.....	Females .....2,314	245	169	161	281	275	290	204	153	150	98	108	57	52	38	25	5	3	..	..
Population of London (reduced).....	Females .....2,668	324	269	238	248	276	251	218	182	167	127	109	77	73	45	34	18	3	3	1

TABLE V.—Statement in Decimal Figures (calculated from Table IV) of the comparative liability of Males and Females respectively to Disease of the Skin at successive (equal) Periods of Life.

	Under 5	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85-	90-	95-
Males .....	.894	.468	.682	1.322	1.662	1.582	1.409	1.291	1.191	1.151	1.489	1.129	1.407	1.225	1.727	1.727	1.2	2.	..	..
Females .....	.756	.628	.676	1.133	.996	1.155	.935	.84	.898	.771	.99	.74	.712	.844	.735	.277	.375	..	..	..

* As computed by deducting the duration of the disease (as stated by the patient at the time of his application to the hospital) from his age at the date at which he presented himself.

which, in these tables, the five thousand cases of cutaneous disease have been carefully sorted (and this information is accurately afforded by the census-returns), and then to compare the proportion of persons affected with skin-disease at each period of life with the number of persons ascertained to be living at each of such periods respectively. This computation is effected in the tables that follow.

Table III is a transcript of the (as yet) last published census of the population of London.

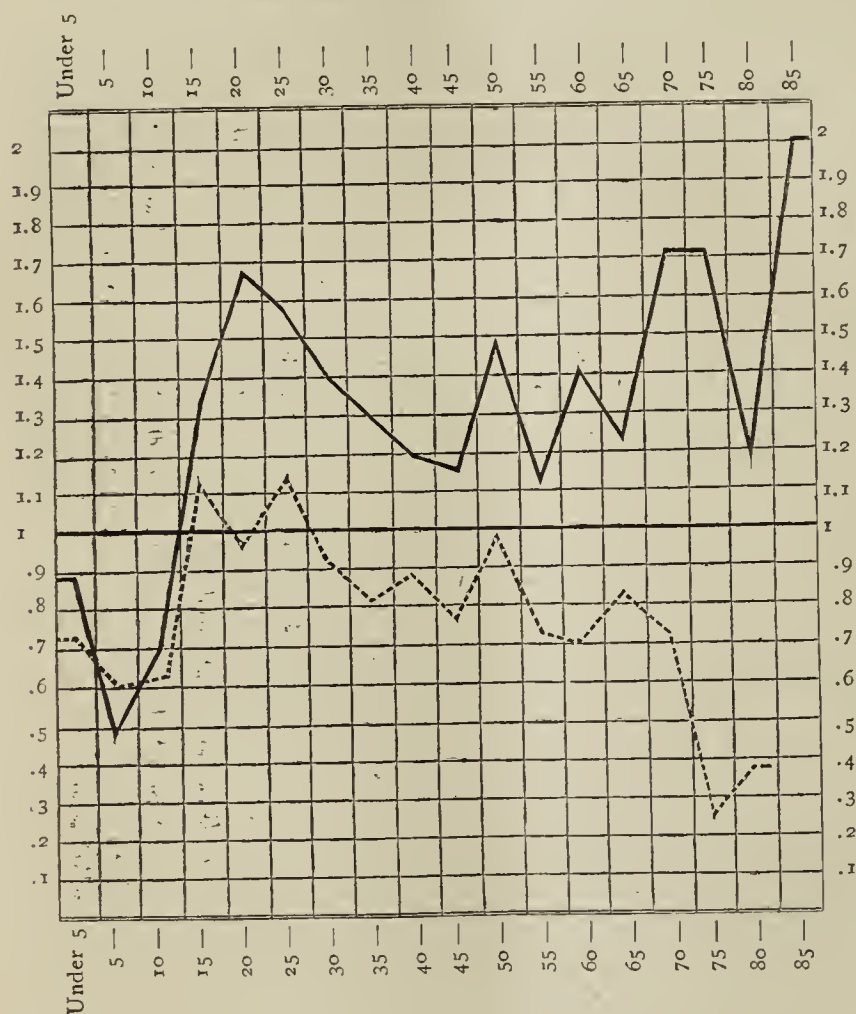
In Table IV, the ascertained statistics of the five thousand cases of cutaneous disease are contrasted with a parallel statement of a *general* population of five thousand, the items of which are calculated from the census of the population of London, shown in Table III; so that in Table IV is shown, at a single view, how a population of five thousand cutaneous patients is distributed amongst the various periods of life, and, at the same time, how a population of five thousand people of all kinds is distributed amongst the same periods of life.

In Table V is shown the results obtained by the comparison of the one with the other—that is to say, each of the figures in the first and third lines of Table IV has been divided by the corresponding figure placed beneath it; namely, in the second and fourth lines respectively, and the result expressed in decimals, which display the relative liability to skin-disease of each of the stated periods of life.

In the diagram drawn below is presented a pictorial view of the results obtained in Table V—the black zig-zag representing the results arrived in the cases of males, and the dotted zig-zag the results in the cases of females.

Further investigation is necessary to establish what may be the precise interpretation of these fluctuations; but it is clear at a glance that, in the female, skin-disease becomes suddenly and markedly more common at the two climacteric periods of life.

Diagram of the Comparative Liability (expressed in decimals) of Males and of Females, respectively, to Cutaneous Disease at different ages.
Thick line—Males. Dotted line—Females.



ALOPECIA: VITILIGO.

By GEORGE GASKOIN, Esq.,

Surgeon to the British Hospital for Diseases of the Skin.

IN my notes of last year, I find a group of cases which cannot but arrest attention—alopecia, not parasitic and contagious, but a form connected with degenerative change, and probably with subinflammatory conditions. I was much struck with what I found in a girl thir-

teen years of age. She had on the vertex a large round patch of alopecia areata. The hair had begun to recover itself freely in its growth, so that there was nothing locally to be remarked. On her neck, and following the margin of the right ear, were streaks and also spots of leucoderma. These were quite away from the hairy scalp. The spots were, as to size, like small *coque de perle*, an orange-pip, or small grape. This girl was of good condition and well fed, not remarkable for complexion, nor any otherwise than for a large-sized head.

Among my cases of leucoderma occurring during the year, I have noted two in which the hair was shed. In one of these, a man of dark complexion, forty-two years of age, numerous white spots or guttæ were found on the arms, and, as is frequent, on the back of the hands; more of it also on the lower belly. Much itching accompanied the leucoderma, especially when he was warm in bed. His hair came off in large patches. He attributed his complaint to the small-pox which he had four years ago. In a very similar case, where the hair and complexion were light, there was little itching. The man's age was 47. He looked well-built, but complained of weakness. I have noted the loss and absence of hair in this case, but do not recollect its condition. He had suffered from the leucoderma for a year. The backs of the hands were spotted, and other parts moderately affected. There were none on the scrotum, but on the glans penis there was a pure white spot occupying half its surface. I may here mention a paviour under thirty years of age. Much of his hair came away irregularly and in patches. Of what he had left, a considerable portion was turned quite white; the rest had lost its gloss. He wore his hair long, and it gave him a mangy look. More striking is the following. A woman thirty years of age, married, but without children, had a large round spot of *area* upon the vertex, upon which there is at present some little hair, which obscures it. From this point there extends a narrow ribbon-like track, raised as it advances above the level of the scalp, and terminating on the forehead like keloid. Its path is first to the right parietal and temporal region; thence it bends abruptly to the central parting of the hair, and finally is produced downwards for the length of two inches or more to the centre of the forehead. This linear cicatricial band, denuded or nearly so of hair, opens out on the forehead into two extremities or claws embracing a spot of vitiligo sunk below the surrounding level, of a pure white colour, and as large or larger than a shilling. There is much itching in the affected parts, and elsewhere on the head there is scurf. The fold of the arm on one side displays much dark cloasma, the coincidence of which with alopecia has been remarked on by medical writers.

The occurrence of cases such as these has not been overlooked by physicians. The terms vitiligo of the scalp and *morphea alopeciata*, though not of common acceptance, are significant of study and observation; but yet a pathology is wanting, without which empiric practice is liable to error. I may here suggest that in these changes there is probably an early stage in which something of inflammation is concerned. In cutaneous disease generally, I find the hair come away with a facility that is pretty exactly proportioned to the intensity (I dare not say the duration) of a foregoing inflammation. This is eminently the case in sycosis. Very commonly, indeed, in alopecia, we hear of itching and heat; we also find redness. Thus one of my group of cases complains of "large heat-lumps rising in the head".

In a female aged 27, bookfolder, probably ill fed, there are several round bare spots on the scalp; "they become pink, and never white; they last three months," and then the hair returns, growing with much rapidity. On the face, there is a good-sized erythematous blotch, which she thinks is "all one with those on the head". She is weakly, with bad pain low down in the back. In a young fellow, a draper's assistant, the hair and whiskers are removed in large patches. He is much distressed. He has used the oxymuriate lotion. Every time he speaks with heightened colour in speaking, there are dark coloured erythematous patches, very observable on the face. As he relapses into silence, they are not observable. Still more interesting is the following. A sempstress, married to a broken-down gentleman, and probably overworked, sitting up late at night at her employment, has on each side of the face a very large erythematous blotch, occupying nearly the whole of the cheek, well defined, and level with the skin. The colour is deep red. The eruption does not correspond to any nosological species. It has been coming on for two years. There is no suspicion of syphilis. She has one healthy child, and has had one miscarriage. The treatment is tentative, but chiefly expectant. A lead lotion is employed to relieve irritation, and seems to suit best. During the later months that I had her under view, the following changes took place in the blotches. Near to the margin, and in proportion as it was approached, a paleness gained upon the original stains; it became, in fact, leucodermatous at and toward the circumference. Nor was this all: a copious deposit of brown pigment was

abundantly deposited in the surrounding skin, so that, in fact, the margin was better defined than heretofore. The whole on each side was set in a dark brown framework. About this time, a single small patch of similar erythema was developed on the forehead towards the roots of the hair; and I had an opportunity of remarking that where it encroached on the scalp, the hair was shed precisely as in alopecia. The case seems to come under the head of morphea or vitiligo, and to stand in correspondence with the foregoing cases. They all seem remotely allied to that degeneration and decay which is evident in the vitiligo and loss of hair observed in drop evil and elephantiasis.

SYPHILITIC GUMMATOUS TUMOUR OF THE BRAIN: WITH REMARKS.*

By S. MESSENGER BRADLEY, F.R.C.S.,

Assistant-Surgeon to the Manchester Royal Infirmary, and Lecturer on Comparative Anatomy in its Medical School.

THE woman from whose brain the tumour here described was removed, died in the Chorlton Union Hospital. I am indebted to Drs. Walshe and Law for the following notes of the case.

Sabrina Bradbury, aged 30, was admitted into the Lock Ward of the Chorlton Hospital on December 18, 1872. She was then suffering from ulceration of the soft palate, and a node over the left frontal bone. She was dull and lethargic, as if weary, and, in short, presented all the symptoms of simple melancholia. At the end of a week, she had much improved, and assisted in the washing and cleaning of the ward. She relapsed on January 15th, when she complained of general pains over the body, and severe hemicrania affecting the left side of the head. She continued in this state till January 20th, when, on getting out of bed, she fell senseless on the floor; when Dr. Walshe reached her, however, she had recovered consciousness. From this date she became rapidly worse; but although she was very helpless, losing control over the sphincters of both bladder and rectum, she still remained conscious to a certain extent; thus, *e.g.*, she could, when roused, still answer questions rationally, and, a week before death, Dr. Law expressly states that there was no aphasia. This heavy state however, rapidly, deepened into coma, in which state she continued till January 31st, when she died, exactly eleven days after the first symptoms of grave cerebral disease had manifested themselves. After death, every organ in the body was found to be perfectly healthy, with the exception of the brain. In the brain, a tumour of the colour and consistence of new Stilton cheese, of the size of a pigeon's egg, and presenting all the usual histological features of syphilitic gummata, was situated behind the left frontal bone, occupying a space midway between the second and third tiers of frontal convolutions, whose configuration it had somewhat copied, though it was readily enucleated from them, growing as it did from the intercerebral neuroglia. The membranes over the site of the tumour were a sixth of an inch in thickness, and the inner and outer tables of the skull were slightly necrotic, although the scalp was apparently quite healthy. The greater part of the left hemisphere had suffered from the pressure of the tumour, very complete softening having taken place, which extended through the entire thickness of the brain, reaching as far as the fissure of Rolando superiorly, and the interpeduncular space inferiorly; it was further noted that, while the puncta vasculosa were normally present in the right hemisphere, they had entirely disappeared over the diseased area in the left; this, indeed, explains the softening, which was due to the pressure of the tumour on the walls of the small cerebral arteries.

The points of interest in this case, are the absence of aphasia and the extreme rapidity with which the cerebral symptoms were developed; the significance of these facts I should like briefly to review.

When we consider the locality and extent of the brain-lesion, the absence of aphasia is both interesting and important. It is quite true that some discredit, or rather doubt, has from time to time been cast upon the theory of Broca, that the function of intelligent speech is located in the third left frontal convolution; but it is nevertheless very generally entertained as a plausible theory, and has never been directly disproved. If this theory be true, it necessarily follows that, when the entire convolution is destroyed by injury or disease, this faculty must be abrogated. Now here we have a case in which the convolution was as thoroughly destroyed as if ablation had been performed; and yet, when the patient was roused to answer, she used words in their proper sense and sequence. It is true that some idea of the contour of the convolution was still preserved; but under the microscope nothing was visible but granular matter and fat-globules, all trace of nervous

tissue having disappeared. This being so, I do not see how Broca's theory can longer be entertained, as it is one of those cases in which a single proved negative must be destructive of the entire proposition.

The next point of interest is the extreme rapidity with which the symptoms were developed. Without attempting to prove too much, we may fairly conclude that the greater part of the very extensive change in the brain took place in a week. Now, the significance of this statement lies in the fact that, side by side with this fatal case, many others might be related which, although to all appearance of an equally grave character, have yet yielded to treatment as rapidly as this one passed on to a fatal issue. In illustration of this statement, it will perhaps suffice to quote two cases; the first of which, taken from Gambaco, is related by Mr. Berkeley Hill; the other was observed by myself. "A man had, in 1843, general syphilis; in 1847, he had nodes. Mercury was taken at both periods with benefit. In 1851, he felt pains about the body most intensely in the right leg; after a while these disappeared, leaving muscular weakness and stiffness in the limb, and loss of tone in the bladder. General tonic treatment was of no service; on the contrary, the feebleness of the right leg extended in some degree to the arm and side. In 1852, the patient passed under Ricord's care, who gave him mercury endermically, and iodide of potassium internally; after five weeks' treatment, great improvement ensued; nevertheless, he suffered relapses of his paralysis for four years more, complete recovery being ultimately obtained by large doses of iodide of potassium. Twelve days after his discharge, the patient again returned to Ricord, with strabismus of the left eye, diplopia, and mental confusion. Iodide of potassium removed these disorders in one month, whereon the patient omitted his medicine for a few days. His recovery was then interrupted by hemiplegia of the left side, and quiet continuous delirium. Specific treatment for three months again removed all symptoms of the disease. Sometime afterwards, the patient died of cholera. At the *post mortem*, no disease of the brain or its membranes was to be found." (*Syphilis and Local Contagious Disorders*, by Berkeley Hill, 1868, p. 178.)

The case which I myself observed was that of a gentleman who contracted syphilis in 1860, and who in 1870 was attacked with persistent hemicrania, inequality of pupils, rapidly recurring epilepsy, and great impairment of intellect, all which symptoms yielded in three weeks to a mixed course of mercury and iodide of potassium.

As a matter of fact, however, it is among the poor that we chiefly see the ravages of syphilis; and thus it happens that, while among the out-patients of our hospitals and dispensaries syphilis is a truly formidable disease, not unfrequently tending to death, it is the rarest thing in the world for syphilis to run on to a fatal termination among the better classes; indeed, it is very uncommon for it even to lead to extensive visceral or bone-lesions. This great difference is doubtless partly owing to the miserable hygienic conditions of the poor. Syphilis hits a man when he is down, and its poorer victims are thus peculiarly prone to suffer from its attacks, as they are already more or less prostrate: they eat too little, they drink too much, and they never wash, and so it comes to pass that they too often, when syphilitised, suffer from the unholy trinity of drink, struma, and syphilis; but I venture to affirm that their low state of health is not the sole, or even the chief, cause of their suffering so terribly, but rather the want of proper treatment, and especially the want of proper mercurial treatment. Some time ago it was currently believed that the use, or perhaps I ought to say the abuse, of mercury was answerable for some of the most terrible lesions of syphilis. For some years I have tried to ascertain if there was truth in this statement, and I do not hesitate to say that it is about as groundless and mischievous a theory as any promulgated, and would be comparable to stating that the gravest evils of small-pox are due to the use, or abuse, of vaccination. My utmost care has generally failed to elicit the history of any mercurial treatment in the worst cases of bone and visceral syphilis which I have met with; and it is also true that these very cases, which certainly do not present the best field for showing the good effects of mercury, yet do nevertheless almost invariably improve under its cautious but continued use. It seems to me very desirable that we should be more concerted in our method of treating syphilis: nothing therapeutically is more certain than the powerful influence which mercury exercises over this dread poison, yet in spite of this the majority of patients are either not treated with it at all, or, what is nearly as bad, it is given up far too soon; for, if relapses are to be avoided, it is almost as important to keep up its action for some months as to begin it in the first instance. There are, it must be admitted, considerable difficulties in carrying out this plan in the out-patient departments of hospitals: patients come and go—go more often than come, as a rule, and so are lost sight of; they will not take their physic regularly; they fall into the hands of quacks; should injunction be ordered, they will not take the trouble of practising it. For similar reasons, it is impossible to carry out the treatment by mercurial baths; but, despite all these diffi-

* Read before the Manchester Medical Society.

culties, much more may be accomplished than is done at present. If, too, what is said in its favour be true, we have in the subcutaneous injection of mercury an efficient mode of treating these cases; for it is stated by the advocates of this method, that about a dozen injections, which of course the surgeon would personally administer, are all that are required to effect a cure; and for these reasons I have myself resolved to give this plan a fair trial in the out-patient department of the Manchester Infirmary.

There is one other point to which I should like to allude, which is this: we have satisfactory evidence—amounting, indeed, to demonstration—that syphilitic gummata, which untreated rapidly lead to a fatal issue, are quickly absorbed under treatment by mercury and iodide of potassium. We also know that, although these special tumours are not prone to soften in the centre, after the manner of cancerous and tubercular growths, yet they and other syphilitic lesions possess many features in common with cancer, one of which is the tendency they both show to cell-proliferation. Is it not, then, rational to hope that we may discover some drug or drugs which shall exercise as powerful a control over the so-called malignant growths, as mercury and iodide of potassium exercise over the poisoned products of syphilis?

Since the above was written, I have employed the treatment by subcutaneous injection of mercury in about a dozen cases of constitutional syphilis, and so far am by no means satisfied with the results obtained. The injections, administered as a rule three times a week, give considerable pain both at the time and afterwards; they sometimes, though rarely, produce abscesses; the patients become dissatisfied with the mode of treatment, and the symptoms do not yield so quickly as under the treatment by inunction or internal administration. The preparations employed have been corrosive sublimate in doses of one-sixteenth and one-eighth of a grain, and the cyanide of mercury one-tenth of a grain.

REMARKS ON THE PATHOLOGY AND TREATMENT OF CONTINUED FEVER.

By CHARLES MACLEAN, M.B., Applecross, Ross, N.B.

UNDER the above heading, I venture to make some observations, in order that a subject which I consider of importance may be properly ventilated in the profession, and in order that they whose opportunities for investigation are greater than mine can possibly be, in a scattered country practice, may give it some consideration. I feel great delicacy in coming forward, especially with anything like new views; and my apology, if any be demanded, is that I am influenced entirely by a sincere desire after truth.

Enteric fever, of a bad type, became epidemic in the filthy villages on the north-coast of this parish. I treated it at first in the usual way in every respect; but the remedies seemed to me to have little good effect, and altogether the mortality was rather high. This caused me to think of the pathology of the disease, and of the physiological action of medicines in connexion therewith. I considered what an important part the tendency to congestion played, and how frequently the immediate cause of death was traceable to the local manifestation of this tendency to capillary congestion; and I asked myself if there were nothing available either to prevent or to cure these baneful results. In considering the question, it occurred to me that, as bromide of potassium has been used, and with success, in engorgements of the internal organs analogous to that often present in fever, I was warranted in giving it a trial here. Pulmonary congestions were almost universally constant in greater or less degree. In one case, with well-marked bronchial congestion, and some indications also of commencing retardation of circulation in the proper lung-tissue, along with the usual cerebral symptoms, I tried the bromide, with the most satisfactory result. I gave two scruples of it, in divided doses, in the twenty-four hours. The uneasiness, dyspnoea, anxious and hurried breathing, and nervous tremors, gradually gave way, and the pulse became more normal in character when the drug took effect; the patient recovered well.

I have used this medicine frequently since then in this disease, and the effect has almost uniformly been, after a day or two of its use, marked amelioration in the nervous symptoms, as headache, subsultus, anxiety, and muttering delirium, usually with diminution of the pyrexia, and removal of the symptoms of congestion generally, indicated by the dicrotous pulse becoming less so in character, and more normal in other respects. Indeed, all the symptoms—general as well as connected with particular complications—have often appeared to be quickly modified for the better, after the full action of the drug. The patients, as a rule, got quiet sleep, whatever might have been their wakefulness,

anxiety, and other nervous symptoms, before. They felt, in fact, as well, as appeared to me, in a fairer way. I have never observed any (even temporary) bad effect to put down against the seemingly beneficial influence of the bromide; and all the cases in which I have used it have recovered, with the exception of one, the particulars of which I think it interesting to state, shortly, in connexion with this subject. It was that of a woman, with the usual bronchitic symptoms, diarrhoea, anxiety, and sleeplessness; pulse 130; temperature 103.5 deg. Fah. I gave the bromide, five grains every three hours, and found a marked improvement in two days. The pulse had come down to 115, and had not the quick irritable feel. Temperature, 101 deg. Fah. The breathing was calmer, and the nervous symptoms were improved; she expressed herself much better. Next time I found her much worse; all the symptoms had returned in force. I found, upon inquiry, that she had not taken any of the medicine for about thirty hours, because "she did not like it." I repeated it in another form, but with what regularity it was taken I cannot say, and the patient sank and died.

I was the more encouraged to use the bromide at first, because physiology and pathology seemed to teach that there were remedies in daily use in the treatment of fever that were either simply useless, or directly injurious. These that I have just used may appear bold terms, but I certainly felt convinced that we never can satisfactorily treat fever until we cease to treat symptoms (or names), and until we direct our energies to obviating or subduing the tendency to passive congestion of the blood in the capillaries, and thus defend life by concentrating our forces at those points at which we know it will be attacked.

Let me not be misunderstood when I say that life is endangered by this state of the circulation, for we cannot strictly say that the immediate cause of death in fever is always congestion of this or that organ, or even of a general nature; but I certainly believe that it is invariably traceable to it. For example, take asthenia as a cause of death, and a rather frequent one it is. First there is congestion, more or less general, of the capillary system. With this passive congestion there comes to be retardation—probably often almost amounting to complete stagnation—of the blood-current, and of course a deficiency in the supply of arterial blood to the part results, and the nutrition is impaired. Now this malnutrition will produce a corresponding impairment of function, including that of important parts in the economy, such as the nervous system, and this must react unfavourably on the circulation again, and so on, until a state of asthenia is induced; and as the heart itself, on account of its ceaseless duty, requiring an uninterrupted supply of blood, suffers early, and becomes weakened in action, can we wonder if asthenia comes on apace?

I shall state here what I believe to be the *modus operandi* of the cause of all the phenomena of continued fever (after the rigor, etc.) and I shall then call attention to the probable mode of development of this cause itself. The cells of the tissues in health are continually parting with azotised and non-azotised substances, the various elements of which compounds eventually become oxidised and go to form carbonic acid, etc., to be eliminated by the lungs and skin; and urea, uric acid, etc., to be excreted by the kidneys. It has been ascertained also, that the nitrogenous substance converted into urea and uric acid is derived not only from the products of the degeneration of the tissues, but also largely from superfluous albumen of ingesta; also that part of the said products of degeneration of cells eventually becomes again part of the solid structure of the body. To make up for this loss by degeneration, the cells are constantly taking up material from the arterial blood. Now in this disease the cells, though they go on degenerating as in health, are not able to replenish themselves, owing to the existing stagnation, and consequent want of renewal of arterial blood, in the capillaries. This same stagnation prevents not only the albumen newly formed from the food, but also that which the tissues have parted with, being taken up in anything like proper amount, by the exhausted cells. One of the obvious consequences of this is an increase of oxidation in the system, causing the rise of temperature, and an increased elimination. It is this circumstance that has probably given rise to the idea that there is an abnormal disintegration of the tissues in fever; but I ask, is not this increased elimination quite explicable by this theory of non-nutrition, as I may call it, or want of replenishing power in the cells, on account of congestion of capillaries supplying them, the degeneration being just as in health? This non-nutrition quite explains the softened appearance of organs, so invariably met with after death from fever of typhoid type. In short, is not the breaking down of this pernicious congestive barrier the one desideratum in the treatment of fever?

An accurate knowledge of the bearing and influence of this tendency to congestion in the pathology of fever must, I think, be of the greatest importance practically, and this must be my excuse for dwelling on the subject. If this be not the cause of the disease, what is? What

else can explain the phenomena? There has been a rather ingenious theory brought forward, that uræmia is induced from the kidneys not being able to eliminate all the urea, and that thus all the symptoms (or the later symptoms), are referable to uræmic poisoning. But can the uræmic theory explain the remarkable uniformity we observe in the time of duration of fever, etc.? There is undoubtedly an excess of combustion going on, for reasons to which I have before alluded, but at the same time the kidneys, as a rule, act accordingly. In the cases which I have seen, and I have seen some severe ones, there has been a very free elimination of nitrogen by them. It would be a very serious matter for millions of people if, for instance, their consuming of nitrogenous food, in excess of what was required, were to be visited on them in uræmic poisoning.

Thus far I have been speaking of the immediate cause of the fully developed fever; but I think it very interesting, pathologically, to trace the matter as nearly to the source as possible; and it is by doing so, I think, that the greatest light can be thrown on the whole subject. And I cannot help thinking that our attending to the state of things in the two great stages into which the disease may be divided, as we shall presently see, may lead to the most important practical results, and that we may be able not only to treat satisfactorily the fever proper, but also, by modifying the first stage occasionally, to mitigate, if not prevent it altogether.

There have been various opinions regarding the mode of action of the zymotic in the system. The most likely view is, that the poison acts directly on the nervous system, for the symptoms at the outset partake largely, if they are not altogether, of a nervous character. But I think that the theory that it acts as a direct sedative on the nervous system is negatived by the fact that the symptoms in the beginning point unmistakably to irritation of that system. For instance, there is invariably more or less feeling of cold (rigor) at the outset of a fever of any consequence; and this, as we all know, is produced by over-stimulation of the vaso-motor nerves, which causes contraction of the vascular coats, and diminution of vascular calibre. Now after this state of stimulation has lasted a certain length of time, in obedience to an universal natural law, that over-stimulation shall be followed by a proportionate paralysis, a reaction comes on in the opposite direction, and there is relaxation of the coats of the vessels; which brings us to the congestive state, which we saw was at the root of the fully formed fever. The mistake of Cullen's theory seems to be that, although he spoke of spasm, still he seemed to share in the opinion that there is direct depression (or paralysis) of the nervous system, two states that appear rather incompatible with one another.

Now may we not reasonably suppose that the action of the zymotic is quite over, or its strength quite exhausted, when the rigor, and other symptoms of nervous irritation, are past? For it seems far-fetched to suppose that the virus, after powerfully stimulating, should suddenly change its tactics and paralyse the nervous system. At any rate, the resulting paralysis is not only quite explicable independently of this supposition, but it is a necessary consequence of the stimulation.

We have thus two great stages of fever; the first that of exaltation, or stimulation; the second, reaction, or depression; and this explains the great uniformity in the course and phenomena of fever.

I may now briefly notice how favourably the action of bromide of potassium may compare with that of some other medicines often used in fever. What can opium do (I mean in the stage of depression, or pyrexia), when nervous energy is kept in abeyance, as we saw, not only directly from the reaction consequent on the first stage, but also eventually by the congestion existing around the nerve centres, in common with that of other tissues, and impeding their nutrition? What can it do, except, by further paralysing the coats of the vessels, effectually stifle any attempt at rallying? Opium is prescribed, in the pyrexial state, hesitatingly, and very properly so; but why use it at all? I have seen the greatest benefit apparently follow from the use of the bromide in the circumstances in which opium is said to be admissible. Indeed, the use of the narcotic in fever, and the administration of strychnine in recent apoplexy, seem to be parallel modes of treatment. Opium may be said to act in a positive manner on the nervous system, and to favour congestion, whereas bromide of potassium is said to act by its constricting effect on the minute vessels; and this is very likely, judging from its effect as a hæmostatic in various passive bleedings, its influence in removing hyperæmia, etc. Now it is surely this constricting influence that is imperatively required here.

Speaking of opium, I think it would be very interesting to try the effect of narcotics, or other nervine sedatives, in the first stage; particularly those, perhaps, whose primary stimulating action is most insignificant.

It will appear, from what I have been saying then, that the medicines to be used in fever (after pyrexia has come on), should belong to the class

of stimulants, as a rule. Now I believe the bromide may be considered the safest and truest stimulant here; for, from its mode of action on the small vessels, it must be evident that it goes to the root of the matter, and is not calculated to overdo what is intended.

Wine is one of our most powerful agents for good; but, at the same time, its indiscriminate employment cannot but be attended with some danger, on account of its action being chiefly confined to the heart and large vessels, and the possibility of its causing inflammation instead of healthy circulation in the congested parts. Where the vital powers are very low, and the pulse indicates want of power of the heart and large vessels, it is often invaluable. I was impressed with the good effects of wine in one case in particular, before I began to use the bromide. It was a case in which there were sibilant râles all over the lungs, much dyspnoea, lividity of face, pulse scarcely to be counted, dark dry tongue, and the patient was in a state of semi-unconsciousness. I looked on the case as desperate. I thought that giving antimony, or ipecacuanha, would be like applying emollients to a conjunctiva where there was nothing but passive congestion of the vessels; for here, as in that affection, the disease is quite the reverse of acute, and depressing, or relaxing medicines seem, indeed, uncalled for. Again, local depletion seemed less than useless, for not only could the patient not afford a drop of blood, but the practice of putting leeches on the chest to relieve congestion in the lungs appears, to say the least of it, rather unscientific. So, as a *dernier ressort*, I ordered wine, and instead of giving diuretics, which I thought might injuriously concentrate the blood, I gave diluents, which I thought would serve the purpose of diuretics, and wash the blood, as it were, and not have their bad effects. I gave simply plenty of milk and water, to serve both as diluent and food. The patient rapidly recovered under the stimulant treatment.

Now in cases like this, in which the vital powers are low, or where we can predict that they will become so, I think the greatest good will accrue from giving the bromide in combination with wine; for the former will act as a *vis a fronte* to the circulation by its action on the minute vessels, while the latter will be a *vis a tergo*, and perfectly safe in this way, owing to the clearance effected by the bromide.

I think it very important to bear in mind in fever, not only that it, with its complications, is not of an acute or high character, but that it is indeed the very reverse; and that if we administered medicines that we would give in acute affections, they will certainly have the opposite effect to that intended.

ON ENLARGEMENT OF THE TONSILS AS A CAUSE OF NIGHTMARE.

By J. WARRINGTON HAWARD, F.R.C.S.,
Assistant Surgeon to the Hospital for Sick Children.

VARIOUS evils have been attributed to enlargement of the tonsils, some of them, perhaps, more imaginary than real; but it has occurred to me to see several instances of distressing nightmare in children clearly referable to the condition of the tonsils; and as I have not anywhere seen the connexion pointed out, it may be worth while to draw attention to it. The case which first led me to observe the fact was a very striking one. An intelligent, and not at all nervous, girl of thirteen years, had for several months been subject to occasional attacks of nightmare, which were increasing in frequency and severity. A short time, usually about an hour, after going to bed, the child arose with a loud scream, and, on the parents going into the room, was found sitting up in bed, the eyes vacantly staring, and the face wearing an expression of extreme alarm. Although the eyes were open, she did not appear to be awake, and required moving and loudly speaking to before she seemed to appreciate the presence of those around her. She would then give a sigh, say that she had been frightened, she did not know by what, and presently fall asleep again. These attacks occurred sometimes several times during the night, and for several nights in succession, and then were absent perhaps for some weeks, when they returned. She was a healthy looking child, and had been nurtured with every care; and the parents were much distressed by these symptoms, fearing they might be premonitory of some serious cerebral affection. She had been treated without benefit by various medicines. She was brought to me in October 1870, on account of an attack of stomatitis; and the parents then mentioned the occurrence of the nightmare. On examining the mouth, I noticed that the tonsils were greatly enlarged, and it seemed to me possible that the

nightmare might depend on the obstruction to respiration thus produced, with the consequent non-aëration of the blood, and cerebral congestion. This idea was confirmed by the mother saying that she always snored loudly, and that the attacks were generally worse when she had a cold. As soon as she had recovered from the stomatitis, I removed a portion of the tonsils, and from that time until now she has never had another attack of nightmare. Since then I have seen three similar cases, all in children, in each of which, after I had removed the tonsils, no recurrence of the nightmare took place.

It is worth while, therefore, I think, when a child suffers from night-terrors, to inquire into the state of the tonsils as a possible cause. The kind of nightmare thus produced seems to differ from that having its origin in gastric irritation or dentition chiefly in this: that whereas this last kind occurs, as a rule, only once in the night (as Dr. West points out), and the child then sleeps quietly, that due to enlarged tonsils, especially when the attacks are worst, often recurs several times in the same night, and is invariably observed to be aggravated by the child catching cold.

While speaking of the removal of the tonsils, I may say that I almost always use the guillotine, which, with the addition lately made of a strong wire to keep the mouth open, seems to me the instrument by which the operation can usually be done much the most quickly, a point of especial importance with children. It is very seldom necessary to give any anæsthetic; but if a child be very resistant, it is better to give ether, and open the mouth by Mr. Smith's gag, which affords an excellent view of the parts, and is not at all in the way of the operator.

SUDDEN DEATH FROM HEART-CLOT DURING CONVALESCENCE FROM PARTURITION.

By GEORGE BOWMAN, M.B., Manchester.

MRS. W., aged 37, was safely delivered by me on February 2nd, of a full-grown child. The labour (her seventh) was in most respects straightforward and easy, as had been all her former ones. The first stage being rather tedious from inaction of the uterus, I prescribed about two scruples of powdered ergot, which in about ten minutes excited the uterus to contraction. The head was born with the third pain. The rest of the labour was in every respect natural; and the patient appeared to be making an excellent recovery, when, on the morning of the tenth day, at two o'clock, I was called up by the husband and requested to come to see his wife, with whom, to use his own expression, "it was a case of life or death." When I arrived at the house, I found my patient dead. Her husband had left her about two hours before in excellent spirits, with the anticipation of sitting up on the morrow. She had been asleep about an hour, when the nurse, who was sleeping beside her, was awakened by the baby (who was at the breast) crying. On attempting to quiet it, she spoke to Mrs. W., but received no answer. Becoming alarmed at the coldness of her limbs and fixity of countenance, she ran for the husband. Mrs. W. breathed twice or thrice before the nurse left her, but death took place before her return into the room.

My friend and neighbour Dr. Brierley assisted me in making an examination fourteen hours after death. The body was very well nourished; both the chest and abdomen were moderately covered with fat. *Post mortem* lividity had taken place to a most unusual degree at the back of the neck, and the under surface of the arms. In the latter situation, in fact, discolouration had commenced when I was called to see her in the early morning. The heart was very pale in colour, and, as the microscope showed, was undergoing fatty degeneration. The walls of both ventricles were very thin; the left ventricle was empty and firmly contracted, the right ventricle was full of blood. The valves were all healthy. In the right ventricle, and attached to the chordæ tendineæ of the tricuspid valve, was a large and straggling dark-coloured fibrinous clot. From its situation and firmness, it had evidently destroyed the competency of the valve, thus producing an obstruction to the circulation through the lungs. The pulmonary artery was perfectly free. The lungs were found to contain very little blood. Evident traces of old tubercular deposits which had undergone calcareous degeneration were found at the apex of the right lung; the left was perfectly healthy. She had a slight attack of hæmoptysis about six years since. No other organs were examined, on account of the objections of the husband.

In none of the cases of death from heart-clot which I can find reported has death come on so insidiously. The patient has generally been out of bed and slightly exerting herself. Here she was in bed and asleep. Death evidently took place without the least movement. This case in

some particulars corresponds with the description given by Dr. Meigs of sudden death from heart-clot, in Sir James Simpson's *Selected Obstetrical Works*. The coagulum or fibrinous polypus attached to the auriculo-ventricular valve in this case had so increased in size, that probably portions of it would be impelled by each contraction of the right ventricle through the semilunar valves into the pulmonary artery, thus so far interfering with the healthy action of the valves as to allow regurgitation.

RARE DISLOCATION OF THE HUMERUS.*

By A. W. STOCKS, Esq.,

Surgeon to the Salford and Pendleton Royal Hospital.

AN elderly lady, not very stout, crossing a street in a hurry, fell on her right hand and doubled her arm up, so that the hand came into contact with the upper part of her sternum; she also received a bruise on the left side of her face, on its coming into contact with the ground. It was found that she had lost the power of motion in her right arm. Medical assistance was immediately obtained, and an examination of the limb was made. No dislocation or fracture was discovered, but there was great pain down the whole limb.

Four days afterwards, I was requested by her medical attendant to see her with him, and on my first visit failed to discover any displacement of the bones of the arm. On a second consultation (next day), however, I became convinced that the head of the humerus was displaced; but, as the opinion of my friend did not coincide with mine, no attempt at reduction was allowed, and it was decided that the opinion of one of our infirmary surgeons should be obtained. He saw her on the same day, and in opinion agreed with my friend that there was no dislocation, accounting for the slight swelling by saying that there was effusion into the joint and surrounding tissues. Rest, evaporating lotions, etc., were recommended. With these remedies I was not satisfied, and a further consultation was fixed. Five days afterwards we saw her again (ten days after the accident); and, although our opinions were the same, it was resolved to complete the diagnosis by attempting, under chloroform, a reduction of the dislocation, should one exist. All doubt as to the exact nature of the case was at once done away when, on moderate extension with the heel in the axilla, the head of the humerus visibly and audibly slipped into its normal position.

It might appear that in any case, on fair examination, there could be little room for doubt as to the existence or absence of a dislocation of this humerus; but as there was in this instance such serious and persistent difference of opinion, showing how slight the distortion was, and as the case appears to be of a somewhat unusual character, I beg to give a description of it.

The shoulder, at first sight, gave no indication of any abnormal position of the head of the humerus. There was no undue prominence of the acromion, nor perceptible flattening of the deltoid muscle—conditions almost invariably present in dislocation of the humerus. The arm was capable of very extensive movements; it could be brought to the side, raised to a right angle with the chest, and extended forwards. The only motion which was restricted, and that to a slight degree, was the backward one: of course, none of these movements could be accomplished without considerable pain. The sole alteration in the figure of the joint was a slight flattening on its anterior aspect, rendering the coracoid process just perceptible to the eye, and a slight bulging under the posterior edge of the acromion.

It will be remembered that in the normal condition of the shoulder-joint, when the arm hangs perpendicularly by the side of the body, the head of the humerus projects slightly beyond the anterior edge of the acromion process, and that there is a corresponding hollow or depression under the posterior edge of that process. A condition the exact reverse of this was the whole distortion found in this case.

In describing the dislocations of the humerus, all authors, I believe, affirm that "flattening of the shoulder and the prominence of the acromion" are "common to all luxations of the humerus" (*System of Surgery*, vol. ii, p. 821; Bryant's *Practice of Surgery*, p. 791; Erichsen's *Science and Art of Surgery*, 4th edit., p. 299, etc.) If these very palpable symptoms had been present in the above case, no controversy as to its exact nature could have existed for one moment; it was the absence of these "common" signs which formed its great peculiarity. On the other hand, there can be no room for doubt that there was a dislocation, as, immediately on the bone very sensibly slipping into its place, our consultant exclaimed, "Well, if I had not seen it, I would not have believed it."

* Read before the Manchester Medical Society,

The "subspinous" or "subacromial" dislocation is the one to which this case is the most closely allied; and in Holmes's *System of Surgery*, vol. ii, p. 821, it is stated that "the displaced head of the bone may rest either on the posterior edge of the glenoid fossa, on the back of the neck of the scapula, beneath the posterior angle of the acromion, or more rarely on the dorsum of the scapula below the spine.* . . . There is always flattening of the shoulder and prominence of the acromion". It would seem that, in the case here recorded, "the posterior edge of the glenoid cavity" is the position in which the head of the humerus was placed, and that, contrary to the opinion stated above, no flattening of the shoulder or prominence of the acromion can or does exist in such dislocations, as would be the case if the head of the bone had slipped, so to speak, around the corner of the head of the scapula.

The question naturally arises, How was the head of the humerus retained in such a position? The only theory that I can offer is, that the long head of the biceps had become partially dislocated from its position—arching over the head of the humerus, and slipped down anteriorly to it, preventing its return into the glenoid fossa; whilst the tendon of the subscapularis, which is generally in backward dislocation found to be detached from the lesser tuberosity of the humerus, had not been ruptured, so preventing the further and more evident displacement of the bone behind the neck of the scapula.

CLINICAL MEMORANDA.

COMPLICATED PARACENTESIS.

HAVING very recently met with a similar complication in performing the operation of paracentesis abdominis for ascites, as narrated in the JOURNAL by Dr. Hunter and Dr. Yeo, I send the following particulars. As I had previously operated upon my patient six times without any obstacle, I introduced a full sized trocar and cannula three inches long through an old cicatrix into the peritoneal cavity. Upon withdrawing the trocar, serum highly tinged with blood escaped, but was immediately stopped by something plugging up the cannula. As neither the reintroduction of the trocar nor passing a probe was sufficient to remove the obstacle, and knowing from experience that as much as sixteen to twenty pints of fluid had to be evacuated, I determined to withdraw the instrument and make a fresh puncture. Upon doing so, a dirty red looking membrane protruded to the extent of about an inch. I then punctured an inch higher up, and, having completed the operation without further impediment, easily returned the membrane (which I believed to be omentum), and closed the wound with a compress of lint and strapping. With the exception of rather more pain in the neighbourhood of the wounds than my patient experienced before, no evil results have followed. In this case I would remark, that the woman was tapped in a sitting position, as in every instance she was prevented by dyspnoea from lying down.

FREDERICK GULL.

THERAPEUTIC MEMORANDA.

GUAIAK AS AN EMMENAGOGUE.

In January last, Dr. Cleland of Galway, in an able paper published in the *Irish Hospital Gazette*, drew attention to the value of guaiac in some ovarian affections, and more especially to the efficacy of the drug as an emmenagogue. For the last four months I have given guaiac in a large number of cases of amenorrhoea, with results which, in the main, bear out the observations of Dr. Cleland. Fully realising the dangers of a *post hoc ergo propter hoc* conclusion, and feeling how much the progress of therapeutics has been hindered by the hasty ascription to drugs of virtues which they have afterwards been found to fail to exercise, I have little hesitation in saying that my experience in the use of guaiac as an emmenagogue has led me to regard that drug as a remedy which is found to act very favourably in promoting the menstrual secretion in a large number of cases of amenorrhoea. When given alone, it seems most efficient in those cases in which the cause of the amenorrhoea is obscure—at all events, in those cases in which there is neither chlorosis nor anæmia. I may add, that I have generally administered the remedy in conjunction with some placebo, in order to complicate my observations as little as possible. I must admit, too, that in many cases I have found guaiac to fail to produce the effect I desired. I order ten grains of the powder of the resin to be taken every morning; this may be safely given for some weeks. In a few instances it has been neces-

* On dissection, the tendon of the subscapularis is generally found to be detached from the lesser tuberosity.

sary to temporarily suspend the administration of the drug, on account of the production of a little abdominal pain and purging.

JAMES SAWYER, M.B.Lond., Physician to the Queen's and Children's Hospitals, Birmingham.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

SEAMEN'S HOSPITAL, GREENWICH.

CASE OF SUPPURATING HYDROCELE.

(Under the care of Mr. W. JOHNSON SMITH.)

R. G., AGED 66, a fisherman, was treated as an out-patient on December 3rd, 1872, for a large hydrocele on the left side of the scrotum, of three years' growth. No operation had been previously performed. The sac was punctured, and emptied of sixteen ounces of clear fluid of a greenish-yellow colour. On January 6th, 1873, the man again applied for hospital relief. The swelling had commenced again very soon after his first visit, and the left side of the scrotum soon became more distended than it had ever been before. The swelling, though evidently due to a collection of fluid, was found to be hard and tender, and the integument of the affected part of the scrotum was very tense and congested. The man appeared to be out of health and very weak. He was recommended to become an out-patient, but refused to be admitted before the ninth day of the month. The tumour had then increased very much in size, and the surface of the scrotum was hot and tender, and the integument oedematous. The patient complained of much pain in the tumour; he was very feverish, the tongue being brown and dry, and the bodily temperature much elevated; he stated that he had had occasional sensations of chilliness, but no violent shivering.

The patient having been put under the influence of ether, an incision about three inches in length was made along the front of the scrotum on the left side and into the sac, the walls of which were very thick and oedematous, and the cavity of which contained several ounces of thick, dark-coloured, and very foetid pus, in which floated large flocculent masses of yellow lymph. The inner surface of the sac was lined by a thick layer of similar material. The testicle, which was slightly enlarged, was seen at the back and lower part of the cavity. A short incision having been made through the posterior wall of the sac, a small drainage-tube was then carried from before backwards through the cavity, which was then washed out with a solution of carbolic acid, and finally stuffed with strips of lint saturated with this lotion.

The patient progressed favourably after this operation, the exposed sac rapidly shrinking, and closing by granulation. The wound was washed out every morning with a weak solution of carbolic acid, and afterwards poulticed. At the end of a fortnight, the drainage-tube was removed, and on January 28th the man was allowed to move about the ward. He was discharged as cured on February 3rd.

CASE OF GANGRENE OF THE SCROTUM.

(Under the care of Mr. W. JOHNSON SMITH.)

G. D., a ship's cook, aged 58, was admitted into the hospital on March 12th, 1873. About a month before admission, he had arrived in London after a passage lasting for four months from West Australia. The provisions, he stated, were good and plentiful, and his general health during his service at sea remained sound. After having rapidly spent all his wages, he became destitute, and was badly nourished, remaining for sixteen days without any animal food. He was afterwards taken as a servant into a sailors' home, where he was well fed, but put to very hard work, part of which consisted in carrying heavy loads to the upper rooms of the building.

On admission, the whole of the scrotum was much swollen and the integument tense, red, and, at some parts, crepitant. On its perineal aspect was a patch of gangrene of the size of a crown-piece, and involving the whole thickness of the dartos, and in front of the scrotum on the right side was another smaller patch. The posterior patch was circumscribed by a deep line of demarcation, from which there was a discharge of thin foetid fluid; the margins of the patch in front, on the other hand, were irregular and not well defined. The inner surfaces of the thighs corresponding to the opposed surfaces of the enlarged scrotum were much excoriated, as if by repeated friction from the latter. The urine, which could be passed without difficulty and in full stream, was examined, and found to be free from sugar and albumen. The patient was weak and very anæmic; no intense febrile symptoms were presented; temperature 100 deg.; pulse 80. On March 13th, an incision

was made into the very red and cedematous skin of the right side of the scrotum, and through the patch of gangrene which was here situated; the subcutaneous cellular tissue was found in a state of sloughing, and infiltrated with a thin foetid fluid. Brandy mixture was ordered, and opium in one-grain doses to be given every four hours. On March 24th, the right side of the scrotum was larger than on the previous day. The gangrene had involved a greater part of the skin on its anterior surface, and seemed to be spreading rapidly.

March 15th. There was no further extension of the gangrene, the large black patch on the front of the scrotum being surrounded by a well marked groove. The dead skin at the back of the scrotum was completely detached, leaving a healthy surface. From this date the patient did well, the large ulcers left after removal of the mortified tissues rapidly closing by granulation and cicatricial contraction.

LEEDS GENERAL INFIRMARY.

PURULENT URINE FROM CALCULOUS DISEASE OF THE KIDNEYS.

(Under the care of J. D. HEATON, M.D., F.R.C.P., Senior Physician to the Infirmary.)

TABITHA PEARSON, a widow, somewhat emaciated, feeble, with a pallid, careworn countenance, had been suffering from frequent vomiting for a month, both after taking food and at other times. But, besides this, which, in addition to great prostration, was the principal complaint noted by the patient, it was found that the urine contained a very large amount of pus, the sediment of which, after complete subsidence, formed one-quarter of its entire volume. In answer to questions, she stated that she had passed what she called "milky urine" for a considerable time—at first only occasionally, latterly more constantly. There has been no habitual dysuria; no incontinence of urine; pain in the loins only occasionally after hard work; no tenderness over the lower abdomen. There had never been any appearance of blood in the urine. The urine was neutral or alkaline, of a rather low density, of an average amount, and slightly albuminous. The treatment was chiefly directed to the relief of the more prominent and distressing symptom of irritability of the stomach, and to support the strength, but without success. The vomiting was only temporarily relieved; she gradually sank; aphthæ formed on the tongue and mouth; intelligence remained clear till near death, but with much irritability. She died in about three weeks after coming under treatment, without any of the ordinary symptoms of uræmic poisoning. After death, the only morbid appearance found was in the kidneys, which were remarkably diseased. Both had a very large accumulation of fat on the exterior, giving to each the appearance of a considerable tumour, as seen *in situ*. The left kidney, when cleared from the surrounding fat, was found to be converted into a fluctuating bag, filled with matter intermingled with urinary secretion. Its section, made in the usual way, exposed the large cavity, whose walls were chiefly formed of the remains of the cortical structure reduced to the thickness of about the eighth of an inch, and presenting internally a sacculated appearance, caused by projections on its inner surface; but the lower lobe of the kidney remained solid, being chiefly composed of two nodules of pure fat, each the size of a small walnut, involving the origin of the ureter, which seemed to be obliterated, and near to which, imbedded in the walls of the sac, was a small, irregularly formed calculus. The sacculated portion of this kidney presented an appearance having considerable similarity to that depicted in plate 6 of the sixth fasciculus of Baillie's *Morbid Anatomy*. The right kidney was somewhat hypertrophied, and retained much of its secreting structure apparently unaltered. But in this kidney, also, a large nodule of pure fat was imbedded in its interior. In the pelvis of the kidney some purulent fluid appeared; and a large irregularly formed calculus, moulded to the form of the cavity, occupied its lower portion, having a narrow stem projecting into the origin of the ureter, but not so as to prevent the flow of urine around it. The bladder was quite healthy. The other organs showed no morbid appearances.

REMARKS.—The chief interest of this case lies in the absence of vital symptoms corresponding with the amount of disease found in the kidneys. One kidney was completely disorganised and converted into a sac filled with purulent fluid, the result of pyelitis and the obliteration

of the ureter; the other kidney was also affected with pyelitis, caused by a large irregular calculus; and yet only occasional pains in the loins and some occasional urinary irritation were the direct result to the patient's sensations. Hence arose a difficulty of certain diagnosis, during life, between renal and vesical disease as the cause of the purulent urine; for the amount of albumen in the urine was no more than was attributable to that derived from the purulent intermixture. The freedom of the mucous membrane of the bladder from disease, in a case where so much prolonged disease had existed in the kidneys, is also an unusual circumstance. And the comparative freedom of the patient from symptoms of urinary irritation, although urine largely intermingled with pus was continually passing through the bladder, shows that purulent matter by itself is not very irritating to the vesical mucous membrane.

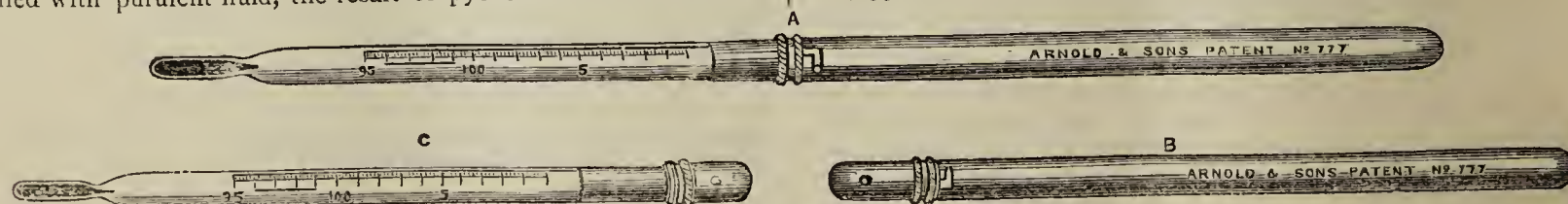
The termination of this case occurred shortly after the report of the *post mortem* examination of the Emperor Napoleon. In that report it is stated that "the kidneys were found to be involved in inflammatory effects to a degree which was not suspected; and, if it had been suspected, would not have been ascertained." The case now under consideration confirms the possibility of the existence of still more extensive renal disease and disorganisation without the coexistence of such symptoms, vital and physical, as should be satisfactorily diagnostic. The right kidney, although considerably diseased, retained sufficient available secreting structure to carry on the urinary function and prevent uræmia. Death seemed to result, with colliquative symptoms, from increasing prostration.

The kidneys were exhibited at a meeting of the Leeds and West Riding Medico-Chirurgical Society, and are now preserved in the Museum of the Leeds Medical School.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ARNOLD AND SON'S POCKET CLINICAL THERMOMETER (PATENTED), SUGGESTED BY PROFESSOR BROWN.

THIS is certainly a most ingenious instrument, and one of the best hitherto brought out. It is very simple, portable, and mechanical means are taken which very much reduce its chances of being broken. The woodcut A shows the thermometer with case attached, C the instrument without case, and B the thermometer when closed. The diagram represents the actual size of the instrument. To the end of the thermometer is secured part of the case—the lid, in fact, as shown in Fig. C. This lid or mount is so formed that the instrument is not liable to slip through the fingers and thereby be broken, which is frequently the case with those in present use, particularly during the operation of setting or bringing down the mercurial register. Greater length of thermometer is obtained by simply plugging the mount into the case, as shown in Fig. A. An instrument double its original length, which can be used for the rectum, vagina, etc., is thus secured. To prevent the mount from slipping or becoming detached from its case (which then forms the handle), a bayonet-joint is attached, which effectually secures it, and at the same time precludes the possibility of its detachment. It will at once be seen that, by a very simple arrangement, a thermometer of 3½ inches long can instantly be increased to one of 7 inches in length, and at the same time, when closed, can be carried in the waistcoat-pocket, and is not more cumbersome than a common pencil-case. The two scales in common use—that of Fahrenheit and centigrade—are engraved on each instrument. The operator is, therefore, enabled to read off either, or to convert one reading into the other at a glance. It may be fairly asserted for the instrument, that it has the merit of perfect simplicity, extreme portability, and security against breakage. The instrument is manufactured solely by the patentees, Arnold and Sons, Makers to Her Majesty's Government, etc., 35 and 36, West Smithfield, London.



Arnold and Son's Pocket Clinical Thermometer (Patented).

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 7TH, 1873.

POOR-RELIEF AND SANITARY SERVICE IN IRELAND.

THE analysis of the population, acreage, sanitary expenditure, and poor-rates for Ireland, prepared for the Irish Poor-law Medical Officers' Association by Dr. Maunsell, ought greatly to simplify the introduction of a Public Health Bill for that country. We have frequently alluded to the difference that exists between the Poor-law medical systems in the various divisions of the United Kingdom; and this analysis goes to prove the uniformity that occurs in Ireland, both as to area and population, when compared with the English and Scotch arrangements. As Dr. Maunsell has pointed out, however, even in Ireland the dispensary districts require rearrangement; for, although uniformly of fifty square miles in extent, in some parts they are twenty-five miles long by two broad, and in others put together like a dissecting map, overlapping each other, instead of being arranged on the more rational plan of each being seven miles square. This would greatly facilitate the perfection of medical attendance on the sick poor, as well as vaccination and the registration of births and deaths, all of which offices devolve upon the dispensary medical officer. Power has been obtained, by an Act of Parliament passed last year, to define the boundaries of land in Ireland, which will no doubt be acted upon. This will also be simplified by the fact that, Ireland being an agricultural country, the inhabitants have already distributed the rural districts so as to suit their own convenience; and a reference to a postal directory will show that the villages are in most instances about seven miles apart. On the introduction of fever-hospitals into Ireland in 1854, the country was mapped out into unions whose average was about equivalent to a circle with a radius of eight miles, or about 256 square miles in extent. The dispensary districts now require similar rearrangements into circles having an average radius of three and a half square miles, with the village as centre. This could be attained in Ireland with very slight readjustment of boundary.

The average area of dispensary districts, then, in Ireland, is about 30,000 acres, or about fifty square miles. The population averages 8,000 persons, and the average number of houses is from 1,500 to 2,000. The poundage out of the poor-rates for the salaries of the 801 dispensary medical officers averages three farthings. The number of persons attended by them during the year 1871 was 741,275, or about one-eighth of the population; close upon 200,000 of these having been visited at their own homes. The average salary of the medical officers was £100 a year. It will be seen from this statement that the population, compared with the acreages, averages one person to the four acres; but from the total area of Ireland, 20,000,000 of acres in all, we must deduct 2,000,000 of acres of bog and lake; and, by the last agricultural returns, there were also close upon 6,000,000 of acres under crops of various sorts. Thus, deducting 8,000,000 of acres, there remain but 12,000,000 of acres, or two acres to each inhabitant.

The absence of all idea of sanitation which exists amongst the lower orders in Ireland is exemplified by the domestication of the pig, the fowl, the donkey, and often the cow, in the family apartments; by the extreme poverty that exists in many places; by the fact of the diet consisting almost entirely of vegetables, as potatoes and stirabout; as well as by the congregation of the population into a large number of densely

populated villages, without any attempt at sanitation. The amount of money devoted to expenditure under sanitary Acts being represented by one-eighth of a farthing in the pound for Ireland in 1871, renders the frequent outbreak of fevers by no means to be wondered at, and the introduction of a Public Health Bill imperatively necessary. The death-rate from zymotic disease in the eight large town-districts of Ireland, as given in the Registrar-General's returns, is much larger than that of any town-districts which can be, either in area or density of population, in any way assimilated to them in the United Kingdom. The reason probably is, that no attention is paid to sanitary matters. Waterford, for instance, a city with a population of close upon forty thousand inhabitants, has an annual death-rate of 52 per 1,000—by far the highest of any city in the United Kingdom, though it possesses every element of salubrity in itself. The distribution of Ireland into rural and urban districts does not appear to be likely to be effective. Of the one hundred and ten urban districts, there are but six that can boast of exceeding the limits of the dispensary districts of which they form a part. It is proposed in the Irish Health Bill to make the dispensary medical officers officers of health of their various districts. Remuneration, such as it is, and in a vicarious sort of manner, has been provided for similar services in England. It would be more economical and effective to have this made out in the form of a capitation or a domiciliary tax—say three half-pence or two pence per head on the population of the district, which would represent about £50 a year to each dispensary medical officer. This sum of twopence per head would not appear to be exorbitant for the supervision in sanitary matters over a whole year. With regard to increased taxation, it would represent about half of a farthing in the pound poor-rates, as Ireland is so distributed into dispensary districts that there can be little difficulty in making sanitary arrangements for that country. The dispensary medical officers, however, had better look after their own interests on the present occasion. Dr. Maunsell's analysis furnishes an exhaustive statement of their case. If they do not interest themselves in the matter, and join the Poor-law Medical Officers' Association, and thus furnish the sinews of war, they will have but themselves to blame if they find themselves left out in the cold shade.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS
OF ENGLAND.

WE regret to hear that Mr. Turner of Manchester, who has for several years sat at the Council of the College of Surgeons as a representative of the provincial schools and of the Fellows of the College in the provinces, has expressed his intention to retire from the Council at the close of his present period of office. As Mr. Turner will not offer himself again for re-election to an office which he has filled worthily and well, Professor Humphry of Cambridge will remain the only representative of the country Fellows on the Council of the College. From his especial connexion with an university school and the interests and status of a great seat of learning, Dr. Humphry holds an exceptional relation to provincial surgery, and cannot be considered an altogether typical representative, or to have the same opportunities as a man connected with other than an university school of becoming acquainted with the conditions characteristic of our provincial schools, and of their wants and opinions. Mr. Turner's withdrawal, therefore, leaves a void which can only be filled by a man of the same stamp and having similar surroundings. The Fellows of the College have repeatedly expressed their concurrence in the claims which we put forward some years since for a fair representation of country Fellows on the Council. Those claims were, however, met by the alleged difficulty of finding country Fellows of the required position who would be willing to make the necessary sacrifices to attend the meetings of the Council and take some share in the standing committees which in the College, as in most other large institutions, do the executive work, prepare the business of the Council, and so really rule the College. Mr. Paget of Leicester,

however, Mr. Turner, and Dr. Humphry, have shown that there are men in the provinces who have sufficient public spirit and taste for public office to make them willing to do the work of the Fellows at the great cost of time, labour, and the pecuniary sacrifices involved in journeys to and from the meetings.

We learn with pleasure that Mr. Southam, Senior Surgeon to the Manchester Royal Infirmary, who holds already the onerous and responsible post of President of Council of the British Medical Association, has consented to stand for election to the vacancy about to be created in the Council of the College of Surgeons by the retirement of Mr. Turner. Mr. Southam has all the qualifications for the office. He has been connected for many years, in important offices, with medical education and with practical surgery in the provinces. He has had for a score of years an intimate association with those who have been most active in furthering educational and institutional reform in the profession, and stands now high in the estimation of his fellows, and in official relation to them. Mr. Southam is, therefore, a representative of provincial surgical interests who has had, and still possesses, the fullest opportunities of acquainting himself with all their various phases; and he has peculiar claims, in respect to his official position, upon the votes of all our members, in respect to his long services to the Association and present position as President of Council. We trust, therefore, that Mr. Southam's candidature will receive the unanimous support of the metropolitan as well as of provincial Fellows. We have a right to anticipate that it will equally commend itself to both.

CANCER CURES.

OUR attention has been called by the reports in the daily papers to the surprising and, if capable of proof, most satisfactory statements made by the surgeons of the Cancer Hospital. It appears that 796 in- and out-patients came under observation in the course of last year. Of these, 54 of the in-patients were discharged "cured, or the disease arrested; 89 were successfully operated on, and discharged well; 38 were discharged cured without operation." We have only the newspaper report of last year's proceedings; but there lies before us the authentic report for the year ending 1871. In it we find this, to us, novel statement. We give it for the benefit of those who may be as ignorant as ourselves. "The possibility of arresting cancer for a great number of years, and, in some instances, curing it, by a combination of local and constitutional remedies, we believe to be fully established, and that with far less suffering and annoyance to the patient than was formerly the case." And in the table of the results of treatment, we find "successfully treated without operation, and discharged cured, 43." Well might the chairman say that "the report of the surgeons was one that ought to be widely circulated amongst the public." We, on our part, are inclined to ask with Sir Toby, "Wherefore are these things hid? Wherefore have these gifts a curtain before them?" To the profession, these wonderful results of combined local and constitutional treatment are utterly unknown. Had they been paraded before us and the public by one of the quack cancer-curers, who are extracting money from the pockets, but not cancer from the systems, of their dupes, we should no more have noticed them than we should the advertisements which are pasted up in obscure corners for the instruction of youth. But these asserted cures come with the sanction of the surgeons of a well supported hospital, and it becomes a duty to examine into their truth. One first question must be—Where are these forty or fifty cases of cancer cured each year? Can the surgeons produce a dozen cases which have been recognised as cancer by competent authorities, and cured by either local applications or constitutional treatment, or both combined? Can they show half a dozen? can they show one? We are told in the report for 1871, that "were it permitted us to mention particular cases, we might give very many most gratifying instances of arrest, and even

cure, of this malady." We always thought that one great use of a hospital was to furnish full data as to the treatment and its results applied to any or all cases, especially to such as were regarded as incurable. But perhaps the surgeons are like the Claimant, who refused to name any young lady with whom he had danced, because it would be so indelicate. Can it be possible that the surgeons of the Cancer Hospital have been possessed of some special means of arresting or curing this awful malady, but have been contented to leave the profession in ignorance of it? No such thing. Not only has delicacy interfered, but we are told, "we do not believe that this plan"—curing by a combination of local and constitutional remedies—"admits of any dogmatic rules capable of being carried out in all cases, but that each patient requires to be managed in accordance with the ever-varying form the disease may assume in each individual, and those differences of constitution which are as marked as are the features and characters of different persons."

Now all this is grandiose but vague. We have some forty cases of cancer cured every year; but particular cases must not be mentioned, and the treatment is so subtle that it cannot be described as applicable to any particular case. And on the strength of this, we, or rather the public, to whom the report is addressed, are expected to look on cancer as readily curable by the surgeons of the Cancer Hospital.

Miracles are only received on evidence vastly more exact than would be required to establish an ordinary event. We should regard it as a miracle that fifty or sixty patients a year are cured of cancer, but that out of the walls of the institution in which the cures have been effected there is not a single competent member of the profession who knows anything of the matter. We get a glimmering of light from one line of the statistical statement for 1871. Out of the 727 cases treated as in- and out-patients, we find "lupus, non-malignant tumours, etc., 53 males, and 219 females." There were, then, 272, or more than a third of the whole number of patients, who had some disease other than cancer. As they are not otherwise specially mentioned, may it be that they figure amongst the cured cases of cancer? We trust that the surgeons have not been thus disingenuous. These gentlemen, however, stand before the profession as surgeons to a large special hospital. We challenge them to bring before the medical profession the cases, or some of the cases at least, which they have cured by local and constitutional treatment. They must excuse us, however, if we insist that the evidence of cancer having really existed must rest on the authority of independent surgeons thoroughly competent to pronounce upon the question. If such statements as the public are invited to have faith in be really true, the surgeons of the Cancer Hospital can have no difficulty, unless *delicacy* stands in their way, in satisfying the profession and immortalising themselves. It is almost unnecessary, we hope, to protest against false hopes being held out to those who suffer under this awful malady; and still more against practices amongst those who hold any position in the profession, which cannot but prove injurious and degrading to it.

WE are informed that Mr. Henry Smith, of King's College Hospital, will on Saturday remove the scapula for a large tumour affecting that bone.

H.R.H. THE DUKE OF EDINBURGH presides to-day (Friday), at 3.30 o'clock, at the distribution of prizes in the Medical Department of King's College, London.

THE President and Fellows of the Royal College of Physicians of London have issued cards for a *conversazione* on Wednesday evening, July 2nd, at 9 o'clock.

DR. ROLLESTON, Linacre Professor of Anatomy and Physiology at Oxford, will deliver the Harveian Oration at the Royal College of Physicians on Wednesday, June 25th.

DR. KLEBS, for a long time past Professor of Pathological Anatomy at Würzburg, has accepted an invitation to a similar position in the University of Prague.

THE Baroness Meyer de Rothschild has made arrangements for sending a supply of cut and other flowers from Mentmore every week, for the Hebrew and general wards of the London Hospital.

MR. R. S. LUTWIDGE, Commissioner in Lunacy, has succumbed to the injuries inflicted on him by a criminal lunatic, who stabbed him in the temple with a nail on the 21st instant, as he was inspecting the Fisherton House Criminal Lunatic Asylum, in company with Mr. J. Wilkes, also a Commissioner in Lunacy.

NORWICH is to have its Hospital Sunday on the 9th of November next. The ministers of forty-nine churches and chapels have already consented to aid in the movement, and refusals have only been received from five churches and one chapel. A joint committee of churchmen and nonconformists is engaged in the completion of the necessary arrangements.

A LONDON musical festival is announced under the patronage of the members of the Royal Family and of the Lord Mayor. The proceeds are to be divided amongst the following institutions:—The Cambridge Asylum for Soldiers' Widows, King's College Hospital, the Samaritan Free Hospital for Women and Children, and the Refuges for Homeless and Destitute Children.

THE CHOLERA IN EUROPE.

DURING the first half of May, there were 175 new cases of cholera in Pesth, and 33 in Buda. The total number of cases in the two cities during the same period was 304, of whom 101 recovered and 113 died. We understand that the Emperor of Russia has been suffering from a severe attack of choleraic diarrhoea in Vienna.

VIENNA UNIVERSAL EXHIBITION.

NINE medical men, acquainted with various languages, have been appointed to stations in the International Exhibition in Vienna, for the purpose of attending to casualties. Three are stationed in the central rotunda, two in offices behind the machinery department, two at the east end, and two at the west end. A qualified midwife has also been appointed to attend to cases which may require obstetric assistance.

PROFESSOR SHARPEY.

FOR fifteen years or more Dr. Sharpey has suffered from cataract, first in the left and then in the right eye. Both had become lately so opaque that he was unable to read, and therefore an operation had become necessary. The cataract in the left eye was extracted by Mr. Streatfeild on May 10th, without any mishap at the time of the operation or subsequently. But, in regard to his general health, Dr. Sharpey has been suffering, and therefore he has been making but a very slow convalescence. Vision has, notwithstanding this, always remained good; and we are glad now to learn that Dr. Sharpey has not only the prospect of good sight, but that he is doing well in every way. Within the last few days, he has once or twice again made his appearance at University College.

A GERMAN HOSPITAL IN CONSTANTINOPLE.

THE Federal Council of Germany has, in accordance with a proposal made by the German Evangelical Benevolent Society, determined to grant from the public funds the sum of 80,000 thalers (£12,000) towards the expenses of building a hospital in Constantinople. The estimated cost of the building is to be 99,000 thalers (£14,850). The grant is made on condition that the supreme direction and protection of the new hospital are to belong to the German Government, but that the Society are to have the management of the hospital and to bear the expenses. The Society is also to be bound to make over the buildings and site of the present hospital to the empire.

THE LATE BARON VON LIEBIG.

THE names of Hofmann of Berlin (formerly of London) and Kekulé of Bonn are mentioned in scientific circles in Munich, in connexion with the chair of chemistry left vacant by the death of Liebig. It is doubtful, however, whether Dr. Hofmann would, if invited, leave his present post in Berlin. The celebrated theologian, Dr. Döllinger, has succeeded Liebig as President of the Royal Academy of Sciences in Munich.

THE EX-CONVICT REDDING.

WE have abstained from noticing the monstrous charges of the ex-convict Redding against the medical men who attended him in gaol, since they were to be brought to the test of legal inquiry. They bore their own refutation, however, on their face. He alleged that, with the complicity and by the instrumentality of Dr. Wilson and Dr. Burns, he was half-starved; that, when unable to take exercise, he was dragged about the yard; that he was confined naked in a very small cell, and beaten with a stick; that he suffered horribly from the action of a galvanic battery; that ropes were attached to his ankles and pulled violently; that he was tossed in the air, kept under cold water until he was insensible, burnt with red-hot irons, and pierced in the legs with needles. Dr. Wilson and Dr. Burns have contradicted the whole of his incredible statements. The slight foundation for his tissue of falsehoods is found in the fact that he was tested with galvanism, in order to ascertain whether he was, as alleged, paralytic. Malingering is, of course, even more common in prisons than in hospitals. It is a main object of refractory convicts to sham all sorts of complaints, in order to secure idleness and extra diet in the infirmary. In doing their difficult duty to prisoners, the medical officers are bound, where reasonable doubts exist, to prevent suspected imposition. The galvanic test of paralysis is not only painless, but remedial, where the malady is real; where it is shammed, it is not so unpleasant but that to get a similar "shock" is a favourite amusement of holiday-makers, as might have been seen in all the out-door places of amusement on Whit-Monday, where hundreds might be seen to pay their pence for the privilege of a "shock" from the galvanic machine. This sort of cruelty has, indeed, long been a source of income at all out-door places of amusement. The medical officers of prisons often err, perhaps, on the side of humanity, in giving prisoners the benefit of very faint doubts. It speaks, perhaps, highly for them that this is an almost unprecedented, as it has been proved to be a wholly groundless and wickedly fabricated, charge of inhumanity. It is a pity that some real punishment cannot be inflicted on its malicious author.

BRITISH HOSPITALS IN EGYPT.

A REPORT has just been issued, from which we glean some interesting particulars as to the management of Egyptian hospitals. The report referred to is from Suez, and the first establishment mentioned is Her Majesty's Military Hospital, which is described as a "pattern of neatness and order". It has been stated in Suez, that it is the desire of the Viceroy's government to take this hospital over and conduct it under their own management; but no authoritative steps have been taken to carry this out, even if it be desired. The situation of the hospital is on a dry plateau, seven feet above the level of the water in the fresh-water canal, and the establishment has, therefore, an ample command of water in any circumstances. This is one of the healthiest neighbourhoods in Suez. The hospital is constructed of wood, which exposes it to a great risk of fire; but the designs of several parts of the building are admirable, and could only have been surpassed by the use of a more permanent and better protecting material. As it is built upon cast-iron foot-pieces, with a clear space of three or four feet for a current of air under its floors, the slightly increased temperature due to wood by day is relieved by greater coolness at night; and the hospital is now placed in such favourable circumstances, as regards ventilation, etc., that complaint on this account is almost impossible. The French have also a permanent hospital in Suez, built of stone, and situated on a moder-

ately favourable site, though not so good as the "Victoria" hospital above referred to. The French hospital is badly constructed, and is now greatly in need of repair. In order to defray the expense of its erection, His Highness the Khedive contributed £1,000; the Imperial French Government, £244 (6,000 francs); the Messageries Impériales, £240; the French colony, £170; other sums being also subscribed in different ways. The ground of the enclosure in which the hospital stands, measuring 7,242 square *mètres*, equal to 8,642 square yards, was also given by the Khedive. The cost of the erection of the building was £1,890. It comprises, on the ground-floor, a saloon, a dispensary, a kitchen, a laboratory, and three sick wards for six beds each; and on the upper floor, three wards for ten beds each, one ward for four beds, and one for two beds; the two last mentioned being for private persons, who pay higher rates. The sick in the hospital are tended by the *Sœurs du Bon Pasteur*. They have a separate residence. The charges to patients are—first class, in private wards, from 8 to 12 francs (6s. 4d. to 9s. 6d.) a day; patients in the common wards, paying for themselves, 5 francs (4s.) a day; in common wards, patients from foreign consulates, 4 francs (3s. 2½d.) a day; common wards, for military and naval patients, 5 francs (4s.) a day. In these charges, attendance, medicine, food, and washing, are included. Patients on an average pay about four francs *per diem*. The medical service is rendered by one doctor, who used to receive a salary of 2,000 francs a year from the French Government; but since the war this has been abolished, and the resident French *médecin sanitaire* is expected to attend the hospital, in addition to his other duties, without receiving any extra stipulated allowance for so doing. Five *Sœurs de Bon Pasteur* attend the sick wards, under the instructions of the surgeon and the guidance of a *supérieure*, for which service an annual allowance of 4,000 francs is made by the French Government. Part of the spare ground belonging to the hospital is cultivated as a vegetable garden, at a considerable expense. Generally, it is stated that the hospital at the present time is greatly in want of repair; the garden is much neglected, and the funds of the establishment have been so much reduced that an appeal was lately made to the residents of Suez in order to raise a small amount to effect some minor repairs which had become absolutely necessary. In addition to the above-mentioned hospitals, there is likewise in Suez, close to the government-house, a rather peculiar native hospital, consisting of some ground-floors, closed by shutters only, round an open court, and not remarkable for cleanliness. It is open to all comers, with the sanction of the government medical officers; but it is significant to notice that the natives of Egypt, particularly those of the poorer class, have not yet acquired confidence in European therapeutics; and the pallets of the hospital are rarely filled from the local population. The government exacts payment of eight *pias* (1s. 7d.) a day, if the patient can afford it, which charge probably may also contribute to making the hospital not a generally available convenience. It is stated with regard to the climate of Suez that, although it is decidedly hot in summer, it is not what would be called cold in winter in Paris or London; nevertheless, fires are sometimes acceptable during the winter evenings. In summer, the air of Suez is too dry and parching to be agreeable, little rain and few storms visiting the place.

A NEW SUBSTITUTE FOR QUININE.

AMONG the specimens of drugs exhibited in the International Exhibition in Vienna is the *Echisess scholaris*, a plant of the natural order *Apocynæ*. It is especially abundant at Luzon, in the province of Batangar, in the Philippine Islands; and its bark has long been used by the natives, under the name of *dita*, as a remedy in all kinds of fever. Herr Gruppe, an apothecary in Manila, has found in it an uncrystallisable very hygroscopic bitter substance, to which he has given the name of *ditaïn*. The principal Spanish physician in Manila, Dr. Miguel Zina, has given it to numerous hospital patients under his care, and has found that ditaïn is not only a perfect substitute for quinine, but that its use is not followed by the disagreeable results which often attend the use of quinine. It is given in the same doses

and in the same way as quinine. In many cases, also, its activity as a tonic was well marked. The ditaïn is prepared from the bark in the same way as quinine from cinchona: 100 grammes of bark give 2 grammes of ditaïn, 0.85 gramme of sulphate of lime, and 10 grammes of a perfectly inactive extractive matter. A single tree yields a large quantity of bark without injuring its growth. It is calculated that the price of ditaïn in Europe would be about 160 francs per kilo (3s. 6d. to 4s. per ounce).

DEATH FROM AN OVER-HEATED BATH.

THE death of a patient from want of care in the use of the warm bath has lately occurred in the Vienna General Hospital. A bath heated to 40 Celsius (104 Fahr.) was ordered for a woman suffering from Bright's disease. Unfortunately, the female attendant heated the bath to 40 Reaumur (112 Fahr.). The result was, that the patient was severely scalded, and died in twenty-four hours. An inquiry has been instituted, with the view of ascertaining who is to blame for the fatal event.

A NEW ANTIDYSENTERIC.

IN the Vienna Exhibition are shown specimens of an "antidysenteric extract" prepared from the pods of the mangosteen (*Garcinia mangostana*), a well known plant in the East Indies. The extract has been prepared by Herr Gruppe of Manila, and has been used in a large number of cases in hospital and private practice. It is said to be a trustworthy remedy in dysentery and in chronic diarrhoea, as well as in catarrhal disorders of the uterus, bladder, and urethra, and generally in diseases for which astringents are indicated. It may be given in pills, or, especially to children, in the form of syrup.

THE LATE DR. TYLER SMITH.

MEDICAL society was much saddened on Tuesday evening last by the announcement of the painful news of the sudden death of Dr. Tyler Smith, the eminent consulting physician-accoucheur of St. Mary's Hospital, under circumstances which distress the mind by the abruptness of the final summons, and the incongruous surroundings of the fatal stroke. He had been found insensible by the road-side in the pretty suburb of Richmond, where he was paying a visit amongst friends, and, being removed to the Richmond Infirmary, where he received the unremitting but unavailing attentions of Mr. Hill of Richmond, a personal friend, and of the staff of the infirmary, he died rapidly from the effects of cerebral hæmorrhage. Dr. Tyler Smith had not been without warnings of the end which overtook him thus suddenly. He had for some time been ailing in health, and had consulted Sir Thomas Watson and Dr. George Johnson, who had detected indications of Bright's disease of the kidneys and of arterial degeneration. He had occasional attacks of severe epistaxis; and, prior to the attack of cerebral hæmorrhage, subcutaneous ecchymoses had been observed, indicating the tendency to hæmorrhagic effusions. The serious import of such indications is well known, and had been pointed out. The career of Dr. Tyler Smith has been one of considerable activity and honourable achievement in professional and in social life. As a writer in his own department of practice, he is known not only for his able monographs on parturition and its processes, and on the pathology and the treatment of leucorrhœa, but as the author of what was, in its day, the best manual of obstetrics in the language. He was a philosophic thinker, an accomplished writer, and a successful practitioner. For many years he subedited the oldest medical paper; and he was accustomed to say, that he had been chiefly paid for his arduous labours by the opportunities offered to the staff of that paper of writing themselves into notoriety. His writings were always to the point, and well worthy of perusal. His judgment was sound, and his mind active in social as well as medical affairs. Dr. Tyler Smith took a prominent part in founding the Obstetrical Society of London; and his energy, influence, and sagacity went for much in promoting its success in the early days when it met with much opposition, chiefly of the silent and negative sort. He was also foremost with Mr. Wakley in founding an enterprise in life assurance, known as the New Equit-

able Society, which, although it has had a hard battle to fight for itself, has done much to secure from other societies a fitting recognition of medical services in certifying lives for assurance. Dr. Tyler Smith became the proprietor of estates at Seaford, a seaside watering-place beyond Hastings, and did much to develop its resources, and to bring it prominently under notice. At St. Mary's Hospital, he showed for many years conspicuous ability as a teacher and practitioner. During a long and active period of busy professional life—for, although he died at the comparatively early age of 59, Dr. Tyler Smith has been for more than twenty-five years a prominent figure in all medical circles—he has done more than almost any other man to obtain for obstetric practice a place in medical estimation as a department entitled to equal recognition with that accorded to medicine and surgery generally.

THE BIRMINGHAM MEETING IN 1872.

MESSRS. THRUPP of Birmingham have issued a large photographic portrait-composition of members of the British Medical Association attending the great meeting of the Association at Birmingham last year, which will, we imagine, be welcomed by a great many as a very agreeable reminiscence of an interesting event. It would, indeed, on looking at the picture, be easy to name individuals who might be expected to be very large subscribers to it. Such compositions are historical recollections, to which every year gives additional interest. Those who possess the portrait-pictures of the gatherings at Oxford, Dublin, and Cambridge, and other meetings, recognise in them heads *tam cara*, but now mouldering in dust; and each year's gathering has its own cluster of local and personal associations. Even here we find, although the work is still fresh from the artist's hands, heads which will be lifted no more; and shoulder by shoulder stand men who gaze out at us with eyes which will not again meet ours. In the centre of the picture stands a small group gathered round Sir William Fergusson, in which are the sagacious cheery head of Partridge and the manly and intelligent front of Carden of Worcester. Near him stands Dr. Wilks; and near him, again, M. Ricord of Paris. Seated at the centre table, in the foreground, are the President of the Association, Mr. Baker of Birmingham; and by his side Mr. Husband of York, then President of Council. Around the table are the Secretaries and Presidents of the Local Committees and other active Birmingham men. Among the mass of portraits which make up the plate, are easily recognised Humphry of Cambridge, Falconer of Bath, Spencer Wells, William Adams, Heckstall Smith, Dyke of Merthyr Tydfil, Wade of Birmingham. There are others whose well-known heads are less easily discerned; for the grouping of the plate is inartistically arranged, almost wholly in straight lines, which are rendered yet more ugly by a repetition of similar lines in the foreground and on the walls; and in the more distant array of lines the figures are so much reduced in proportions, that the features of individuals are not easily identified. The distribution, moreover, appears to recognise only the just principle of bringing into the foreground the local officers of the meeting, on whom the heat and burden of the day fell. Beyond that, the figures are arranged, we imagine, by drawing papers out of a hat; unless it were intended to give an equal interest to all parts of the picture by placing the most distinguished men in undistinguishable corners, where they have to be hunted for, and dropping into the foreground chance comers. Far away in the extreme distance are the vanishing forms of our late President Dr. Chadwick of Leeds, of Dr. Henry Bennet, and Dr. Barnes; and Dr. Lockhart Clarke may be seen reduced to physical insignificance, while the President of the Obstetrical Society of London just squeezes half his head into the last millimetre of space. In pensive prominence is seated at full length, in the middle foreground, Dr. Wiltshire. On the left, the most prominent full length figures in the foreground are Mr. West and Dr. Ramsay (who is far too sensible and modest a man to have courted the position); and away in the back on the same side may be made out Mr. John Marshall and Dr. Arlidge of Newcastle in small proportions; and, squeezed against the distant wall, Dr. Waters of Chester and Dr. A. P. Stewart, yet more microscopically

reduced. There is much to be said, however, for an arrangement which is thoroughly democratic, and evidently dependent upon a chance medley; while it lends itself to pleasant surprises. Taken as a whole, the plate is a very pleasing reminiscence of a great professional gathering. It is full of good portraits; and the sun is very independent of artistic errors, and easily shines through such little mists as overlie the arrangement of the picture. The likenesses are almost all of them good; and the publishers will, we hope, be rewarded by a large sale for the pains and expenditure involved in their rather troublesome enterprise. The plate contains upwards of a hundred portraits, each of which was separately taken from life, prior to its being reduced and grouped and rephotographed. The triple process of reducing, rephotographing, and reproducing, with a painted background, rather injures the individual sharpness of the portraits; but it speaks highly for the first plates, that it leaves them all recognisable and life-like.

THE DERBYSHIRE INFIRMARY.

IN a letter to the governors of the Derbyshire Infirmary, which is remarkably honest and able, Dr. Ogle avails himself of the report of Dr. Bristowe and Mr. Holmes in 1864 to the Privy Council, for the purpose of illustrating some of the chief defects in that institution. It is difficult to avoid coming to the conclusion, from Dr. Ogle's statement, supported in every respect and strengthened by the report of the government inspectors, that the infirmary is overcrowded, ill-arranged, imperfectly nursed, and ill-suited to its great public objects. The question of reconstruction and enlargement is under the consideration of a committee; and Dr. Ogle deserves thanks for the manly and straightforward exposition which he has published of the defects of the hospital, and the means of remedying them. His letter may not be agreeable, but it is useful.

PARIS LETTER.

AN occasional French correspondent writes to us:—The authors of theses "*couronnés*" by the Faculty are beginning in many cases to tremble for their honours. We do not read German as a rule, but those of us who do so, read it very much, and rely a good deal upon others leaving that department of scientific industry in our hands, so that our theses have accordingly shone not less in originality than in erudition. Authors of ambitious theses have, however, occasionally been in the habit of obtaining the services of obliging linguists, and now this is going to be vulgarised. A German lady announces in the public prints, and one of our most respectable journals of medicine gives great prominence to the announcement, that she is prepared to do their German for intending authors, and gentlemen preparing *thèses de concours*, on the easiest terms. "The translations will be made on the spot, under the direction of the person desirous of supporting his thesis by German observations and researches. They will be literal and very exact in respect to the parts essentially useful for the desired research; but, on the contrary, free and succinct in non-essential points. This is a very rapid method, and saves loss of time." Do Madame Lackerbauer, the lady who publishes this announcement, and the authors of the theses, ever meet? I should like to be at hand; it must be like the meeting of the Roman augurs. Her presence at a prize-giving of the Faculty and the Societies must seem to the "*laureats*" like that of the Egyptian skeleton at the feast. I commend this branch of industry to your lady-students as a new example of skill and energy in women's work: it is introducing paint and powder into science; the art *de faire la toilette* of books of science; it is racy of our soil, and, although Germanised in name, I cannot imagine that its inventor is other than a Parisian by birth. We have not yet done paying our indemnity; and if M. Bismarck, who sees everything, pays attention to this, something will be added to the indemnity exacted from our city of Paris. One of our recent authors of theses should have consulted Madame Lackerbauer. He has got into the same sort of trouble as your Dr. John Harley some time since with Dr. Cobbold. Taking his bibliography from the German with only too much fidelity, M. Villeureisis has, in a thesis on hay-fever,

copied too literally from Dr. Phoebus, not only his news but his bibliography, and, like Dr. Harley, is enamoured of that distinguished author "Derselbe" to whom he makes frequent references.

CHOLERA IN PRUSSIA.

ASIATIC cholera has been introduced from Poland into two small villages in West Prussia. The authorities have in consequence taken precautionary measures by establishing a visiting station at Graudenz, and ordering persons coming from the infected places to undergo a quarantine of five days.

THE SANITARY SUPERVISION OF THE THAMES.

SINCE the Corporation of London was appointed sanitary authority for the Thames, it has taken energetic action in establishing a cholera hospital at Gravesend. A suitable vessel has been bought from the Admiralty, and is to be stationed at Gravesend. The sanitary committee have recommended the appointment of a medical staff for the docks, to be superintended by an officer of health at a salary of £600 a year. The Common Council was, however, when the proposal was laid before it, seized with a cold fit of economy, and the subject was sent back for reconsideration.

MEDICAL EDUCATION OF WOMEN.

A MEETING was held on Monday in Birmingham to form an association to promote the introduction of women into the medical profession. A resolution was passed requesting Lady Lyttelton to act as president of the society. We believe that, at a meeting of which we shall have occasion to announce the result next week, it will be proposed by some of the Medical Council of Queen's College, Birmingham, to establish three separate classes for the education of women who desire to follow the profession of medicine.

ANTHROPOLOGICAL INSTITUTE.

AT the meeting of this Society on June 3rd, Professor Busk, the President, exhibited and described a new apparatus for measuring, with ease and accuracy, the cubic capacity of skulls. Dr. Rolleston, while approving generally the method of Mr. Busk, differed from him in the nature of the material to be employed. He thought that sand was objectionable, as being subject to hygrometric variation, from which rape-seed was entirely free.

GRANULAR OPHTHALMIA IN POSEN.

ACCORDING to the German papers, granular ophthalmia has broken out and is spreading extensively in the province of Posen. The Prussian government has ordered measures to be taken by the local authorities to prevent the extension of the disease; and it is reported that it is intended to send into the province ophthalmic surgeons of experience, in order to determine on the measures to be employed to arrest the spread of the malady.

BLUMENBACH TRAVELLING FUND.

A NOTICE appears this week in the *Berliner Klinische Wochenschrift*, signed by Professor Virchow, on behalf of the medical faculty of the University of Berlin, stating that an award of the Blumenbach travelling fund will take place next November. This fund was bequeathed in 1825 by Dr. Rudolphi, and entrusted to the University of Göttingen, on condition that, whenever the interest amounted to six hundred thalers (£90) it should be paid to some young doctor of medicine of high mental promise, to enable him to travel for his improvement in some special department of medical science.

THE TOTTENHAM TRAINING HOSPITAL.

THE annual report of this useful institution was presented this week at an influentially attended meeting. Twenty-five probationers were under training. In addition to the labours of the deaconesses at the parent-house and in private families, there were now four affiliated stations where the sisters were engaged, and a fifth was to be established on the 1st of July next. The places in which the deaconesses had

been engaged during the past twelve months were:—At the Girls' Industrial Orphan Home, Lower Tottenham, four sisters; at the Cork Union Infirmary (Protestant Hospital), two sisters; at the County and City Infirmary, Perth, seven sisters (including a managing and a dispensing sister); at the Protestant Hospital for Incurables, Cork, two sisters; at the Herbert Convalescent Home, Bournemouth, one sister; and on the 1st of July, seven sisters would be sent to take charge of the Infirmary at Sunderland. No payments whatever are made to the sisters, nor are any charges made.

THE WIGAN INFIRMARY.

THE new Infirmary at Wigan has just been opened. The site is an elevated ground half a mile distant from the town. It is built from designs by Mr. Worthington of Manchester, at a cost of £24,000, and affords accommodation for sixty patients.

THE ORGANISATION OF BRANCHES.

OUR members will notice with pleasure the successful result of a special meeting of the Lancashire and Cheshire Branch held at Blackburn. We have more than once referred to the great advantage of establishing numerous local centres of meeting for Branches covering large districts; and we have pointed to the South-Eastern Branch as a conspicuous example of success in this way, and to the Yorkshire Branch as an example of a Branch which languishes for want of localisation and of the establishment of more numerous district places of meeting, worked by district secretaries. It will be seen that, in the excellently worked Branch in Lancashire and Cheshire, the result of this meeting at Blackburn has been the immediate addition of five-and-twenty new members to the Association. Dr. Steele may be congratulated on this fresh evidence of his activity and efficiency as a local secretary.

VIENNA UNIVERSAL EXHIBITION.

WE are requested by Mr. P. Cunliffe Owen to state that the Committee of the Imperial Royal Society of Physicians in Vienna have given notice that during the continuance of the exhibition, the Society will have much pleasure in receiving foreign members of the profession as guests at their rooms, Universitäts Platz 2, Stadt, both at their scientific assemblies, which are held every Friday at 7 in the evening, and in their reading rooms, where a large number of scientific journals lie upon the table. In making this communication, Baron Schwarz Senborn, the President of the General Direction, expresses the wish that the gentlemen alluded to will make a liberal use of the invitation given them.

SCOTLAND.

MORISONIAN LECTURES ON INSANITY.

DR. CLOUSTON delivered the first lecture at the College of Physicians, Edinburgh, on Tuesday, the subject being "Dr. Skae's Classification of Insanity." The lecture had been prepared by Dr. Skae himself some time before his death. Dr. Skae had been appointed the Morisonian lecturer for the next three years, and had prepared three of the six lectures, but failing health having compelled him to discontinue them, he sent for Dr. Clouston to complete and read them, this arrangement being confirmed by the patron after his death.

ABERDEEN OPHTHALMIC INSTITUTION.

THE annual meeting of subscribers to the Aberdeen Ophthalmic Institution was held on the 28th ultimo. The report of Dr. Dyce Davidson, the medical officer for the year ending 31st March, showed that of 656 eye-cases treated, 541 were cured; and of 15 ear-cases, 7 were cured. The revenue was £107 13s., and there was a balance of £32 11s. 3d. at credit.

INVERNESS INFIRMARY.

THE fever hospital, which has cost £2,295, is now completed and ready for patients. The infirmary during the past year has been left by the late Miss Ettles £2,500 for general purposes, £1,000 for the Children's Ward, and other £2,500 in which several relatives were meantime life-rented.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held on Friday, the 30th of May last, at the Office of the Association, 37, Great Queen Street, London—Mr. G. Southam (President of the Council), in the Chair; Mr. Alfred Baker (President of the Association); Sir William Fergusson (President-elect); Dr. Falconer (Treasurer); Mr. Board; Dr. Chadwick; Dr. Chevallier; Mr. Cresswell; Mr. Fowler; Mr. Husband; Mr. Hodgson; Mr. Nicholson; Dr. Roberts; Dr. Shettle; Dr. Sibson; Dr. Stewart; Mr. Heckstall Smith; Dr. Steele; Dr. Underhill; Dr. E. Waters; and Mr. Wheelhouse.

The Report of the Subcommittee on the Constitution of the Council and Committee of Council, was read.

Resolved—That Readers of Addresses and Presidents of Sections shall be Life Members of the Council.

Resolved—That the elected members be increased from ten to twenty.

Resolved—That those five members who shall have attended the fewest meetings in the previous twelvemonths shall be ineligible for re-election.

Resolved—That the method of election, as suggested by the Subcommittee, be adopted as follows:—

MODE OF ELECTION.—The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the Secretary at least a fortnight before the annual meeting. The election shall take place at the first meeting of the new Council by voting-papers containing a list of all the nominated persons.

Resolved—That the President of the Council be requested to give notice of the changes in the laws which are required to carry out the decision of the Committee of Council.

Resolved—That the Accountants' Report, as ordered by the Finance and Journal Committee, be printed and circulated amongst the members of the Committee of Council.

NOTICES OF MOTION FOR ALTERATIONS OF LAWS.

1. The President of the Council will move the following alterations in the Laws.

Rule 7. To omit the word "and" in the second line, and insert after "treasurer" the words "the readers of addresses and presidents of sections for the current and past years after 1872".

Rule 8. To omit the word "fortnight", and insert instead the words "five weeks"; also in the same rule, to insert the word "twenty" instead of "ten".

Rule 13. To insert the following new rule before Rule 13. "The Committee of Council shall consist of—1. The President, President-elect, President of Council, Treasurer, the Vice-Presidents, and one Secretary from each Branch. 2. Twenty members chosen annually by the Council. Of these, the five who shall have attended the fewest meetings of the Committee of Council in the preceding twelve months shall be ineligible for re-election for one year. In case of equality of attendances, the ineligibility shall be decided by lot.

"*Mode of Election.*—The Committee of Council shall nominate twenty persons. A list of these, together with a list of the new Council, shall be sent to each member thereof at least three weeks before the annual meeting. Any two members of the Council shall also have the power to nominate one or more persons, on giving notice to the General Secretary at least ten days before the annual meeting. A list of the nominated persons shall be sent to each member of the Council before the annual meeting; and the election shall take place at the first meeting of the new Council by voting papers containing a list of all the nominated persons."

2. Mr. R. H. B. Nicholson, of Hull, gives notice that he will move, at the annual meeting in August next, that Law 23 be omitted; viz., "The Committee of Council shall annually prepare a statement of accounts up to the last day of each year, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year. The accounts shall be previously audited every year by two auditors, appointed at the preceding annual meeting, and not holding any other office in the general Association." And that the following new Law be substituted for it:—"The Committee of Council shall annually appoint a public accountant to audit the accounts up to the 31st day of December of each year, and

such account shall include a statement of assets and liabilities, and a report upon the financial condition of the Association, which shall be published in the JOURNAL within the first three months of the year."

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES.

THE combined annual meeting of the above Branches will be held at the Town Hall, Great Yarmouth, on Friday, June 20th, at 2 P.M.; J. C. SMITH, Esq., President, in the Chair.

Dinner at the Royal Hotel, Great Yarmouth, at 5.30 P.M. Tickets, 12s. 6d. each.

Members wishing to read papers, or to join the dinner, are requested to communicate, as early as possible, with one of the Honorary Secretaries.

B. CHEVALLIER, M.D., Ipswich.

J. B. BRADBURY, M.D., Cambridge. } *Honorary Secretaries.*

J. B. PITT, M.D., Norwich.

May 19th, 1873.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting of this Branch will be held in the Museum, Warrington, on Tuesday, June 24th, at One o'clock; CHARLES WHITE, Esq., President-elect.

The dinner will be provided at the "Mess House", at Five precisely. Tickets 7s. 6d., exclusive of wine.

The following communications are promised:—Dr. Noble: Some Particulars of Treatment in a Case of Pneumothorax. Dr. Lyster: A Case of Intermenstrual Uterine Pain. Dr. Steele: Note on the Interuterine Injection of Perchloride of Iron in *Post Partum* Hæmorrhage.

Notice of communications should be sent to the undersigned at once.

A. B. STEELE, *Honorary Secretary.*

54, Rodney Street, Liverpool, May 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Great Western Hotel, Birmingham, on Tuesday, June 24th, at 3 P.M.

An address will be delivered by the President, FURNEAUX JORDAN, Esq., F.R.C.S.

The annual dinner will be held at 5 P.M., for the convenience of country members.

Dinner tickets, including waiters and dessert, 7s. 6d. each.

Members intending to be present at the dinner, are requested to communicate with the Honorary Secretaries on or before June 20th, in order that suitable arrangements may be made.

T. H. BARTLEET, F.R.C.S.

BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*

Birmingham, May 20th, 1873.

NORTHERN BRANCH.

THE annual meeting of the above Branch will be held in the Library of the Newcastle-upon-Tyne Infirmary, on Thursday, July 3rd, at 2 P.M.; G. Y. HEATH, M.D., President, in the Chair.

G. H. PHILIPSON, M.D., *Honorary Secretary.*

Newcastle-upon-Tyne, June 4th, 1873.

LANCASHIRE AND CHESHIRE BRANCH: SPECIAL MEETING.

ON Friday, May 23rd, a meeting of the medical practitioners of Blackburn and East Lancashire was held in the Council Chamber at the Town Hall, Blackburn, at which eighteen members were present. Mr. SKAIFE was voted to the chair. Dr. A. B. Steele, of Liverpool, Honorary Secretary of the Branch, was also present.

Mr. MARTLAND explained that the meeting had been called in consequence of a letter received from the Honorary Secretary of the Branch, suggesting that Blackburn would be a desirable place of meeting for the Branch in 1874. He (Mr. Martland) put himself in communication with the medical practitioners of Blackburn and East Lancashire by means of a circular, to which he had received an almost unanimous expression of cordial approval of the proposal to invite the Branch to meet in Blackburn next year. The whole of the profession of Blackburn, with two exceptions, had agreed to become members of the Association and the Branch. He had received letters from several gentlemen of the town and district, who were unable to attend this meeting, but who cordially approved of its object.

Dr. STEELE expressed his great satisfaction with the hearty and en-

thusiastic response which the profession of Blackburn and East Lancashire had made to his appeal. Having observed that amongst the large number of practitioners in this district, but very few indeed were members of either the Association or the Branch, he was induced to write to his friend, Mr. Martland, to suggest this movement; and it appeared, just as he had anticipated, that the medical men of East Lancashire were quite ready and anxious to support the Association. Not a few old members had in past times left the Association with a grievance; and he thought the Branch and the Parent Association must share the blame of having caused this disaffection from a want of sound business management in reference to the supply of the JOURNAL, collection of subscriptions, and other matters. He thought, however, that the Parent Association were mainly responsible, for it was their duty, if the Branches got into disorder, to put them right. However, this was now a matter of the past, and he might assure them that these old grievances, both here and in other parts of the Branch (for he had heard of them elsewhere as well as in Blackburn), would not occur again, a better system of management having been established. He hoped, and, indeed, confidently anticipated, a large accession of new members from this district, and he trusted that as many as possible would attend the annual meeting of the Branch in Warrington, and that of the Parent Association in London in the month of August. Dr. Steele then gave a brief sketch of the history and progress of the Branch, and explained its objects. He said that the Council were most anxious to extend the influence of the Branch throughout the entire counties of Lancashire and Cheshire, and by no means to encourage the limitation of its operations to the two large towns of Manchester and Liverpool. This object was to be effected by meeting successively in every large town in the two counties, and thus securing the sympathy and support of the remotest districts of the Branch. He was confident the invitation sent from Blackburn would be cordially accepted by the Branch.

It was then proposed and carried unanimously that the Branch be invited to hold the annual meeting of 1874 in Blackburn, a deputation was appointed to attend the meeting at Warrington for the purpose of presenting the invitation. Mr. John Skaife was nominated as President elect, and Dr. Coultate, of Burnley, as Vice-President elect for the year 1874.

Votes of thanks were accorded to Dr. Steele, for his attendance; to the Mayor and Town Council of Blackburn, for the use of the room for the meeting; and to the Chairman, John Skaife, Esq., for presiding.

* * We hear that in connection with this movement upwards of five-and-twenty new members have already been added to the Association, and it is expected that many more will eventually join our ranks.

CAMBRIDGE AND HUNTINGDON BRANCH: ANNUAL MEETING.

THE annual meeting of the above Branch was held at the Town Hall, Royston, on Friday, May 23rd, under the presidency of D. B. BALDING, Esq. There were twenty members present, and several visitors, including Dr. Stewart and Dr. Henry, the Honorary Secretaries of the Metropolitan Counties Branch.

THE PRESIDENT gave a short but very interesting introductory address.

New Members.—The following new members were elected:—W. Thomson, M.D., Peterborough (of the Branch only); H. F. Banham, Esq., M.A., Cambridge; C. Mayo, Esq., Mildenhall; Hill Smith, Esq., Stevenage; H. R. Archer, M.B., Royston; Eustace J. Carver, Esq., Melbourne.

Next Place of Meeting.—Dr. MEAD proposed, and Mr. FOSTER seconded, the following resolution: "That the next annual meeting be held at Cambridge, in conjunction with the East Anglian and South Midland Branches, provided those Branches approve of such conjoined meeting."

On the proposition of Mr. PYNE, seconded by Dr. PINCHARD, Dr. Humphry was elected President of the proposed Cambridge meeting.

Representatives in the General Council.—The following gentlemen were elected: D. B. Balding, Esq.; W. R. Grove, M.D.; and G. M. Humphry, M.D., F.R.S.

The British Medical Journal.—It was proposed by Mr. FOSTER, seconded by Dr. GROVE, and carried unanimously—"That this meeting expresses its satisfaction with the manner in which the JOURNAL is conducted."

Papers.—The following papers were read.

1. By J. T. Beck, Esq.: Notes of a Case of Poisoning by Ammonia.
 2. By J. T. Beck, Esq.: On the Relief of Vomiting in Pregnancy.
- Thus paper elicited considerable discussion, in which Dr. Grove, Dr.

Mead, Mr. Hemming, Mr. Hill Smith, Mr. Carver, Dr. Latham, and Dr. Bradbury, took part.

3. By H. R. Archer, M.B.: The Type of Disease.

4. By G. M. Humphry, M.D., F.R.S.: On the Treatment of Ulcers of the Leg. This paper also provoked much discussion, in which Dr. Latham, Mr. Hemming, Dr. Grove, and others, took part.

5. By J. B. Bradbury, M.D.: Notes of a Case of Extensive Pleuritic Effusion, in which a Portion of the Fluid (sanguinolent) was withdrawn by Dieulafoy's Aspirator. Dr. Humphry, Dr. Latham, and Mr. Carver, took part in the discussion.

6. Mr. Edmund Carver exhibited a case of Traumatic Aneurism of the Carotid Artery cured by Pressure; and the President a case of Multiple Fatty Tumour of the Thigh, and a case of Exostosis.

The Dinner took place at the Bull Hotel; the President in the Chair, and Dr. Bradbury acting as Vice-Chairman. Among the visitors were—Fordham, Esq., Chairman of the Quarter Sessions, who returned thanks for the "Lord Lieutenat and Magistrates of the County"; Rev. —Malaher, who replied to the toast of the "Bishop and Clergy of the Diocese"; and Dr. Stewart, whose name was coupled with the toast of the "British Medical Association".

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

A MEETING of the Section took place in Queen's College, Birmingham, on May 20th; Dr. WADE in the Chair.

Tumour of Dura Mater.—Dr. RUSSELL read a paper on cerebral tumours, illustrating his subject by mounted specimens carefully prepared by Dr. Rickards and Mr. Priestley Smith. A specimen was shown of a sarcomatous tumour growing from the dura mater. Dr. Russell remarked on intracranial tumours in general, referring especially to the collection of cases of foreign formation within the cranium made by Dr. Ogle in the *Medico-Chirurgical Review* for 1864-5; and, in this connexion, referred especially to the distinction lately established between the different forms of malignant growth. The tumour weighed six ounces and a half. It sprang from the temporal dura mater, and was composed of cells having all the characters of the round-celled sarcoma; but, in addition, its tissue exhibited an abundance of fibrous bands, giving much the aspect of the loculi of carcinoma. These bands were evidently outgrowths from the dura mater.

Cirrhosis of Liver.—Dr. RICKARDS contributed some notes explanatory of microscopical sections of liver affected with cirrhosis in various degrees of severity. The morbid change was made very evident by the sections having been stained by carmine.

Stricture-Tissue from Rectum.—Mr. LAWSON TAIT showed two preparations of non-malignant stricture of the rectum—an affection of extreme frequency in women. Hitherto it had been regarded, in the majority of cases, as of syphilitic origin; but in none of his cases had Mr. Tait been able to trace a history of syphilis. In one case, the tissue of the stricture was seen, on microscopical section, to be merely a hypertrophy of the submucous coat of the gut. In a second, the condition was quite different, being due to a proliferation of the epithelial layer; the elements being normal epithelial cells in extraordinary numbers and in thick layers, without any evidence of fibrous stroma.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETING.

THE May meeting of this district was held at the County Asylum, Hayward's Heath, on Friday, May 16th; Dr. S. W. D. WILLIAMS in the Chair.

On this occasion, after an elegant luncheon provided by the worthy chairman, the time of the meeting, which was a very full one, was most profitably occupied in a thorough inspection of the building, the whole of which was visited under the guidance of the able and courteous superintendent, Dr. Williams, who, in the course of the tour of the wards, made some most interesting clinical remarks on various well marked cases of general paralysis which presented themselves; deferring the reading of his promised paper on that disease amongst the insane until the next meeting of the district. An ample and most interesting account of this County Asylum, as drawn up by the Branch Secretary, Mr. G. F. Hodgson, appeared in the BRITISH MEDICAL JOURNAL for October 1st, 1870.

Dinner.—Twenty-three members and friends subsequently dined at the Station Hotel; Dr. S. W. D. Williams presiding.

New Member.—B. D. Smithers, Esq., of Hayward's Heath, was nominated as a member of the Association and of the Branch.

The *Next Meeting* was appointed to be held in September at Eastbourne; Robert Colgate, Esq., to be invited to take the chair.

SPECIAL CORRESPONDENCE.

MANCHESTER.

[FROM A SPECIAL CORRESPONDENT.]

Provident Dispensaries.—Owen's College.

A MEETING, convened by the Manchester Medico-Ethical Society, was held in the Mayor's parlour on Thursday, May 29th, to consider the question of the establishment of provident dispensaries in this city and locality. The meeting, however, came to an untimely end, as Dr. Royle succeeded in carrying an amendment against the very principle of provident dispensaries, and so rendered it impossible for the chairman to put any further resolutions to the meeting. When the amendment was submitted to the vote, nineteen voted in its favour, and eighteen for the original resolution. It is very doubtful, however, whether this represents the true balance of professional opinion upon the subject in Manchester. It is, indeed, more than probable that the unforeseen *fiasco* which terminated Thursday's meeting was due to the very conspicuous want of power in the Society's advocates, and to the slashing, though not very logical, reply of Dr. Royle, who is a very Rupert of debate, and who carried the meeting with him by the very force of contrast between his vigour and the warm-water style of oratory employed by the advocates of the system. There was another cause which contributed to their defeat—viz., their extravagant assertion of the results which are to flow from the adoption of these dispensaries. Amongst other good things, for instance, they are to render medical charities unnecessary; they are to enrich and satisfy the wants of every living general practitioner; they are to render sickness quite an enjoyment on the part of the poor; they are to minimise, if not quite remove, pauperism. This hyperbole to many men, who approve of the general principle of self-supporting provident dispensaries, seems to defeat itself by exaggeration; they see in these institutions a very convenient form of family club, and one for which there is ample room. They consider that such institutions would lighten, but not more, the labours of the great medical charities, and that they would bring competent men to the bedside of the poor, in cases where the patients could not attend as out-patients, and were not proper cases for admission into hospitals. The very fact of out-patients coming to a hospital at all, however, strikes some with horror and shame: the peripatetic preacher, Mr. Birch, jun., for example, declaimed at the Free Trade Hall on Sunday against patients having to come for their physic, or to have their legs strapped, to the hospital at all; according to Mrs. Birch, the only fit and proper thing being for the honorary staff of the hospital, or, it may be, the paid staff of a provident dispensary, to visit the people at their houses, taking, it is to be presumed, the necessary bandages and bottles in their professional pockets.

An influential Committee, perfectly unconnected with the Medico-Ethical Society, is considering the whole question of medical out-door relief, and will report in a short time, when I will not fail to keep you *au courant* with their views. Among other preliminary inquiries which they are making, is one into the position, the wages, and, indeed, into every source of subsistence, of each individual patient who applies for relief at the infirmary. Men, specially appointed and paid by the hospital, have been at work upon this subject now for two months; and I am able to say that, so far, these inquiries have not resulted in a single patient being refused admission to treatment on the score of being able to pay for private medical advice.

The Owen's College Council have appointed five of the present lecturers at the medical school members of the Senate; and, as Dr. A. Gamgee was previously appointed the Brackenbury Professor of Physiology, there will be six members of the medical department altogether with seats in the Senate, and, therefore, with a vote in all the governmental matters of the College. This is a very fair proportion, as the entire number of professors for the remaining departments is but twelve.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MAY 20TH, 1873.

W. HOWSHIP DICKINSON, M.D., Vice-President, in the Chair.

REPORTS were read on the following morbid growths: Dr. Bagshawe's specimen of Epithelioma of the Tongue; Dr. Walters's specimen of Loose Cartilage from the Knee-joint, which presented no sign of necrosis; Dr. Silver's case of Epithelioma of the Glottis; and Dr.

Thompson Dickson's specimens of Spinal Cord after Amputation of the Thigh. The Committee coincided in the description of the changes given by Dr. Dickson. A report was also read on Mr. Coupland's specimen of Gouty Deposit on the Aortic Valves. The report showed that the deposit consisted partly of uric acid, but was chiefly made up of carbonate and phosphate of lime.

Renal Cyst from a Pig.—Mr. SEBASTIAN WILKINSON presented a specimen. The animal during life occasionally exhibited symptoms of excitement, perhaps due to uræmia.

Recurrent Osteo-Sarcoma.—Mr. BUTLIN exhibited a specimen, with drawings, of recurrent osteo-sarcoma from the lower extremity, unconnected with bone, and situated in the subcutaneous tissue. The disease had been on three separate occasions removed from the same spot within two years. There was no glandular affection, and no evidence of visceral affection.—Mr. HOLMES referred to a similar case, but in which the disease recurred at much longer intervals. It was at first checked by local blistering, and ultimately removed. It returned thirteen years afterwards, and was again removed. It had not recurred when the patient had been last seen several years afterwards.—Dr. DICKINSON alluded to a case in which a primary myeloid displaced the lung. It was, however, possible that it had originated from the rib.—Referred.

Dilatation of the Kidney.—Mr. KESTEVEN exhibited a spleen and kidney from a young man aged 34, who had been suffering from enlarged spleen, and who died suddenly of apoplexy. On *post mortem* examination, besides enlarged spleen, the most noteworthy lesion was that the pelvis of the left kidney was distended into a large cyst capable of holding a pint of urine, and in which were masses of soft substance of the consistence of butter. No other cause of obstruction could be found; the ureter was pervious; no disease of the bladder existed. This semi-solid substance consisted of minute crystals of triple phosphates and *débris* of mucus. How far it was possible that this material could have contributed to the dilatation of the pelvis, was the question on which the opinion of the Society was asked.—Dr. DICKINSON remarked that it was not evident what was the cause of the dilatation.

Disease of Suprarenal Capsules.—Dr. GREENHOW exhibited specimens of disease of the suprarenal capsules from five subjects. In the first, from a patient of his own, the capsules presented the ordinary morbid appearances found in Addison's disease. The skin and buccal mucous membrane were affected. There were lumbar abscess, and enlargement of the mesenteric glands, Peyer's patches, and solitary glands. The two next specimens were from the bodies of patients of Dr. Sydney Ringer. A report by Dr. Sanderson and Dr. Klein described catarrh of the stomach with white patches consisting of lymphoid tissue. The fourth case—one of Dr. Henry Thompson's patients—presented during life only slight symptoms of the disease, and after death only one capsule was found to be affected. The fifth specimen was one of secondary cancer of the capsule, the patient presenting no symptoms of Addison's disease during life. The specimens tended to confirm all the conclusions previously formed regarding the nature of the disease, and the connection between the pathological condition of the capsules and the symptoms during life.

Blood-Cyst from the Leg.—Mr. HOLMES exhibited a specimen. It was removed from a man aged 30, was of two years' growth, and had very freely bled on several occasions. There were no varicose veins. The wound healed well. The cyst was lined with blood-clot like an aneurism. It was, Mr. Holmes thought, perhaps a dilated vein.—Mr. HULKE referred to a similar case which had been under the care of Mr. De Morgan in a girl thirteen years old. It was removed, and six months afterwards a sarcoma appeared at the same spot.—Referred.

Pulsating Cancer of the Kidney.—Mr. HOLMES exhibited a specimen of cancer of the kidney which, during life, pulsated, and over which an arterial murmur was produced from pressure on the circulation.

Tumour of the Jaw.—Mr. WAGSTAFFE shewed a tumour of the upper jaw, presenting, it was stated, microscopical characters of epulis and epithelioma. The interest of the specimen lay in the fact that both upper maxillæ had been safely removed. Mr. Dobson, of Bristol, performed the operation.

Condylomata of the Penis.—Dr. GOODHART exhibited for Mr. GAY a specimen of extravagant and extensive condyloma of the penis, involving the urethra. There was no distinct evidence of the syphilitic character of the affection.

Aortic Valve Disease in Soldiers.—Mr. MYERS exhibited two hearts taken from the bodies of soldiers brought to the Society in 1869. They exemplified the form of aortic disease, with much dilatation, found amongst soldiers. Mr. Myers also shewed sphygmographic tracings.

Intrathoracic Tumour compressing the Bronchus.—Dr. DICKINSON exhibited a very interesting specimen of lymphadenoma, of the size of a Tangerine orange. It pressed on the trachea and both bronchi, but

chiefly the right. The specimen was taken from the body of a clergyman, who for about two years was the subject of attacks of asthma of a spasmodic character, and who presented the physical signs of obstruction to the right bronchus, with circumscribed dulness at its point of origin.

A Rare Form of Tumour.—Mr. MAC CORMAC exhibited a tumour, measuring eight by six inches, which he had removed from the lumbar region of a man twenty-four years of age. It was of three years' growth. A microscopical examination by Dr. Creighton showed that the structure of the tumour was largely of muscular connective tissue.—Referred.

Specimens of Hearts, Livers, and Kidneys.—Dr. CRISP exhibited specimens showing the injurious effects of alcohol.

The meeting was then continued beyond the usual time; Dr. Crisp, Dr. Goodhart, Dr. Curnow, Dr. Hilton Fagge, and Mr. Wagstaffe exhibiting specimens.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 23RD, 1873.

PRESCOTT HEWETT, ESQ., President, in the Chair.

Traumatic Rupture of the Tympanic Membrane.—Mr. W. B. DALBY reported five cases of this accident, and five others also were mentioned as having come under his notice. In three cases the injury was caused by the head of a pin being thrust through the membrane; in three others, a needle, the point of a pair of scissors, and a blade of straw, were used in the same manner. In the remaining four cases the rupture was caused as follows: by a fit of vomiting, by blowing the nose vigorously, by a box on the ear, and by pressing some cotton-wool into the ear. The terminations of these cases were very various, both as regards the healing of the rupture and the extent of permanently impaired hearing. In six out of the ten cases the wound healed; and when no inflammation in the tympanic cavity followed the accident, a few days sufficed for the perforation to close. In the other four cases, the perforation did not heal at all; and in two out of three, improved hearing was obtained by the use of an artificial membrane, in the form of a piece of moistened cotton-wool, worn pressed up to the tympanum. When suppuration had been once established in the tympanic cavity, the treatment pursued was the same as in cases where the perforation had been the result of disease, and consisted chiefly in the use of astringents. No treatment at all was adopted when the injury was not followed by inflammation in the tympanum. Mr. Dalby pointed out, that it did not follow necessarily that the hearing was regained in a greater degree if the rupture healed, than when the perforation remained; and that the greatest losses of hearing followed those accidents in which the greatest force was used in producing the rupture. The conclusion arrived at was, that the injury to the nervous structure of the ear behind the tympanum caused the loss of hearing, rather than the injury to the membrane itself. Where the shock was very slight, as in the instance of injury from a needle, or any sharp instrument, the hearing was regained completely, or nearly so, but if the instrument used were blunt-pointed, and considerable force was employed, the resulting deafness was proportionately greater. The same held true when rupture took place from sudden condensation of air in the tympanum (as in blowing the nose), or in the meatus (as in a box on the ear). It was quite impossible, Mr. Dalby said, to recognise a cicatrix in the tympanic membrane if the patient had not been under observation during the process of healing, as thinning of the membrane, and other changes, occurring during catarrh of the middle ear, were sometimes so like cicatrices as not to be distinguishable from them.—Mr. HINTON confirmed Mr. Dalby as to a wound of the membrane leaving no serious defect. He was not, however, certain that all the cases read were traumatic. If so, they might give rise to erroneous notions as to the gravity of the accident.—Mr. DALBY showed that there might be rupture of the membrane even by a box in the ear.

Treatment of Diabetes with Skimmed Milk.—Dr. GREENHOW read the case of a patient, successfully treated for diabetes with skimmed milk, on the plan of Dr. Donkin. W. H., coal-porter, was admitted into the Middlesex Hospital on November 9th, 1872. He had been of intemperate habits, and subject to rheumatism and winter cough. On admission he was suffering from œdema of the right leg, and was passing a great deal of urine. He was kept under observation for some days, on a restricted diet, and was found to have night and morning cough, raising a good deal of sputum, which continued more or less whilst he remained in the hospital. On December 1st, he passed one hundred and two ounces of urine, containing about four ounces of sugar by the fermentation test. He was then treated with opium, beginning with half a grain twice a day, and gradually increased to one grain three times a day. Beyond this it could not be carried, as the patient's bowels became obstinately confined, his tongue creamy, and his pupils contracted. The quantity of urine somewhat diminished, but not the

quantity of sugar contained in it. On December 12th, he began to take skimmed milk as exclusive diet; at first, four quarts, increased on December 20th to five quarts; and on January 4th, to six quarts daily. The brandy and opium were gradually decreased, and on December 19th were entirely discontinued. On December 12th, he passed ninety-five ounces of urine, of specific gravity 1035, reduced by fermentation to 1007, containing twenty-eight grains of sugar to the fluid ounce. From this time the average quantity of urine diminished, though less steadily than the proportion of sugar it contained, which grew less and less, until after January 18th no trace of it was ever found, either by Trommer's or the fermentation test. From January 21st, his diet was gradually changed, and he was allowed bran, gluten cakes, eggs, ham, meat, and greens, with a smaller quantity of skimmed milk. On March 12th, he was sent to Eastbourne Convalescent Hospital, and was re-admitted to the Middlesex Hospital in April, for fourteen days, during which time he passed from forty to sixty ounces of urine in the twenty-four hours, perfectly free from sugar, and was otherwise in good health. He continued under observation after his discharge, and on May 23rd, remained in the same satisfactory condition. Dr. Greenhow remarked, that he did not bring the case forward in order to recommend skimmed milk as a panacea for the cure of all cases of diabetes; he did not even assert that a permanent cure had been effected in this case; but, so far as it had gone, he considered the case an important and interesting one, as showing that it was possible to maintain an adult in health and strength for many weeks on a diet of skimmed milk exclusively, and also that such a diet is, sometimes at least, successful in removing the glycosuria. He did not pretend to determine, from his limited experience, in what classes, or proportion of cases, of diabetes it would be found applicable, but thought no other treatment could have done more for W. H. In old-standing cases, especially if complicated with organic disease, it would undoubtedly fail, as do all other plans of treatment that have been tried.—Dr. ANSTIE asked what in this case would be the effect of removing the alcohol. That increased the urine, and sometimes also the sugar.—Dr. PAVY said his own experience was diametrically opposed to the system of treatment by skimmed milk. He thought the author of the paper should have waited and collected other evidence. The case he considered exceptional. The patient's age was fifty-six, and with such patients one could do anything. No doubt the disease would have yielded to other measures. He did not stand up for the opium treatment in particular. He did not introduce it. After opium, the patient was put on skimmed milk. Twelve pints were given, and only sixty ounces of urine passed; he thought there must be something wrong here. He had tried skimmed milk. After it was given for a time, the patient would take other food; they wanted something solid. Sugar was not to be got out of fat; on the contrary, it was of the greatest use to diabetic patients. With skimmed milk, both thirst and sugar were increased. He tried it in a well marked case of diabetes. The patient had done exceedingly well with restricted diet, improving in every way. He put him on skimmed milk; the urine increased; the sugar returned, and went on increasing. He was again placed on solid food, but did not perfectly recover. Female patients, too, complained of it. He objected altogether to the way in which this plan of treatment had been brought before the public. It had been brought forward as a cure for three of the most inveterate diseases known—Addison's disease, Bright's disease, and diabetes, cases of which had been said to be cured by it in a very short time. This he did not think right.—Dr. DONKIN said that, as the originator of the skimmed-milk treatment of diabetes, he had listened with much interest to Dr. Greenhow's paper and the discussion on it. In a large number of diseases, and indeed in most acute diseases especially, there was a natural tendency to recovery, either through what has been termed the *vis medicatrix naturæ*, or in consequence of a tendency on the part of the disease to run a definite course, and then subside. For this reason it was extremely difficult, if not impossible, to determine in these affections how far recovery in any given case was to be attributed to nature, and how much had been effected by remedies. But this did certainly apply to diabetes; with it there was no conservative energy of the constitution at work, sufficient to subdue it, and it showed no tendency whatever to end spontaneously in recovery. On the contrary, the disease, if left to itself, proceeded from bad to worse, and at last ends fatally. Now this was a fact of great importance, because it enabled us to determine with the greatest degree of exactness the operation on it of different remedies; for whenever improvement or recovery took place, it must be attributed to the treatment or remedy employed. Dr. Anstie had put a very pertinent and proper question in asking whether, in Dr. Greenhow's case, the patient having been intemperate, the withdrawal of stimulants did not produce recovery. In reply to this, he could refer to a case of diabetes, in which the patient had been a total abstainer

for fourteen years. He had been placed on a restricted diet, similar to that recommended by Dr. Pavy and others, by his medical advisers, for a period of four months, at the end of which time he came to him, passing twenty-five grains of sugar to the ounce of urine, having a specific gravity of 1040. By a singular coincidence, this case was placed by him under the skimmed milk treatment on the very day that Dr. Greenhow began it in his case, the 14th of December. The sugar was entirely removed from the urine in fourteen days. In January he began to take a more generous diet, and also to increase in weight rapidly. On the 8th of April last, he wrote to him the letter which Dr. Donkin handed to the President, in which it was stated that he had gained a stone in weight, and that the specific gravity of his urine ranged from 1016 to 1020, never higher. He had since ascertained that his urine was free from sugar. He felt sorry at the manner in which Dr. Pavy had entered into the discussion. Dr. Pavy had written a book on diabetes, in which he asserted that, as milk contains from four to six per cent. of lactic acid, or milk-sugar, it must be injurious in the disease. But, more unfortunately still, in this book he had published a dietary table, in which he had placed milk at the head of the list of prohibited articles of liquid food, such as ordinary saccharine compounds. The fact was, that Dr. Pavy had bound himself to a dogma unsupported by a single clinical observation, and rendered untenable by his (Dr. Donkin's) own experiments. In 1847, '48, and '49, the speaker first observed the treatment of diabetes in the Edinburgh Infirmary, by Sir Robert Christison, who had always been a strenuous advocate of the dietetic method. During the quarter of a century which had since elapsed, he could state conscientiously, that he had tried every known remedy, not only such as had been recommended by others, but several which had suggested themselves to his mind; but the result was negative. Opium he had often found to do more harm than good. Dr. Pavy had told the members of the Society that opium was first prescribed for diabetes by a Scotch physician; but, if Dr. Pavy would look into Aetius, he would find it recorded that it was used as a remedy in the disease by Archigenes, in the second century, and everybody knew that it had been a common remedy ever since. It had occurred to him, that possibly, skimmed milk might prove an efficient remedy for the disease. He had a severe case of diabetes brought under his care, in the Sunderland Infirmary, but the result was partially a failure; the patient was an incorrigible, and could not be kept strictly on the diet. In the second case, however, he was successful. In the beginning of the year following, Dr. Wiltshire, who, he believed, was a member of this Society, but not present, was in Sunderland, and requested to see some of his cases. Dr. Wiltshire then examined the urine of two cases, which he visited with Dr. Donkin, for himself, and in each instance declared it to be free from sugar. In the one case the sugar had been removed only a few days, the patient having previously passed about 30 ounces daily, and from 25 to 32 pints of urine. The second case had been convalescent for three months, and had gained about three stones in weight. Dr. Donkin said that he had not in a single instance published his own unattended experience. All his cases published were authenticated by the names of professional gentlemen who saw them in conjunction with him, or with whom he attended them in consultation. He wished to tell Dr. Pavy that he had as scrupulous a regard for truth as he had, and an enthusiasm for his profession quite equal to his. If Dr. Pavy could not believe his statements, surely he should show some regard for the reputation of those gentlemen whose names he had used. He desired to point out in reference to the skimmed-milk treatment of diabetes, that it differed from the restricted regimen introduced by Dr. Rollo, nearly a hundred years ago, and since more fully developed by the practical sagacity of the late Dr. Prout and Sir Robert Christison, in following respects. First of all, it contained a saccharine alimentary principle, necessary for health, which was assimilated in spite of the disease; and secondly, it excluded all fatty substances which were injurious in the disease. There was certainly *prima facie* evidence that fat was converted into diabetic sugar, in the fact that in advanced cases patients might take such large quantities of fat, that the blood-serum might become milky, and yet, notwithstanding this, the temperature of the body remained far below the normal standard. What became of the fat? It was, he said, certainly not oxidised and converted into heat, and certainly not deposited in the tissues. It most assuredly, he considered, underwent saccharine metamorphosis, and of this he had satisfied himself by direct experiments. For this reason, cream, on account of the butter it contained, was certainly injurious in the treatment of diabetes.—Dr. PAVY explained that it was to the unwarranted use of the word cure that he objected.—Dr. GREENHOW said he had brought forward the report of this case from no motive of advocacy, but in *bonâ fide*. He made no use of the word cure. Dr. Anstie's query was most pertinent, but he did not think that the withdrawal of the alcohol had anything to do with the improvement.

Subperiosteal Excision of Hip-joint.—Mr. JOHN CROFT exhibited a case. C. B., aged 7, was brought as an out-patient to St. Thomas's Hospital; on February 6th, 1871, suffering from the first symptoms of hip disease, on the right side, the result of a fall one month previously. His mother was in good health. A maternal aunt had died of consumption. His father died of rheumatic gout. He became gradually worse, and a large abscess formed on the outer side of the thigh, below the joint. On September 11th, he was admitted into the hospital, and the abscess was incised. On November 22nd, a slightly curved incision, three inches long, with its centre opposite the top of the great trochanter, was made down to the bone, dividing the periosteum. The soft parts were then turned aside, and the periosteum cut across at right angles to the first incision, just below the level of the small trochanter. With the bistoury the transverse division of the periosteum was carried round all but the inner and back part of the bone. Then, with a periosteal elevator, like Dr. Sayre's, the periosteum was easily peeled back. An attempt was also made to detach the muscular insertions from the great trochanter, but this was not effected without the use of a knife. The top of the femur was sawn off with a chain saw, just below the small trochanter. This mass having been turned out by the elevator, the acetabulum was freely exposed. Five roundish sequestra, varying in size from a small to a large pea, were picked out of the floor of the space. The portion of femur removed consisted of the head, neck, and two inches of the shaft, measuring from the top of the great trochanter. The wound was partially closed by sutures. After the operation, the limb was kept at rest, and extended by means of a bracketed long outside splint, or extension by weight. At the end of four weeks, passive motion was commenced. In the following July, he was able to wear a boot and iron support. The last sinus finally closed at the end of the year 1872. When exhibited, eighteen months since the operation, he was in good health and spirits, and could run about. At the hip, very slight flexion and extension were allowed. The chief movement was of the pelvis on the spine. He could not rotate or abduct the limb. In this respect, therefore, Mr. Croft did not think he had been a gainer by the operation as he performed it. The limb appeared shorter than the opposite one. On measuring from the anterior superior spine of the ilium to the tip of the internal malleolus, the right leg was two inches shorter than the left; but on comparing the length of the right femur with the one not operated upon, the sound femur measured 11½ inches, and the right bone scarcely the eighth of an inch less. From the crest of the ilium to the top of the shaft on the right side, the distance was three inches, and from the crest of the ilium to the top of the trochanter on the healthy side, four inches. The anterior superior spine of the ilium, on the right side, was one inch above the level of the opposite point of bone. Mr. Croft remarked, that though the case did not exhibit any superiority in the matter of range of movement, yet to the subperiosteal method of operating was due the remarkable and important fact, that the diseased femur, from which two inches of shaft were sawn off in November 1871, was now almost, if not quite, as long as the healthy femur in the opposite limb.—Mr. W. ADAMS said that Mr. Croft had failed to obtain perfect motion, from fibrous ankylosis and shortening of the limb. He had seen as good results by the ordinary method. He found the length of the thigh bones equal, so that in the side operated on regeneration must have taken place. He thought that they should operate earlier in all cases, even when first called upon to open abscesses.—Mr. BARWELL said it was often difficult to get consent to operate so early. One of his patients on whom Sayre operated did not do very well. Abscesses formed, and there was some shortening. Some cases did very well, some not. It can hardly have all the advantages said of it. In this case he did not think the right femur as long as the other by nearly an inch, and the heel was more than two inches from the ground. He had seen quite as good results in ordinary cases.—Mr. CROFT said there were two classes of hip-disease; in one there was caries, in the other necrosis. The former, as a rule, did badly; the latter did well. Even according to Mr. Barwell, one inch of bone had been regenerated.—Mr. HURST and Mr. CALLENDER, who had been deputed to measure the child's limbs, reported that the two femora were exactly equal in length.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, MARCH 15TH, 1873.

Sir DOMINIC CORRIGAN, Bart., M.D., M.P., Vice-President, in the Chair.

Multiple Ovarian Tumour.—Mr. HAYES showed a large tumour, which he had removed on the 12th of March. It had been concurrent with pregnancy. After giving birth to a child, the woman came under treatment, but refused to undergo ovariectomy. On February 18th,

Mr. Hayes tapped her, when fifty six and a half pints of a thick fluid escaped slowly, in the course of five and a half hours. On March 12th, ovariectomy was performed. The anterior wall of the tumour was connected with the anterior abdominal wall, but the adhesions were easily severed. The posterior wall of the tumour was adherent to the right lobe of the liver by a tough and dense fibrous band. Peritonitis set in, and the patient died on the 15th. The tumour, on removal, weighed six pounds one and a half ounces, and contained twelve pints of fluid. Its external surface was uniform, but large solid masses bulged into its interior, which was composed of a vast number of cysts.

Senile Chorea, depending on Atheroma of Cerebral Vessels.—Dr. A. W. FOOT exhibited the viscera of a man aged 68, affected with unilateral chorea, who had died of capillary bronchitis. On the surface, and towards the anterior end of the corpus striatum of the side opposite to that affected, were two shallow depressions, underneath which were two delicately encysted deposits of white diffuent brain-substance, showing "granular corpuscles," with molecular and fatty debris. Running transversely across the deepest part of the interior of the optic thalamus of the same side was a deeply discoloured track, orange red at the end nearest the lateral ventricle, plum-red at the opposite end, where it approached the quadrigeminal bodies. Both basal and cortical vessels were, almost without exception, atheromatous. The spinal cord was healthy; the cerebellum was soft and greasy; the kidneys were granular and cystic; the cortex was thin; their arteries were atheromatous. The left ventricle of the heart was an inch thick at the apex and mid point, seven lines at the base; the larger curtain of the mitral valve alone was atheromatous, showing mitral valvulitis from the increased strain of an enlarged ventricle. The aorta presented the various forms of atheroma.

Double Ureters.—Dr. FINNY showed the kidneys, with symmetrical double ureters, from the body of a female subject, in the dissecting room of the School of Physic. The four tubes were all pervious, and passed separately into the bladder.

Resection of Elbow-joint.—Mr. TYRRELL exhibited the parts removed in two cases. A girl, aged 14, had fallen off a donkey on her elbow, a year ago. Owing to extensive disease, the joint had to be excised. The operation was performed by simple incision, and the result was very successful. The second case was that of a woman, aged 30, who a year and a half ago had a tumour over the internal condyle of the humerus. In removing this tumour, the ulnar nerve was slightly frayed. At the end of six months, the tumour again commenced to grow, and became very painful. Removal of a portion of the ulnar nerve failed to relieve the patient's sufferings. On March 5th, Mr. Tyrrell excised the joint. The tumour sprang from the internal condyle of the humerus, but did not implicate the joint. It was dense and fibrous, and was stated by Mr. Coppinger to be an example of the "spindle-cell sarcoma" of Virchow. Since the operation the woman's general state had improved much. Mr. Tyrrell believed that resection for recurrent fibroid tumour had never before been performed.

General Fatty Degeneration of Viscera.—Dr. A. W. FOOT exhibited the heart, liver, and kidneys, of an intemperate man, aged 64. The viscera were penetrated with the fatty change; the large blood-vessels illustrated all stages of the atheromatous process. The interior of the right ventricle presented the subendocardial buff striæ, faithfully represented in Pl. 68, fig. 1, 2, of Lebert's *Atlas*, particularly on the muscular tissue of the infundibulum. A piece of muscle from the outer wall of the chamber showed absence of the striæ, and some of the earlier stages of the intrasarcolemmar fatty degeneration. Calcification of the atheroma had occurred in one of the aortic valves, but they held water well, and were not roughened on their ventricular aspect. The mitral orifice was enlarged from excentric hypertrophy of the left ventricle. In the aorta, the atheromatous process was specially obvious at the curve of the arch, and at the points of origin and division of the larger vessels. The liver weighed six and a half ounces, and presented cirrhosis and steatosis. Thickened and condensed peritoneum covered the barely perceptible prominence which occupied the situation of the Spigelian lobe. In other respects the cirrhotic condition was not far advanced; the convex surface was becoming granular, and showed frequent cicatricial depressions, and milky thickening of the capsule. The section presented a nutmeg appearance; the venulæ centrales were dark and dilated, surrounded by the light-coloured fatty peripheral cells. The fat amounted to 9.4 per cent., or 41.10 grs. of fat to each ounce of liver. The hepatic cells were extensively infiltrated with fat drops. The gall-bladder contained an ounce and a half of thick orange-coloured bile, and thirty-four small glossy-green warty calculi. The kidneys were large and smooth, and weighed seven and a half and six and three quarter ounces. The tubular epithelium of the cortex was fatty; the larger branches of the arteries

atheromatous: the exterior of the organs preserved traces of early lobulation. The man had been a week in hospital, during four days of this time he had been dying. When admitted, he was dropsical in the legs and abdomen, cyanotic, jaundiced in the eyes, and had been long deprived of sleep. The action of the heart was slow, weak, irregular, intermitting every fifth beat, without abnormal sound. Notwithstanding the protracted death, rigor mortis was strong and general twenty hours afterwards.

CORRESPONDENCE.

SKIMMED MILK IN DIABETES.

SIR,—In the recent discussion at the Clinical Society, which you last week criticised, Dr. Pavy ventured to impugn the truthfulness of my published observations on the skim-milk treatment of diabetes. His remarks were to the effect that my cases are fabulous, and undeserving of the slightest credence. All the successful cases I have published are authenticated by the names of other members of the profession, who witnessed the complete removal of the sugar from the urine by the treatment. It is needless to again repeat all these names, but I may refer in particular to Mr. Francis and Mr. Wilson, of Sunderland; and to Mr. Keele, of St. Paul's Road, Highbury; and I am prepared to produce further evidence to prove the accuracy of my statements regarding the effect of the treatment on the disease. Under these circumstances, I must request Dr. Pavy either to retract his observations, or to declare his reasons for maintaining them.

I am, etc.,

A. S. DONKIN, M.D.

Henrietta Street, Cavendish Square, W., June 4th, 1873.

THE ARMY MEDICAL WARRANT.

SIR,—You have doubtless received from other correspondents remonstrances against the injustice of the last Medical Warrant. It may, however, bring the effect of the new regulations more prominently to view if I give you one or two examples of individual hardship.

Assistant-Surgeon A. B., at the beginning of his career, was sent to India on the staff. Without being consulted as to his wishes on the subject, he was gazetted to a regiment, with which he served until the regiment returned to England. Again, without reference to himself, the authorities removed him from his regiment, and he found himself for the second time on the staff. Having suffered severely from the Indian climate, and in view of being again ordered to India as a staff assistant-surgeon, A. B. obtained official sanction to exchange to a regiment just returned from that country. His prospects under the old system were clearly defined, as he was sure of being allowed to remain with his regiment until promoted, unless he were removed therefrom sooner at his own request. The regiment to which he exchanged had a long tour of home service before it, and A. B. had to pay a proportionately high price for the advantages he thus appeared to have secured. Now, however, he finds himself again cast adrift, without a regimental home, without any intimation of what to expect, and without any hint of being granted compensation for even the heavy pecuniary loss he has thus sustained, for the *third* time, by the action of the authorities. It cannot be supposed that the Director-General has not represented to the Secretary of State for War that a medical officer, like all other officers, has to pay (by regulation) band and mess donations on appointment to a regiment, as well as the annual subscription thereto. A. B.'s pecuniary loss in compulsory band and mess entrance donations alone is £50; his regulation annual subscription amounted to £10 each year, though in fact actually double that sum; his compulsory change of uniform on two occasions may be set down at not less than £30, and a heavy tailor's bill will again have to be incurred by his present removal to the staff. But this officer's severest loss, besides confiscation of the large sum paid for his exchange, will be in being deprived of all the advantages which he had obtained by such exchange, and which he should have retained but for the new Warrant.

X. Y. was sent to India on appointment, was gazetted to a regiment without being consulted as to his wishes, and served with his regiment until invalided, in consequence of his health having given way from the effects of hard work (three cholera epidemics) and climate. Before half of the six months' leave of absence, granted at the recommendation of a medical board, had expired, he found himself gazetted to the staff without his consent. This involved a loss of his Indian allowance for three months, and of his regiment. He subsequently obtained an appointment to a cavalry regiment, and now finds himself again thrown on the staff, with the heavy expense of a cavalry uniform and equipment, mess and band donations (for the second time), and

the usual outlay in a regiment—all sacrificed, not to add the loss of the sum usually obtained by an exchange from cavalry to the staff.

These are but two instances out of many within my own knowledge of the immediate and direct hardship inflicted by the new Warrant on regimental officers. *Ex duobus disce omnes.* But the conditions imposed upon the department generally are so obnoxious, inconsiderate, and ill-advised, that we look to the press to exert its powerful influence in obtaining such a modification of the new Warrant as will at least restore to medical officers the privileges conferred upon them by the Royal Warrant of 1858, of which they have now been so surreptitiously and dishonourably deprived. And, in the event of the removal of the late assistant-surgeons from regiments being adhered to, a suitable pecuniary compensation should be granted to them for their forfeited band and mess donations, compulsory change of uniform, and the sums which they paid or could have received on exchanging to the staff.

I am, etc.,

SENEX JUNIOR.

April 23rd, 1873.

OBITUARY.

ALEXANDER J. M'GREGOR, L.R.C.P. & S. Ed.

MR. M'GREGOR was born in Rannoch, Perthshire, in 1839. He was gazetted ensign in the Royal East Middlesex Militia, in which his father was lieutenant, at the early age of sixteen; and three years afterwards was promoted to the rank of lieutenant. He continued with the regiment until the end of the Crimean war. He afterwards studied medicine in Edinburgh, and received the double qualification of the Royal College of Physicians and Surgeons of that city in 1863. He then became assistant, and soon afterwards partner, to Dr. Wilkinson of Tranent, whom he ultimately succeeded. He very soon gained an extensive practice; but, finding his health was not sufficiently robust for country practice, he obtained the appointment of Medical Superintendent to the Barony Workhouse and Lunatic Asylum at Glasgow. About Christmas, he had several attacks of pulmonary hæmoptysis, and died of consumption on March 19th, at the early age of thirty-four. Mr. M'Gregor has left a widow and four children. It is pleasing to mention that the managers of the Barony Parochial Board have given his widow a gift of £50, as an acknowledgment of her late husband's services.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, May 22nd, 1873.

Johnson, Cottingham Greaves, Clapham

The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, May 29th, 1873.

Webb, William Edward, Wimborne Minster

As Assistants in compounding and dispensing medicines.

Brouard, Edward James, Guernsey

Herd, Henry Wilson, Sedburgh

Higginson, Alfred, Bolton

Lomas, Charles Benjamin, Leicester

Matcham, Edward, Lowestoft

Wheatley, Arthur William, Stratford-on-Avon

Wrigglesworth, George, Hull

Moorhouse, William, Wakefield

MEDICAL VACANCIES.

THE following vacancies are announced:—

ABERGAVERN UNION—Medical Officer for the Blaenavon District: £30 per annum.

BECKETT INFIRMARY, Barnsley—House-Surgeon.

BILLERICAY UNION—Medical Officer and Public Vaccinator for the Mountnessing District: £30 per annum, and fees.

BLOOMSBURY DISPENSARY, Great Russell Street—Resident Medical Officer.

BUCKINGHAMSHIRE—Public Analyst. Applications to Acton Tindal, Esq., Aylesbury.

BUCKS COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £80 first year, £100 per annum afterwards, board, and furnished apartments. Applications to Acton Tindal, Esq., Aylesbury.

CAISTOR RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

COUNTY DOWN INFIRMARY—Resident Registrar and Assistant-Surgeon: 60 guineas per annum, board, apartments, and washing.

COUNTY OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles.

GLENELG, Parish of—Medical Officer: £90 per annum, and residence. Applications to Rev. John Macrae.

GREAT YARMOUTH HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.

GUILDFORD UNION, Surrey—Medical Officer and Public Vaccinator for the Horsley District: £45 per annum, and fees.

H.M.'s INDIAN MEDICAL SERVICE—Eleven Surgeons.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square—Dispenser: £100 per annum, rooms, coal, gas, and attendance.

HUDDERSFIELD UNION—Medical Officers and Public Vaccinators for the Golcar and Paddock Districts: £20 and £12 per annum and fees, respectively.

HUNSLET UNION, Yorkshire—Medical Officer for the Workhouse: £40 p. ann.

LISMORE UNION, co. Waterford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cappoquin Dispensary District: £100 per annum, and fees.

LITTLE LEVER URBAN SANITARY DISTRICT—Medical Officer of Health: £15 per annum.

NEWBURY UNION, Berks—Medical Officer for District No. 1: £170 per ann.

RAINFORD URBAN SANITARY DISTRICT—Medical Officer of Health: £10 per annum.

ROSS RURAL SANITARY DISTRICT—Medical Officer of Health: £60 p. ann.

ROYAL UNITED HOSPITAL, Bath—House-Surgeon: £60 per annum, board, and residence.

ST. MARYLEBONE—District Medical Officer: £120 per annum.

SHEFFIELD GENERAL INFIRMARY—House-Surgeon: £140 per annum, board, lodging, and washing.

SLIGO UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Riverstown Dispensary District: £100 per annum, and fees. Applications to Henry McLoughry, Esq., Riverstown.

STOCKTON UNION—Medical Officer for the Norton District: £50 per annum, and fees.

TORRINGTON UNION, Devon—Medical Officers for the Great Torrington and Winkleigh Districts: £70:11 and £17:18 per annum, and fees, respectively; also, a Public Vaccinator for the Winkleigh District.

TRAINING HOSPITAL, Tottenham—Physician.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea—Assistant-Physician.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon.

WILTON RURAL SANITARY DISTRICT—Medical Officer of Health: £120 per annum.

WORCESTER INFIRMARY—Resident Surgeon, Dispenser and Secretary: £150 per annum, furnished apartments, coal, gas, and attendance.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

MOORE, Edward, Esq., Surgeon, of Halesowen, aged 70, on May 6th.

VISE, E. B., Esq., Surgeon, of Holbeach, aged 84, on May 17th.

MR. JOHN SHANNON has been presented with a handsome gold watch, as an acknowledgment of the energy displayed by him during the prevalence of small-pox last year. It bears the following inscription: "Presented to Mr. John Shannon, Whitehaven, by a few friends, as a mark of respect. May 1873."

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, May 31st; The Manchester Guardian, June 4th; The Aberdeen Daily Free Press, May 31st; The Bath Express, May 31st; The Birmingham Daily Post, June 4th; The Melbourne Argus; The Roscommon Journal; The Yorkshire Post and Leeds Intelligencer; The Herts and Essex Observer; The Birmingham Daily Mail; The Sussex Daily News; The Kendal Mercury; The Hull Packet; The City Press; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. G. M. Humphry, Cambridge; Mr. Erichsen, London; Dr. D. Embleton, Newcastle-upon-Tyne; Mr. S. M. Bradley, Manchester; Mr. Richard Davy, London; Dr. Dyce Duckworth, London; Mr. T. H. Bartleet, Birmingham; The Secretary of the Royal Medical and Chirurgical Society; Mr. J. F. Streatfeild, London; Mr. J. Dewar, Edinburgh; Dr. T. L. Brunton, London; Dr. George Johnson, London; Dr. C. Handfield Jones, London; Dr. Phillips, London; Our Dublin Correspondent; Dr. Cunningham, Campbelltown; Dr. Sawyer, Birmingham; Dr. Ballard, London; Mr. Dalby, London; Dr. A. B. Steele, Liverpool; Our Paris Correspondent; Mr. Joseph Bell, Edinburgh; Mr. Hackney, Dallington; Mr. Maunder, London; Mr. Walford, Reading; Mr. A. B. Vise, Holbeach; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; The Secretary of the Clinical Society; Dr. Falconer, Bath; Dr. Roberts, Manchester; Mr. Balmanno Squire, London; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. G. Southam, Manchester; Dr. Reeves, Carlisle; Mr. G. Gaskoin, London; The Secretary of the Social Science Association; Dr. Hollis, London; Messrs. Mayer and Meltzer, London; Dr. Hinds, Birmingham; Dr. Waters, Chester; Dr. Waters, Liverpool; Dr. Clifford Allbutt, Leeds; Mr. T. Eyton Jones, Wrexham; The Secretary of the Pathological Society; Mr. H. J. Rope, Shrewsbury; Dr. Syson, Hartford; Mr. Roberts, Golcar; Mr. Joseph Smith, St. Heliers; Mr. Nelson Dobson, Bristol; Dr. Jelly, Madrid; Mr. J. Birchenall, Macclesfield; Mr. R. E. Jones, Long Melford; Dr. Hammond, New York; Mr. Clegg, Epping; Dr. Walker, Hertford; Dr. Donkin, London; Mr. Royes Bell, London; Dr. Silver, London; Dr. Rumsey, Cheltenham; Dr. Corfield, London; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Social Science Association (Adam Street, Adelphi), 8 P.M. Mr. F. W. Lowndes, "On Infanticide."

EXPECTED OPERATIONS AT THE HOSPITALS.

KING'S COLLEGE HOSPITAL, Saturday, June 7th, 2 P.M. Removal of Scapula for Tumour of that Bone, by Mr. Henry Smith.

WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Macpherson, "Notes on the Seasonal Prevalence of some Epidemic Diseases in the Tropics."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. SYSON's letter has been handed to the General Secretary, Mr Fowke, to whom all communications respecting change of address, non-receipt of JOURNALS, and all other business matters, should be addressed.

SPECIALISM IN MEDICINE.

SIR,—My attention has been drawn, by a friend who at once recognised the circumstances, to a passage in the first Lumleian Lecture, in which the lecturer refers to a lady of "typical modern intelligence", by whom he had been consulted, as an instance of the extent to which special discrimination in medicine is carried by the public. I express no opinion as to the felicity of the illustration; nor do I desire to question its fitness on the occasion of an address delivered within the walls of the College of Physicians, where it was likely to aggrive no one. The pages of the BRITISH MEDICAL JOURNAL, however, are read with interest by the public at large; and, putting aside the question how far the general dissemination of professional matters in—shall I say?—a spirit of caricature may be deemed consistent with good taste on our part, I cannot but think that the lecturer, on fuller consideration, would have hesitated before committing to the press the case of his patient in detail so readily susceptible of identification.

I say this in no unfriendly spirit to the lecturer, who, I feel assured, would be among the last to be accused of any intentional discourtesy, but simply in justice to the lady herself. That her high estimation of the profession is not limited to special eminence, however worthy of respect, her munificent contributions to medical charity of the most comprehensive character, may well attest. And for the rest, I will venture to quote the assurance which, in virtue of my own small official capacity with relation to the charity alluded to, is now before me, that "the cause of medical distress should not want support so long as she had means to give"; believing, as I do, that a "modern typical intelligence" working by such fruits as these, will vindicate its own claims to appreciation.

April 1873.

I am, etc.,

C. S. W.

METHYLENE ETHER AS AN ANÆSTHETIC.

SIR,—I was present yesterday at an operation with Mr. Lawson Tait, in which the new anæsthetic, methylene ether, was used. It was administered in the manner described by him in last week's JOURNAL. It acted perfectly, and only three and a half drachms were required to render the patient completely unconscious, and this in the short space of six minutes. During its administration, there was no alteration in the colour of the face or lips, and there was not the slightest struggling or excitement. The patient speedily recovered, and was not sick in the slightest degree. At no operation have I seen an anæsthetic act so quickly and so perfectly.

Stourbridge, April 3rd, 1873.

I am, etc.,

JOHN CASKIE, M.B.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

"NOW READY."—Messrs. Churchill and Sons do not appear to be in fault; but no doubt they would be willing to represent to the author of the book that the advertisement in question is misleading. We agree that to advertise "now ready" a book published in 1868, is misleading.

PHYSIOLOGICAL RESEARCH ON THE LOWER ANIMALS.

It is evident that, unless the doings within the walls of the Edinburgh University Physiological Laboratory are kept publicly quiet, it is very probable that the whole question of experiments on living animals will be once more brought before the public in the usual sensational style, to the injury of harmless physiological research. We should not be surprised to find that the following foolish advertisement from the *Scotsman* may yet cause some stir. It has already produced some mental anxiety amongst the lower animals, if may trust the complaint of a dog named "Bob," in the correspondence column of that paper: "Dogs and cats (few useless) wanted. Any kind of breed will suit. Apply at the Physiological Laboratory, University, between 10 and 11 A.M." The officials of the Laboratory appear to have satisfied Mr. Brown, the Secretary of the Scottish Society for Prevention of Cruelty to Animals in the meantime, but the public are not all so sensible as that gentleman.

MEDICAL INTERESTS IN PARLIAMENT.

SIR,—A *propos* of your correspondent's letter on the subject of death certificates, I venture to suggest the great desirability of some legislation by which medical men may be empowered in all cases to demand a *post mortem* examination should they deem this desirable, before granting the certificate of death. It is hardly necessary for me to point out the vast influence of such a measure in promoting medical science, and I think that, in the present imperfect state of that science, the above ought to claim precedence over the pecuniary question.

I am, etc.,

S.

USE FOR OLD STOCKINGS.

MR. H. J. ROPE, of the Salop Infirmary, writes to us:—The new use for old stockings, alluded to in your impression of May 17th, had previously been adopted at the Salop Infirmary, and it was believed the plan was novel; but I have since been told that it was in vogue years ago at St. Bartholomew's Hospital. It is found very efficient and simple applied at once in the treatment of fracture of either bone of the leg, without displacement, or later on in the treatment of cases where displacement has occurred, and has been rectified by the use of suitable appliances. One woollen stocking is capable of absorbing sufficient of a mixture of gum and chalk to be firm enough for any purpose.

SELF-DECEPTION AS TO PREGNANCY—IGNORANCE OF A MIDWIFE.

THERE came under my notice about three weeks ago, a case, which although it is not altogether unique, yet presents some points worthy of being noted in these days when the education of midwives is engaging the attention of the profession.

Mrs. —, aged about 36, has been married for seven years and never has had any children. About six or seven months ago she came to me, stating that her abdomen was enlarging, and that she thought she was pregnant. The only thing that made her question the existence of her pregnancy was the fact that she was regularly "unwell." I could find no evidences to lead me to give her hope of being pregnant; but I stated at the same time that it was not unknown for pregnant women to menstruate regularly. I met her subsequently in the street. She was certain of being with child, as her abdomen was enlarging, and the movements of the child were distinctly felt. Her appearance did not belie her statement. As the full period of gestation (as she thought) had arrived, a midwife of some repute and considerable experience was sent for. She sat up with Mrs. — the whole night, sipping her back when the pains came on, and otherwise ministering to her depressing her mind. Progress not being so rapid as the "quasi" mother wished, I was sent for about 11 A.M. the next day. Everything was in readiness for the arrival of the "young stranger." The midwife said that Mrs. — was getting on as well as could be expected. I waited until a pain came on, and to my astonishment found the cervix uteri as large as in a virgin. The abdomen was considerably enlarged, but there were no evidences of a gravid uterus or of any abnormal tumour. I but stated my opinion that she was menstruating, and that she was not pregnant; but the "mother" asserted that she felt the movements of the child immediately before I entered the room, and the midwife was certain that the baby would soon be born. The sequel, however, is that in the short space of three weeks, the enlargement of the abdomen has entirely subsided, the phantom baby is undelivered, and Mrs. — and her attendant are wiser women.

J. CUNNINGHAM, M.B.

Campbeltown, May 26th, 1873.

WE are requested by Mr. Balmanno Squire to state that he is about to give a course of demonstrations of skin-diseases at the British Hospital for Diseases of the Skin.

REGISTRATION OF DEATHS.

SIR,—It is my desire to call the attention of the medical profession in England and Wales to a clause in the Bill to amend the Acts relating to the Registration of Births and Deaths, which is now before the House of Lords, and which affects the interests of medical men very seriously. It enacts that the medical attendant shall sign and give a certificate stating *truly* the cause of death to the informant of the registrar. If there were no other reason, it is sufficient cause of objection to see an enactment relating to the medical profession brought into a Registration Act, instead of being brought fairly and openly before us in a Medical Amendment Act; but to make it *compulsory* upon us to state *truly* the cause of death for state purposes, without giving us any acknowledgment whatever, and then to sell our information to the friends and public, in a certificate for a shilling, is most unjust. The duty of giving our information to the registrar is already sufficiently responsible, and exposing medical men to criminal prosecution for slight errors—as in the case of Mr. Croft—without making it more stringent still. To have to give the cause *truly*, would frequently involve a *post mortem* examination, and always be a source of anxious consideration, and inflicting a great amount of extra labour upon hospital officials and such-like officers, in verifying the statements of relatives.

It surely is quite sufficient for all purposes that we continue to give our information as at present, to the best of our knowledge and belief, without being exposed to persecution for a wrong or incomplete diagnosis, as will occasionally happen, even with the utmost care, in returns furnished by us without fee or reward.

I am, etc.,

HENRY MAY, L.R.C.P.Lond.

Fairfield House, Lichfield Road, Aston, April 24th, 1873.

LECTURES ON THE VARIETIES IN THE MUSCLES OF MAN.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,

Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; etc.

LECTURE I.—Monday, June 2, 1873.

FEW subjects are more fertile in interest and instruction than that of variety in animal and vegetable forms; and few would tend more, if rightly apprehended, to throw light upon some of the great questions which perplex the morphologist and the physiologist. The varieties in any one structure or groups of structures are similar in nature to those in any other; and we cannot but feel that they are also similar to, and are held together by bonds of unity in the same manner as, those differences which constitute the peculiarities of the several groups, classes, orders, and species of the animal kingdom. All these, in their several degrees, are illustrations of variety—of the great principle of variety blended with, yet subordinate to, uniformity.

I endeavoured, to some extent, to point this out in the three lectures which I had last year the honour to give in this place*: to show, that is, that the muscles of man are but varieties from a simple pattern, which we find to be displayed in its greatest simplicity in some of the lower animal forms. Not that these are devoid of variety; for in these simple forms there is some variation from or modification of the simple pattern, adapting each for the particular place it has to occupy in the animal kingdom. I propose, in the three lectures I have now to give, to show that the varieties, or abnormalities as they are sometimes called, in the muscular system of man, are but modifications of the simple pattern, though differing from that modification which, being the more usual, we regard as the normal one. That this is so, may in most instances be clearly traced. To ascertain, however, the causes of the varieties, or the laws which govern them, is more than I can pretend to do. As I have just hinted, I make no doubt that they are of the same nature as the causes and laws which govern the diversities of the different animals; and, as in the case of these, I think it may be shown that they have a relation to utility which may be expressed in the following way. Taking the normal standard as the most perfect or most useful, those deviations from it are the most frequent which will least interfere with the perfection or usefulness of the muscle concerned; and, as a sequence of this, the muscles which have the most definitely specialised action, or rather those in which the definitely specialised action is most important to the economy, are the least frequently absent, and are, on the whole, the least liable to variety.

The materials which have been collected by the persevering labours of Wood in particular, and also of Meckel, Gruber, Henle, McWhinnie, Macalister, Turner, and many others, are amply sufficient to enable us to arrive at some generalisations; and my inability to accomplish much in this way will be due less to a deficiency of facts than to want of power to anneal them well together into good and consistent theory.

It has been remarked, and observation confirms the remark, that no two things are alike, and that variety is the order of Nature. It has been asserted, and the assertion has been questioned, that variety is an essential element in material form and quality. A little reflection will, I think, show that it must necessarily be so. No two particles can be precisely alike, because they cannot occupy the same space, and cannot, therefore, have the same surroundings. Those near the circumference of a sphere, for instance, must differ from those near the centre, owing to the differences of attractive forces operating upon them. The difference thus initiated is capable of indefinite multiplication; it will be manifested most clearly in the bodies which are formed by the greatest aggregation of particles; and it will be in increasing ratio in proportion to the complex nature and relation of the bodies. Hence it becomes apparent, even to the unaided eye, that no two blades of grass and no two muscles are alike; and we perceive that, in the nature of things, they cannot be alike. It is not, however, with this subtle kind of variety that I propose to occupy your attention; nor, on the other hand, with those varieties which come under the head of malformation of the body or monstrosity, but rather with the varie-

ties of muscles usually understood as such, and comprising duplicity, anomalies of attachment or connexion with one another, etc. There may be no bold barrier-line separating them from differences of size and form on the one hand, and from monstrosities on the other; but, practically, they are sufficiently distinct from both, and are recognised to be so; and it will be found that, as a general rule, they do not markedly interfere with the function of the muscle or muscles concerned.

Before entering upon the consideration of the individual varieties, I will make a few reflections which have arisen in the course of the investigation, and to which I shall from time to time have occasion to refer.

1. We may, as has just been remarked, fairly assume that the ordinary standard of muscular anatomy in man, as in each other animal, is the best, the one most fitted to the movements which have to be performed. Hence the varieties in and deviations from the standard are not changes for the better, but, for the most part, are for the worse, though the variety may not be attended with any manifest deterioration or imperfection of function. The perfection of the standard is attained by the requisite segmentation of muscles from the simple primitive mass, and by the concentration of the fibres, by means of tendons, upon the parts where the force may be most advantageously exerted. And the varieties are due, in most instances, to imperfection of segmentation, or to a want of proper concentration of fibres, which sometimes presents itself in the form of too great segmentation or in too great a range of attachment.

The principle of subdivision, with, at the same time, that of concentration—of subdivision for the purpose of executing varied movements, and of concentration for the purpose of executing them in the most favourable manner and with the least expenditure of force—is carried to its utmost in the upper limb and, especially, in the hand. Here, therefore, we may expect to find the greatest frequency and the greatest number of varieties. In the trunk, where the opposite conditions occur, where specialisation is at its minimum, and where there is little difference in the disposition of the muscles in different animals, varieties are least frequent and fewest.

2. An imperfection of segmentation is, as we should expect, most frequently observed in the case of muscles the fibres of which—the fibres, that is, of two or more adjacent muscles—are parallel, and which are in the habit of acting simultaneously or nearly so, such as the pectoralis major and the deltoid, and more particularly the two radial extensors of the wrist; also the peroneus tertius and the extensor digitorum pedis: whereas the abdominal muscles, the fibres of which take different directions, and the peronei which act upon the different parts of the foot and in different modes, rarely present examples of imperfect segmentation from one another.

An imperfection in concentration is illustrated in the simplest manner by a want of due limitation of the attachment of a muscle, as when the coraco-brachialis extends down the humerus to the inner condyle, or when the biceps has an additional origin from the humerus, or the peronei extend upon the toes. This may be attended with additional cleavage, leading to further subdivision of muscles; as when a third radial extensor of the carpus is formed, or when a segment of the tibialis anticus is inserted into the first phalanx of the hallux, or when an additional stylo-glossus or stylo-hyoid is present. Sometimes supernumerary muscles are found, which are scarcely the result of wider extension and additional cleavage of the ordinary muscles, but still are to be referred to the persistence and development of some part of the embryonic or primitive muscular mass, which usually becomes absorbed, and makes way for the fuller growth of the regular muscles. Hence the presence of these supernumeraries is often associated with imperfect development of the regulars; or they may be due to what may be called a hypertrophic development of the muscular system, in which case the presence of supernumerary muscles is associated, not with a lower, but with a higher, amount of growth of the regular muscles. Accordingly, in several of the instances in which supernumerary muscles were found, it was observed that the general muscular development was unusually great. The supernumerary muscles, if not the mere segments from or the reduplications of the ordinary muscles, are usually the obvious adjuncts to, or substitutes for, them. There are, however, some instances in which this can scarcely be said to be the case.

3. The muscles which are most frequently wanting are, on the whole, those which are most easily spared—the muscles, that is, for which substitutes are most easily found, or which do not play any very definite or important part in the movements of the body. Such are the pyramidalis abdominis, the psoas parvus, the palmaris longus and the plantaris, the extensor primii internodii pollicis, the peroneus tertius, the omo-hyoid, the stylo-hyoid, and the gemellus superior. It will be

* See BRITISH MEDICAL JOURNAL, 1872, vol. i, pp. 657 and 685; vol. ii, pp. 4, 33, 57, and 85.

remarked, that of these some are, as it were, lingering remnants of muscles which are more developed in other animals, and which seem to be present in man rather because they are part of the animal muscular system, than because they serve any special purpose in him. Some, on the contrary, are developments peculiar to him or nearly so, are initiated in him, and seem scarcely to have established themselves as stable elements of the animal muscular system; whereas others do not admit of being classed under either of these heads.

4. With regard to the correlation of muscular varieties, it is well known that several are often present in the same subject, and that they are often associated with varieties in the other structures, as in the blood-vessels and nerves, and even in the bones.* Moreover, the same kind of variety is likely to be repeated in the same person; that is to say, extensions of attachment, additional cleavages, or supernumerary muscles, are likely to be associated, or to appear at different parts of one subject. And the same is true of the variations in which the contrary tendency—viz., deficiency of development—is the leading feature.† To this, however, there are many exceptions; it being no uncommon thing for deficiency in one part to be associated with excess in another.‡ I have already mentioned that the presence of a supernumerary muscle is sometimes associated with a deficiency in an adjacent muscle, the function of which it shares or performs.

Moreover, the varieties are, as a rule, symmetrical. At least, in rather more than half the instances this is found to be the case. It is, however, to be remarked, that corresponding varieties are not commonly found in the upper and lower limbs, or on the opposite (flexor and extensor) surfaces of the same limb. In other words, the varieties do not usually affect the serially homologous muscles in the upper and lower limbs of the same person, or the antagonistically corresponding muscles in the same limb. Thus, in the tables given by Wood, there are seven instances of varieties of the lumbricales pedis, and in only one was there any variety in the lumbricales manūs. In that case, the third lumbricalis was double in both hands and in both feet. In the majority of the cases in which the slip from the extensor carpi ulnaris to the extensor tendon of the little finger was present, the homologous slip from the peroneus tertius to the extensor tendon of the little toe was absent. Occasionally, this slip passed to the metacarpal or to the metatarsal bone, instead of to the extensor tendon; but I do not find any instance in which the like anomaly occurred in the upper and lower limbs of the same person. Frequent as are the varieties in the flexors of the digits in the upper and in the lower limbs, an absence of the superficial flexor to the fifth digit afforded the only instance of a similar abnormality in these muscles in the two limbs; and I do not note any instance of a corresponding variety in the interossei of the two limbs. We are the more surprised at the frequent want of correspondence in the varieties in the muscles of the two limbs, forasmuch as we observe that the foot and the hand in the same persons are often the seat of similar deformities from excess, deficiency, or variation in development of the digits.§ We learn from this that we must not look to varieties as a source of much information respecting the homologous disposition of the muscles in the two limbs. I do not mean to say that they are altogether fruitless in this respect; for we shall find that the varieties in a muscle in one limb, upper or lower, are not unfrequently reminders of the usual disposition of the serially homologous muscle in the other limb.

I have searched in vain to make out any other correlation of varieties of muscles beyond those which I have mentioned. Thus, the discovery of a variety in a particular muscle suggests to us that there are, probably, other varieties in the muscular, the vascular, the nervous, and the other systems of the body; that these varieties in the muscles of other parts are probably of the like nature to that in the one observed, and are probably symmetrical; but we cannot infer that any particular muscle—scarcely even the serially homologous muscle in the other limb—is likely to be affected.

It appears that males and females, and the two sides of the body, are about equally liable to be the subject of varieties. We scarcely yet know in what class of persons they are most likely to appear, or whether they are more common in any one class than in others. We should expect to meet with them in those persons who present any obvious de-

formity or defect of development; and this receives some support from Mr. Carver's case of the idiot before mentioned. Judging from the dissection of the Bushwoman by Flower and Murie,* and of the negro mentioned in *Guy's Hospital Reports*, vol. xiv, we may infer that they are at least as common in the other races of mankind as in the European; and, judging from the differing account of the dissections of members of the same species of several of the lower animals, especially of the Monkeys and Apes, by different anatomists, we may infer that varieties are as common in them as in Man; and it may be remarked that in animals as well as in Man the muscles not uncommonly differ on the two sides of the body.

We might, perhaps, on the whole, have anticipated that varieties would be most frequent in the higher orders of animals, because in them the departure from the simple type is greatest for the purpose of executing the more complex movements. There is not, however, sufficient evidence to enable us to form an opinion on this point; and we must remember that though in the higher animals the muscular dispositions are more complex, yet the special functions of the several parts of the muscular system are more definite; and this would, to some extent at any rate, counterbalance the tendency to variety which the greater complexity might engender. It seems, indeed, to be shown by the dissections of different animals, including Man, that there is less fixity, more license of development, in the muscular than in the other structures of the body, except perhaps the blood-vessels. This accords with the fact, that the variations in the muscles in the different classes are greater than those of the other structures; are greater, I think, than would have been expected from merely taking the variety of movements into account; are greater, that is, than would appear to be necessary. For instance, there seems to be no reason for the varieties in the flexor muscles of the digits being so great in the different classes of animals. We learn from this two things—first, that the tendency to variety in the formative processes is greater than we should have anticipated from a superficial observation of animal form; and that it is limited or restrained only, as remarked in my *Observations on Myology*, p. 178, "by the high controlling forces which insure the requisite subservience to utility". Secondly, the varieties in the several members of each class are more numerous in those structures which vary most in the different classes of the animal kingdom. I have already mentioned that the muscles vary most in those parts of each animal in which the varieties are greatest in the different animals, as the limbs, and, more particularly, the distal parts of the limb.

Moreover, the varieties themselves are very variable; that is, an unusual muscular factor, such as an additional head of the biceps brachii, differs a good deal in the different instances in which it is found. Still, there are lines, or "directions", as they have been called by Wood, which the variation most frequently takes; and these are so often in the direction of muscles normally existing in the lower animals, as to be strongly suggestive of a common origin of the muscular system in the several members of the animal kingdom. All that we can say, however, with any degree of certainty is, that they are illustrations and results of the similarity of the forces which are in operation in the evolution of each of the several animals. The forces which evolve the coraco-brachialis of a Man and of an Echidna are similar; the materials are similar, and the surroundings are similar. It is probable, therefore, that the variations in the human coraco-brachial will present a resemblance more or less close to that muscle in the Echidna; and it does not necessarily follow that the muscle in the one instance has been evolved from that in the other, and that the variation is consequently a reversion. It may be asked, and with some reason, why, then, does not the coraco-brachial of the Echidna sometimes vary in the direction of that of Man? Perhaps it does so. At present we know too little of the varieties in animals to draw inferences from them. Still, we should judge it to be more probable that the higher and more nicely adjusted frame of Man would vary in the direction of the lower animals, than that the reverse should be the case. We should also expect that an animal would be more likely to vary in the direction of another near to it in the animal scale, and resembling it, than of one more remote and dissimilar, because the forces which evolve the two are more alike in the one instance than in the other. Unquestionably the variations in Man are not unfrequently reminders of the anatomy of the Ape; though somewhat too much has been made of this, for these variations are often reminders of the anatomy of other animals as well as of the Ape. Often the variations are reminders of the anatomy of other animals, and not of the Ape; sometimes of animals far distant in the zoological scale. Often, too, they are *sui generis*, and not reminders of the anatomy of any other animal.

* See case of an idiot, by Mr. Carver, in the *Journal of Anatomy*, iii, 257, in which abnormalities were presented by the bones of the skull, as well as by the muscles, vessels, and nerves.

† In each of the thirteen varieties recorded by Meckel (*Arch.*, v, 115), as occurring in the same subject, the anomaly was an excess of attachment, a supernumerary muscle, a preternatural cleavage, or an extension as of the psoas parvus to the femur. Moreover, all the muscles in this subject were unusually strong.

‡ See Wood, *Proceedings of the Royal Society*, June 6th, 1844, p. 299. Hallett found the peroneus tertius absent in a case of many anomalies by excess. Meckel found the biceps in one arm with three heads, and in the opposite arm with only one.

§ For examples of this, see Dr. J. W. Ogle's paper on Hereditary Transmission of Structural Peculiarities, *British and Foreign Medico-Chirurgical Review*, April 1872.

* *Journal of Anatomy*, i, 189. Wood found very few irregularities in a Negro and in a Lascar dissected by him.—*Proceedings of the Royal Society*, 1865, p. 386.

Much, therefore, as we may be tempted to adduce variations in the muscular system as additional arguments in favour of the evolution of man and animals from a common origin, it is perhaps more philosophical to refrain for the present, and to leave the mind unfettered by the bias attendant upon the consideration of this great subject, which, in the present epoch of scientific inquiry, tends rather too much to engross the thoughts, and which sometimes casts too strong a shadow upon the work, and too obviously obscures the view, of the investigators of Nature.

MUSCLES OF ABDOMEN.

I will consider, first, the varieties in the muscles of the trunk, commencing with those of the abdomen. They are few and infrequent, in accordance with the simple disposition of these muscles, with their comparatively slight deviation from the primitive, unstratified, or partially stratified, transversely segmented layer, which we find in the Cryptobranch, and with the little variation in structure, associated with little variation in function, which they present in different animals.

The most noteworthy varieties are the occasional persistence of inscriptions in the obliquus externus in the neighbourhood of the lower ribs, and contiguous with their cartilages. In one of these inscriptions a piece of cartilage was found by Henle. It may seem rather remarkable that such inscriptions are not more frequently met with in this and the other abdominal muscles; but it must be remembered that in the lower animals the disappearance of the transverse septa, of which the inscriptions are remnants, is usually associated with the stratification of the muscular mass, and with the difference in the direction of the component fibres of the several strata.

Additional slips are occasionally present, segmented from the normal muscles. Such a one is described in *Guy's Hospital Reports*, vol. xvi, p. 149, passing from the cartilage of the twelfth costal cartilage to the ilium between the obliquus externus and the obliquus internus. The most frequent varieties in the abdominal wall are presented by the two muscles which are most easily spared, and which are, therefore, least impressed into regularity by the constraining influence of utility—viz., the pyramidalis and the psoas parvus. Of these, the first is often (in one case out of four) absent on one or both sides, its place being usually supplied by an increased breadth in the rectus. It, moreover, varies in size, and is sometimes double. The psoas parvus is absent in one or both sides in nearly half the number of subjects examined. It has been found in some instances extending beyond the ordinary range of its origin. It is sometimes divided longitudinally into two muscles; and in some instances it extends over the pubes in company with the psoas magnus, and blended with it,* or inserted separately from it into the line descending from the trochanter minor to the linea aspera.† These two—psoas magnus and psoas parvus—it may be remembered, are both parts of, what I have called in my lectures last year, the internal or transversalis stratum of the abdominal wall. The psoas parvus not infrequently preponderates in lower animals, especially in some of the Carnivora, in which the movements of the pelvis upon the spine are free and strong. In Man, the femoral, or psoas magnus, portion nearly, often quite, pushes the pelvic, or psoas parvus, portion out of the field. The latter is not, however, always thus stunted by its greater neighbour; for in some instances, as just said, it encroaches upon the territory of the psoas magnus, extending with it to the femur, and being inserted with it, or near it, into the linea aspera.

It may be remarked that the pyramidalis is very inconstant in Mammals, being more frequently absent than present; as, indeed, is the spine of the pubes, with which, or with the marsupial bone, it is often associated.‡ Any inferences which might be drawn from this in relation to its frequent absence in Man, are, however, weakened by the fact that the other muscle—the psoas parvus—is very generally present in Mammals, and often attains to considerable size. In Birds, both are absent.

The absence of the transversalis abdominis has been noted in one instance by Macalister. Considering the remarkable disposition of the oblique and transverse muscles with regard to the rectus, and that it differs from the disposition which prevails in many animals, among others the Chimpanzee, in which the internal oblique passes entirely upon the superficial aspect of the rectus, we should have expected to find varieties here to be rather frequent. This, however, appears not to be the case; at any rate, they have not attracted attention. Neither do I find notice of varieties in the external oblique, the diaphragm, or the intercostals, which are of sufficient importance to occupy our time.

[To be concluded.]

* Meckel's *Archiv*, v, 116.

† *Guy's Hospital Reports*, xiv.

‡ See remarks on this, *Journal of Anatomy*, vi, 312; and *Observations on Myology*, p. 124.

CLINICAL LECTURE

ON

CHRONIC BASILAR MENINGITIS.

Delivered at the Belle Vue Hospital Medical College, New York.

By WILLIAM A. HAMMOND, M.D.,

Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine.

THE patient whom I have now the opportunity of showing you, first made her appearance at this clinique in the winter of 1871-72, about a year ago. At that time she was suffering from deep-seated pains in the head, vertigo, and paralysis of the third nerve on the left side, as evidenced by ptosis, dilatation of the pupil, and external strabismus, the latter condition producing diplopia. Conjoined with these symptoms, there was slight but decided paralysis of the muscles of the face, arm, and leg of the opposite side, together with cutaneous anæsthesia.

The history of the case was not that of cerebral hæmorrhage or of embolism, for inquiry showed that the symptoms had been of very gradual development, a fact not consistent with the existence of either of the lesions mentioned. I was disposed to think that the affection was an aneurism of the left posterior communicating or posterior cerebral artery, both of which, as you know, are in very intimate topographical relation with the crus cerebri; a tumour of some other kind, involving the left crus, or pressing upon it; or chronic basilar meningitis with effusion, implicating the same part. I regarded the latter as the most probable morbid condition, for the reason mainly that the symptoms were not so intense as regarded paralysis and pain as are those which result from either of the other diseases named.

The explanation of the phenomena observed in this case some of you will doubtless recollect; but, as the patient illustrates important physiological and pathological facts, and as most of you have not seen her before, it will not be out of place for me briefly to touch upon the relation of the observed symptoms to the supposed pathological condition.

In the first place there were ptosis, external strabismus, and dilated pupil of the left side. These circumstances indicated the involution of the third pair of nerves in the lesion, probably of the same side, even if there were no accompanying symptoms but with these latter, with very considerable certainty.

The third pair of nerves has its apparent origin in the crura cerebri—the right nerve from the right crus, and the left nerve from the left crus. If, however, the fibres be followed out by minute dissection, as has been done by Vulpian, they are seen to be arranged into three groups. Of these, the middle and posterior decussate, after passing entirely through the crus, while the anterior group passes forward to the optic thalamus, in which ganglion the fibres are lost. None of the fibres of origin originate in the crus, and this latter may be entirely dissected away, and the third nerve be left intact.

Now, if Vulpian be right in his view, that a considerable number of the fibres of the third nerve decussate, any disease of the brain affecting these fibres must be manifested by paralysis of the muscles supplied by the nerve of the opposite side; and, as the motor and sensory fibres of the spinal cord decussate below the point at which the third nerves decussate, the disease, if causing paralysis of other parts of the body, would induce this condition also on the opposite side, or, in other words, on the same side with the paralysis of the muscles supplied by the third nerve. But in the case before us the reverse is the fact, the muscles of the eye, and those of the face, arm, and leg, being affected on opposite sides. The disease, therefore, whatever its nature, must be confined entirely to the left side of the brain.

The left crus cerebri contains motor and sensory fibres coming from the right side of the body, below the medulla oblongata. It contains the fibres of the left third nerve; disease involving the left crus would, therefore, cause paralysis of the muscles supplied by the left third nerve, and of motion and sensation in the left half of the body. And this is exactly what existed in the patient before us a year ago.

As we have seen, the anterior group of the fibres of origin of the third nerve come from the optic thalamus of the same side, and a lesion affecting this ganglion would give rise to a similar condition so far as the paralysis is concerned. But it is difficult to conceive what morbid process could go on in the optic thalamus, and cause such a group of phenomena, so gradually developed as those which mark this case, and not at the same time produce more extensive disturbance. Taking all the facts into consideration, I thought the theory of basilar meningitis,

involving the left crus, the most probable; and when we come to consider the present state of the patient, we shall find strong confirmatory evidence of the correctness of this opinion.

At the time to which I am now referring, I prescribed the use of the iodide of potassium in large doses, but gave an unfavourable prognosis. I was therefore somewhat surprised to find her to-day in the ante-room with the other patients, and, to cursory examination, in about the same state as she was this time last year.

But a very slight inspection suffices to convince us that she is differently affected, for we see that the left eye is now rotated inward, showing, therefore, that the sixth pair of nerves has become involved, producing paralysis of the external rectus muscle; the disease, whatever its nature, has shifted its site, and with the change of location there is a corresponding change in the symptoms. It need scarcely be said that such a circumstance is altogether inconsistent with the existence of a tumour of any kind, and is only reconcilable with the theory of meningitis with exudation.

It is not necessary to presuppose any very extensive change in the situation of the disease. To be sure, the origin of the sixth pair at the upper border of the medulla oblongata, and below the pons Varolii, is quite remote from that of the third pair; but the two nerves are in very intimate topographical relation to each other throughout a great part of their course; they leave the cranium through the same aperture, the sphenoidal fissure, and even within the orbit are in close contiguity. This change in the situation of the lesion is, I think, one of the prominent features of chronic basilar meningitis.

You will also recollect the case of the young man who during the past year has appeared several times before you. He came to me originally with external strabismus, ptosis, and dilatation of the pupil affecting the left eye, with the most intensely agonising pain in the head that has ever come under my observation. He had also vertigo, frequent attacks of vomiting, and paresis, if not paralysis, of the arm and leg of the same side. A consideration of his condition led me to the diagnosis of a cerebral tumour, and I accordingly gave a very unfavourable prognosis. I was led to this conclusion, not so much from the motorial derangement, as by the atrocious cephalalgia from which the patient suffered. In this case there was some slight suspicion of syphilis, and I treated him with mercury and large doses of the iodide of potassium. In a short time the pain in his head disappeared, and in a few weeks there were no indications of paralysis anywhere, in fact, he was to all appearance perfectly cured; but at the end of two or three months he reappeared, with the corresponding set of symptoms in the right eye and the right half of the body, and with pain in his head fully as severe as that which characterised the previous attack. I again treated him with mercury and the iodide of potassium; his symptoms again disappeared, and up to the present time there has been no recurrence.

I have now under my care a gentleman belonging to the legal profession of this city, who has attacks of acute pain in the head, accompanied with all the phenomena of paralysis of the left third nerve. Curiously enough, these attacks alternate with an eczematous affection, involving the trunk, especially the breast. On the disappearance of the skin-disease, under remedial measures, his head-symptoms immediately recur; and when they are relieved, as they are by the action of the iodide of potassium, he is again attacked with the eczema.

In this case, I presume, there is an actual transference of the disease from the brain to the skin, and *vice versa*.

In a case which I saw a few days ago, in consultation with Dr. Hermann Knapp, the eminent ophthalmic surgeon, the patient, a young man of whom there was no history, or even suspicion of syphilis, at first became attacked with disease of his brain, characterised by pain and obscurity of vision. Next there was paralysis of the muscles supplied by the third pair of nerves, then the fourth pair became involved; then the fifth, as evidenced by anæsthesia of the face, and paralysis of the masseter and temporal muscles; then the sixth; and eventually the seventh and eighth, producing loss of hearing, and paralysis of both sides of the face. In this very remarkable case there was a gradual advance in the disease through a period of several weeks along the base of the brain, from the anterior to the posterior region. With all these symptoms, there was not the slightest mental derangement. Shortly after I saw him, the pneumogastric nerve became implicated in the lesion, and death took place soon afterward. Unfortunately, there was no *post mortem* examination, but Dr. Knapp and myself agreed that the case was one of inflammation of the membranes covering the basilar surface of the brain.

Now there is one point to which I especially desire to call your attention, and a careful consideration of which will do much to prevent you from making any serious mistake relative to the part of the brain involved in the morbid process.

The upper, or convex surface of the brain, is particularly connected with the evolution of that part of the mind known as the intellect.

In meningitis affecting the membranes covering this upper surface, we should expect, *a priori*, that the chief manifestations of brain-disorder would be shown in the direction of mental aberration, and in fact we find that such is really the case.

The lower, the basilar or concave surface of the brain, is not so much in relation with intellection as it is with sensation and motion; hence we should expect to find that a meningitis affecting this surface of the brain would more especially produce deviations from the normal standard in sensation, motion, or both. In practice we find that these effects are produced. Take, for instance, the cases before us, and we perceive that the chief manifestations of disease are alterations in sensibility, and paralysis of some one or more muscles of the body. You will observe, too, another prominent feature; and that is, that in all of them some of the muscles of the eyeball have been notably affected. Sometimes, conjoined with pain in the head, there is anæsthesia of distant parts; and sometimes, instead of paralysis, there is muscular spasm, or convulsion.

Thus, in thirty-two cases of meningitis of the base of the brain, attended with serous or gelatiniform exudation, collected by Gintrac, there was not one in which convulsion or paralysis was not a prominent feature.

From a very complete summary, made by this author, I extract the following remarks relative to symptoms.

"Headache is one of the most common. It occurred in more than two-thirds of the cases; the pain was deep-seated, and more or less severe; sometimes it was located in the forehead, sometimes in the occiput, and again in the supra- or infra-orbital regions.

"The patients often expressed their sufferings by sharp and almost characteristic cries.

"There has been sometimes loss of consciousness, or stupor, but in the majority of cases the intellect has retained its ordinary activity even to a very advanced period of the disease. Delirium occurred in about one-third of the cases, and was light in character. A disposition to sleep was manifested very often, even in the early stages, but in two cases there was persistent insomnia. In some of the patients speech was embarrassed, slow, infrequent, or the articulation difficult. In four cases it was entirely abolished.

"The phenomena offered by the visual apparatus were very varied and worthy of attention; their source is found in the very seat of the disease. The eyes are intolerant of light, the conjunctival vessels injected, and the surface covered with a thick, viscid mucus; they are prominent, and often one is more so than the other. One of the upper eyelids is often paralysed, generally the left. The eyeballs are usually turned upward, rarely downward; sometimes they roll convulsively. In more than a third of the cases they deviated from their normal axis, and thus strabismus was produced. The pupils are insensible, or oscillate; they were dilated thirty times, and contracted four times. Often they are unequal, the one being dilated and the other contracted simultaneously or alternately. Diplopia and amblyopia existed in diverse degrees from the first, or in the course of the disease, in every case.

"The other senses have been rarely affected. In one case there was anosmia, with preservation of the tactile sensibility in the pituitary membrane. In two cases there was deafness; but if sometimes the patients were spoken to in a loud voice, and did not respond, it was perhaps rather due to the state of the intellect than to the paralysis of the auditory nerve.

"Convulsions were noted in twenty cases; the spasms were general or partial, affecting a limb, or the face, or the eyes, or the organs of deglutition or respiration; if in other cases there were not prominent convulsive movements, there were tremors, subsultus, and carphologia, grinding of the teeth, trismus, with stiffness of the neck; opisthotonos was occasionally observed. In one case the head was spasmodically flexed on the chest, and could not be drawn back without causing great pain. Tonic spasm of the muscles of the arm, forearm, legs, or face, were observed in three cases. Paralysis, exclusive of the muscles of the eye, or upper eyelids, was rare. There were three cases of hemiplegia, one of paraplegia, one of an upper limb, and one of a lower limb.

"Hyperæsthesia was rare, anæsthesia much more frequent. "Vomiting occurred in fifteen patients. Difficulty of swallowing in seven. Respiration was difficult, irregular, or stertorous, in every case. In a third of the cases there was more or less of intense fever, but generally the pulse was slow; sometimes, after having been slow, it became frequent. The skin was hot, and the face flushed."

Now you must bear in mind that the cases cited by Gintrac were all of great severity, and terminated fatally. You must not, therefore, expect to find in cases of which the lesion is very limited, all the symptoms noted by him. Then, too, his cases are much more acute in

character than the one before us, or the others to which I have referred. Four of his cases, however, present very great analogies with those to which I have called your attention to-day.

It seems to me, after taking a full consideration of the symptoms of this case, and from what we know of others, in which *post mortem* examinations have been made, that the disease in this woman is really basilar meningitis; and, acting upon that supposition, I will treat her for that affection.

As bearing upon the treatment, inquiry should always be made relative to the causation, for one of the first things to be done in the management of every disease is to remove or counteract the cause. It is astonishing to find how many of these cases are connected, either directly or indirectly, with a syphilitic taint. As far as my own experience extends, the great majority of my patients affected with the disease in question acknowledged the pre-existence of syphilis; and even when they failed to do so, in a large proportion of the remaining cases there was evidence upon which to found a reasonable suspicion that syphilis was at the bottom of the cerebral affection.

In the present case I have not, after careful inquiry and examination, any proof that the woman has ever, either directly or indirectly, been subjected to the action of the syphilitic poison; and yet I cannot help thinking that this disease owes its existence to the influence of that virus. At any rate you will remember that I have frequently inculcated upon you a therapeutical principle applicable to the treatment of all obscure brain-affections, and that is, when in doubt, give iodide of potassium, and give it largely. I have come to the adoption of this idea not from guess-work, but from the results of actual experience, a great deal of which has been brought here before you at these clinics. You will, doubtless, recall several quite recent cases, in which the symptoms of severe cerebral lesion were unmistakable, and in which complete recovery ensued upon the administration of large doses of the iodide of potassium. I am inclined to think that most of these were cases of meningitis of circumscribed extent, and involving either the basilar or convex surface of the brain. Whether they were or not, the iodide of potassium cured them, and that, after all, is the principal point.

You know, too, how I prefer to give the iodide of potassium in these cases. A saturated solution of the salt in water contains about a grain to the drop. Starting with, say five drops of such solution, given three times a day, I give the next day six drops, three times, the next day seven, and so on, increasing a drop for the doses of each day, until the patient takes as much as thirty or fifty drops to the dose. By this method of administration the system is kept fully under the influence of the medicine, and the maximum of the curative effect is produced.

Last year, this woman was cured by this plan of treatment, and we have every reason to hope that a like degree of success will follow now.

As regards adjunct treatment, there is nothing which is specially indicated in the case before us. Sometimes iron and the bitter tonics are proper, and the hygiene should always be carefully looked after. Local treatment of any kind is rarely beneficial, and cauterisation and blistering are especially to be condemned, as they only add to the distress of the patient, without in the slightest degree arresting the progress of the disease. One point I must not forget, and that is, that excessive mental exertion should always be avoided. Indeed, the less there is of this the better.

The patient has a sore brain, and it is no more sensible to use it than it would be for her to walk from here to the Battery on a sore leg.

CASE OF PARALYSIS OF THE BLADDER, PROBABLY OF CATARRHAL ORIGIN: WITH CLINICAL REMARKS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

MRS. S., aged 26, married three years, had had three miscarriages, the last twelve months ago. None of her children had lived more than five months. Her temperament was nervous; two other sisters had an unstable nervous system. She had been very well lately. For about a week she had felt some pain, of a bursting down character, quite in the pelvic region. It was felt very much when she urinated. On the night before I saw her (Oct. 4th), it came on much worse; she kept getting out of bed frequently, trying to urinate, but could only pass a few drops. She had not been able to pass the usual amount of urine the last twenty-four hours, but thought she had passed a pint or more. The sitting posture or lying hurt her; she was easiest when standing. The bowels were not well open. The catamenia were regular; a

period ceased on the previous day. Pulse quiet, weak; tongue pretty clean. I found the bladder very full, and drew off a very large quantity of urine, which appeared normal. The uterus was normal, except that the lining membrane of the cervical canal near the os was of a dusky red colour, and that the os was directed too much forwards; but it seemed impossible that it could have pressed on the neck of the bladder, or in any way mechanically impeded the flow of urine. At the vaginal entrance, there were two or three folds of mucous membrane extremely sore and tender, and evidently hyperæmic; but I could see no ulcer. A lead lotion was ordered to be applied. In the evening, she began to suffer great distress again, got very little sleep, and by 2 P.M. of the 6th was in extreme uneasiness, as before. I drew off a large quantity of urine, which was turbid, slightly alkaline, and deposited a large amount of granular and minutely globular phosphate with some fine prisms and numerous blood-corpuscles, but little or no mucus or epithelium. The abdomen, after the urine was drawn off, was quite soft and flaccid, devoid of tenderness, and resonant down to the pubes. I ordered ten grains of Dover's powder, with a drachm and a half of liquor ammoniæ acetatis, in an ounce of camphor mixture, three times a day; and sinapisms to the epigastrium. On October 7th, in the evening (7 to 8 P.M.), I found her very comfortable, with good appetite, feeling very well, and apparently quite so, except that she had passed no urine since 10 or 11 the previous evening, and could pass none now on trial. The hypogastrium was resonant, and the bladder seemed empty. She had taken five doses of the mixture. I desired that no more should be taken. On the 8th, the urine evidently contained more blood, and was very turbid; she had no power of expulsion; the quantity secreted was moderate; it was very offensive. I drew off about sixteen ounces, of specific gravity 1033, slightly alkaline, depositing mucus-corpuscles abundantly, and prisms of phosphate. The inner surface of the bladder did not appear tender. She was ordered to have twenty minims of liquor ferri perchloridi in water every four hours. On the 10th, the urine drawn off last night was much clearer, acid. She had no power at all of expelling it. The bowels were freely moved by castor oil. Pulse 66. She felt well. The mixture was continued four times a day. On the 11th, she had tried hard, but could expel no urine. She had much pain in the back and hips after her efforts. The appetite was good. She remained in bed. The mixture was ordered to be taken every four hours. I faradised her on the night of the 12th—one pole over the pubes; the other introduced into the vagina, and resting against its upper wall. Till then she had not been able to expel any urine; but two hours afterwards she passed it naturally, and did so on the 13th and the morning of the 14th. On the latter day, the urine was alkaline, very turbid with mucus, pale, and not albuminous. She had great pain in her legs on the 13th, and could not walk about. On the 14th, she felt very well. She began on the 12th to take one-twenty-fourth of a grain of strychnia, with fifteen minims of liquor ferri muriatis, in an ounce of water, four times a day. On October 18th, the urine was nearly clear, acid, not albuminous; it was passed naturally, but she could not hold it long. It deposited some mucus and stellar phosphate. She felt quite well. On November 19th, she had had no trouble with the bladder since the last report, only a little soreness at the vulva; but had had several colds and pain across the lower part of the abdomen. She had pain in the back and yellow discharge. An ulcer existed at the fourchette, and the glands at the inner extremity of Poupert's ligament on both sides were enlarged. Subsequently, a tubercular and macular syphilide developed itself on the lower limbs and other parts, which is still present (March 10th). No disorder of the urinary organs has recurred.

REMARKS.—I think it clear that this was a case of paralysis of the bladder—of the detrusor urinæ—and not one of spasm of the sphincter. Pain in the affected region seems to be present, from Duchenne's description, in cases where the latter exists. The ease with which the catheter was introduced, and the effect of faradisation, confirm this view. Then what was the nature of the paralysis? and how was it caused? Some may be disposed to take refuge in the term hysterical—that *asylum ignorantie*. But I cannot join with them; for there was no outward manifestation of hysteria at all, and no indication of the existence of that peculiar mental constitution which makes such disorder to be, consciously or unconsciously, simulated. The derangement was purely physical, I believe, as it is in the hemiplegia which sometimes succeeds epileptic attacks. I much prefer the term "neurolytic", which affirms nothing respecting the causation of the paralysis, except that it is not dependent on coarse lesion, or inhibitory irritation, or demonstrable toxæmia. So far is pretty certain; but I venture to go farther, and to propose the following hypothesis as highly probable. She got catarrh. In the usual course of things, supposing the bladder to suffer, the morbid influence would have affected the vaso-motor nerves, and through them the muscular fibres of the arteries and the

capillaries of the part. Hyperæmia would thus ensue, and would give rise to the usual mucous exudation, with more or less admixture of blood. This actually occurred here, but not primarily. The first event was paralysis of the organic muscular fibres which constitute the detrusor urinæ, and which are essentially similar to those existing in the arterial coats. It cannot be considered unlikely that a tissue closely adjacent, and very similar to that which is commonly affected, should in some instances be first attacked. That catarrh depends on some nerve-paralysing influence, I cannot doubt. Apart from much recorded experience, the following fact is worth mention. My house-cat at present (March 1873) has been acutely ill the last few days with diarrhoea, loss of appetite, frequent sneezing, extreme feebleness, and incomplete paraplegia of the hind legs, so that she could not go up stairs. She is now convalescing. I suppose the cat may be acquitted of hysteria; so, I think, may my patient. Both had catarrh, I believe. That the syphilis which made its appearance a month later could have been concerned in causing the paralysis, can hardly be imagined. The history, both in itself and as a contribution to the history of catarrh, is not without interest.

CASE OF PUERPERAL CONVULSIONS.*

By JOSEPH GRIFFITHS SWAYNE, M.D.,

Physician-Accoucheur to the Bristol General Hospital, and Lecturer on Midwifery at the Bristol Medical School.

WHEN uræmic convulsions occur during pregnancy, and are unaccompanied with any symptoms of labour, and when all other methods of treatment have failed, the propriety of resorting to artificial delivery becomes a question of great importance. The following case has some bearing on this question, and is also worthy of notice on account of its unusual severity.

On August 28th, 1872, Mr. Baretti requested me to see Mrs. S., Gloucester Street, Mall, Clifton, whom he was attending in her first confinement. For some days there had been much oedema of the legs. Violent convulsions came on about 10 A.M. on August 28th, and continued until 9 P.M., when we saw her. She had then had thirty fits of convulsions, with complete insensibility and stertorous breathing in the intervals. The urine had mostly been voided involuntarily, so that we could only obtain a very small quantity by catheterism, but this was found to be highly albuminous. She had just completed the eighth month of pregnancy, but no signs of labour were present. On examining, I found that I could just introduce the tip of the finger into the os uteri and feel the head. Sinapisms had been applied to the nape of the neck and calves of the legs, and a turpentine enema which Mr. Baretti had ordered had been administered. She had another fit very soon after our arrival; and, as soon as it had passed away, we bled her to eighteen ounces. The pulse was softer and less laboured after the bleeding, the breathing was less stertorous, and she seemed on the whole somewhat relieved. Nevertheless, in less than half an hour another fit came on. As the case seemed desperate, we determined, as a last resource, and with a view, if possible, to save the child, to empty the uterus. The bleeding had softened the os uteri somewhat, so that I was enabled to introduce without any great difficulty first one, then two, then three, and then four fingers, and finally to pass the whole hand into the uterus, to seize the feet and deliver. The whole operation did not occupy more than an hour's time. The child, however, was still-born. It was a male, and was a full-sized eight months' foetus. As the symptoms were not much relieved, we kept her under the influence of chloroform for some time, but without any very apparent effect. As I had arranged to go out of town about this time, I did not see her afterwards; but am indebted to Mr. Baretti for the subsequent history of the case. When he saw her on the next day (August 29th), she had had in all as many as forty fits. He examined the urine, and found it still albuminous, but not nearly so much so as on the previous day. She had no fit after this, and began to improve steadily. The amount of albumen decreased every day, until at last the urine became quite clear. She completely recovered consciousness in a few days, but did not regain the power of speech, and was obliged to express all her wants by writing on a slate. Although she could put out her tongue, she had considerable difficulty in swallowing, the left side of the throat appearing to be partially paralysed. There was, however, no paralysis of the body or extremities, and she could get out of bed very well to use the night-stool. Mr. Baretti saw her last on September 15th, and she was then so much better that he did not think it necessary to call on the next day. On September 17th, before his

next visit, she wrote down that she wished for a mutton-chop. This her friends gave her, and she ate it with great apparent relish, but almost immediately afterwards was seized with a violent convulsion, and died before he could arrive at the house. This was exactly twenty days after the first attack. No *post mortem* examination could be obtained.

In this case the fatal termination was no doubt due to some cerebral lesion, probably a rupture of one of the cerebral vessels and effusion of a clot into the substance of the brain. The woman had probably partially recovered from the injury, which was no doubt occasioned in the first instance by the extreme cerebral congestion arising from the violent convulsive attacks. A full meal, however, was sufficient to cause a recurrence of the same symptoms, which terminated in death. An interesting case of aphasia which terminated in a similar way was published by Dr. Fox in the *Lancet* for August 11th, 1866. A girl was suddenly attacked with aphasia and hemiplegia of the right side, and was in a fair way for recovery, when, about three weeks after the original attack, she was seized with convulsions after taking some improper articles of food, and died very rapidly. In this case an old clot was found in the left cerebral hemisphere, involving the lower portion of the corpus striatum, and some recent effusion of coagulated blood in the left lateral ventricle. Dr. Fox considered that the *post mortem* examination in this case tended to confirm Broca's views that the seat of the faculty of articulate speech is located in the posterior portion of the third left frontal convolution. Other cases, however, especially some published by Dr. Hughlings Jackson, would tend to show that the chief lesion in aphasia is seated in the gyri of the island of Reil. It is very unfortunate that in the case I have just described we had no opportunity of verifying this point in pathology by a *post mortem* examination. One peculiarity observed in this case in which it differed from most others of aphasia was that there was no hemiplegia of the right side, nor, indeed, any paralysis, except to a very partial extent, of the muscles of the throat.

With respect to the treatment of the case just related, it has been stated that delivery was effected by turning, although no symptoms of commencing labour were present. This, I am aware, is contrary to the generally received rules of obstetric practice. Dr. Churchill, in his *Theory and Practice of Midwifery*, says: "I believe there is no dispute, that until labour sets in naturally interference would be injurious; so that, in convulsions during gestation, we have nothing to do with the uterus, but must confine ourselves to the treatment of the convulsive disease." Dr. Murphy, in his *Lectures on Parturition*, brings forward statistics to prove that those cases of puerperal convulsions in which labour took place naturally showed the smallest proportion of deaths, and those in which delivery was effected by turning the largest. Hence these statistics would tend to prove that it is not desirable to expedite delivery in any way; an opinion, however, which Dr. Murphy does not hold.

Statistics, however, are apt to be a very fallacious guide in settling disputed points of this kind. There is no doubt, I think, that those cases in which delivery was allowed to take place naturally were the most favourable ones, the labour being so far advanced and going on so favourably that the accoucheur in attendance did not think it necessary to resort to artificial aid; whereas those in which turning was adopted were labours which were so little advanced that no other method of delivery appeared feasible. My own experience of puerperal convulsions (I mean those of an epileptiform character) would lead me to conclude that by far the worst and most fatal cases are those which occur during pregnancy, and are accompanied with no symptoms of labour. I have had five fatal cases of puerperal convulsions out of a total of nineteen, and three of these were of the kind just mentioned. In two, no attempt was made to deliver, because there was no sign of labour. The third was the one I have just related; and in this also there were no signs of labour, yet the case seemed so desperate, that we were unwilling to leave any remedy untried, and preferred to act in opposition to established rules rather than to abandon the woman to her fate. The result proved, I think, that but for the cerebral lesions caused by the convulsion, she might have recovered; for the albuminuria and convulsions had entirely disappeared for more than a fortnight. My own experience with regard to the treatment of such cases would lead me to the conclusion that after other remedies, such as bleeding, chloroform, chloral, purgatives, etc., have been tried without success, delivery by turning should be resorted to, provided that the os uteri is in a condition to admit of this without using much force; and it is one of the advantages of venesection that, besides (as I have shown before) relieving the albuminuria, it renders the os uteri soft and dilatable. If there be time, it would, of course, be better to dilate the os uteri gradually by caoutchouc bags, as recommended by Dr. Barnes; but generally there is no time for this, and then the process of dilatation must be effected by the hand, which, as Krause has pointed out, may be done when the os uteri is so far opened as at least

* Read before the Bath and Bristol Branch.

completely to admit one finger. I must, however, join with Professor Braun, of Vienna, in his condemnation of forcible delivery when the os is in a rigid undilatable condition. On this subject, he remarks:—"When artificial delivery (*accouchement forcé*) is attempted by introducing the hand in a conical form through a narrow os uteri, and when the cervix is narrow or very little dilated, it is generally found to be altogether impossible, or it sometimes leads to uterine ruptures dangerous to life; and thus the mother is subjected to greater dangers from the operation than from the eclampsia itself, of which no one can say whether any more paroxysms may come on and cause death" (Braun on *Puerperal Convulsions*, translated by Dr. Matthews Duncan).

EMBOLISM OF RIGHT MIDDLE CEREBRAL ARTERY: WARTY GROWTHS IN THE LEFT AURICLE AND ON THE MITRAL VALVE.*

By HENRY E. ARMSTRONG, M.R.C.S., Newcastle-on-Tyne.

As the *post mortem* examination of this case revealed the conditions which form the text of the following paper, the symptoms may be divided into three sets; viz., those previous to the detachment of the fibrinous growth; those which accompanied its passage and marked a temporary impediment to its course along the vessels of the brain, as the pulsations drove it slowly onward; and, finally, those which supervened after the total arrest of its progress when the balance of the circulation was in some degree restored, and which continued till death.

M. D., a slender girl, aged 14, with none of the signs of puberty, had been ill four years. Her complaint was said to have begun with slight swelling of the feet and legs, followed by numbness of the right side. These symptoms, however, after a time disappeared entirely. She had been under treatment for palpitation, dyspnoea, etc., at various public institutions here and in Edinburgh, and understood that she had disease of the heart.

I was called to the case on February 15th, 1872, when I found the patient comatose after a succession of epileptiform convulsions, which had come on during the morning, from the exertion of ascending several pairs of stairs to the tenement occupied by her family. A loud cooing systolic *bruit* was audible over the entire chest, and (less distinctly) down the abdominal aorta; by its continuance it seemed to drown the second sound of the heart. The pulse was 112, regular, and of equal volume at the two wrists.

Early next day the patient roused up, and soon began to chatter incessantly. She complained of her head, especially near the right temple, which she said was fit to "open." She had left hemiplegia—sensation and motion being completely lost in the upper limb; motion entirely, sensation in great measure in the lower. The pulse was 120. The patient was occasionally sick. She had a chloral draught, and slumbered at times; but, so long as she was awake, she continued to talk volubly. On my visit in the evening of the same day, the mother volunteered statements that the patient had that day used words "such as she never used before." She had called her relatives strange names, made unusual demands, and frequently struck out and kicked with the right hand and foot. Although at all times previously to the present seizure, the patient was, to my knowledge, of a retiring and modest disposition, she had now become bold and slightly erotic in her remarks, even to myself. In the intervals of her chattering she would lapse into unconsciousness, which lasted a few minutes.

I was told that during some of the comatose periods her face had been distorted as though by pain; but all such appearances had passed off at the time in question, and her general aspect was placid, and her pupils normal. She had vomited all food.

Next day she was more rational, but at times semicomatose. She then vomited matters of a grass green colour. On the day following consciousness seemed completely restored, and the expression, though languid, was more natural. The heart beat with more force; and the second sound was once more audible.

A day or two after this (on February 22nd), the sound side began to jerk spasmodically. The vomiting continued urgent for about a week, the stomach rejecting all food, though the patient had become almost ravenous. To relieve the insomnia from which she suffered, thirty grains of hydrate of chloral in solution were injected *per rectum*, but were not retained. Sleep was afterwards procured by solution of morphia taken into the stomach.

On March 1st, the paralysis was unaltered, but the patient had re-

gained her usual mental condition, and was once more the quiet shy girl whom I had known before the attack.

On the morning of March 7th, she spat up a little blood and complained of frontal headache. At night, she was for over three hours violently convulsed on the right side, after which she became semicomatose for a time. On the return of consciousness, vocal articulation, which had hitherto been intact, was observed to be somewhat impaired. The patient was rational. She complained of a choking sensation, and occasionally spat up blood or bloody mucus. At this stage I noted that the first sound of the heart had become rougher, and that the second sound seemed more distinct, from which I at the time inferred a further detachment of the valvular vegetations.

After this, the patient slowly improved, and in about three weeks had regained some power over her limbs—the upper first, so that when raised in bed she could move the elbow of the palsied arm away from the side, and by jerking the shoulder could bring it forward. The forearm and hand were still paralysed. When lying supine, she could raise the lower limb from the bed and flex the leg.

Speech and reason had now become normal, the vomiting and hæmoptysis had entirely ceased, and the scapular, humeral, and pectoral muscles were gradually reacquiring force. By the latter end of April the patient was able to use the forearm a little, and could even walk without assistance. Tarsal ophthalmia of the right side was now observed, but there was no ptosis.

By the beginning of June she was not quite so well; and on the 11th she had become dropsical, with symptoms of uræmia, from which she died on the 13th, about four months after the first appearance of signs of embolism.

Sectio cadaveris, thirty hours after death. The body was small for age, anasarous, and discoloured on the surface. The dura mater was tense; the meningeal vessels and cerebral sinuses were full. The cerebral substance was of a dark greenish grey colour on the surface. The convolutions were flattened. The brain was somewhat soft and not easily removed entire. The medullary substance was slightly yellow in hue, with "moist lustre of cut surface," indicating œdema; there were few or no *puncta vasculosa*. The vessels at the base were loaded. On tracing the right middle cerebral artery along the Sylvian fissure and following up one of its divisions to the back of the anterior lobe, a white plug, about the size of two or three large pins' heads, was distinctly visible through the thin transparent wall of the (up to this point) distended vessel. The plug felt hard between the finger and thumb. No other abnormal appearance was noted in connexion with the brain. The heart weighed above eight ounces and a half, a rather heavy weight for the size of the girl. The lower and left walls of the left auricle were closely studded with short, easily detached fibrinous prolongations, forming a well-defined rough surface down to the free margin of the posterior segment of the mitral valve. Warty growths hung down into the ventricle from the margins of the valve, the largest (which was afterwards accidentally detached) being of the size of a split pea. The left ventricle was dilated; and its walls were hypertrophied. The right ventricle was small in comparison with the left, otherwise normal.

REMARKS.—During the progress of this case, certain of the symptoms led to the supposition that the detachment of fibrin from the heart was repeated. These were the clonic spasm of the right limbs, followed by semicoma, and afterwards impairment of articulation, on the 7th of March. At that time the actual roughness of the endocardium or the quantity of warts was not even guessed at; and, when auscultation after a recurrence of the more acute symptoms of embolism revealed an alteration in the mitral systolic sound, the diagnosis of further detachment of warts from those valves was not altogether without foundation. The *post mortem* examination, however, showed the probable fallacy of this diagnosis, since there was found but one morsel of fibrin found in the vessels of the brain, and several remained adherent to the mitral valve; had there been others in the brain, the thinness and transparency of the vascular coats at the seat of plugging, and the distension elsewhere, would readily have shown any but the minutest solid foreign body within the vessels. The inference, therefore, is that the first attack of convulsion was caused by the passage of the wart as it was slowly carried through perhaps the first portion of the middle cerebral artery by the more rapidly travelling stream of blood which, from the presence of the foreign body, found its way with difficulty to the parts supplied by the branches of the vessel; that, reaching a bifurcation, the embolon for a time obstructed the current through one or both branches, causing anæmia of the brain beyond and coma, which passed off as the circulation became re-established collaterally by the circle of Willis; and that, as the heart's action began to increase in vigour (*i.e.*, about a fortnight after the coma) the obstructed vessel (which, from previous want of blood, etc., had suffered in tone more than those of other parts of the body) yielded, and allowed

* Read before the Northumberland and Durham Medical Society.

the plug to be pushed by the blood a little further to the next bifurcation of the artery, at which time the second series of milder clonic spasms, followed by semicoma, occurred. The gravity of the symptoms in each attack of convulsions and stupor would be proportionate to the calibre of the vessel through which the embolon was passing at the time, and the relative amount of brain deprived of blood by its occlusion. One peculiarity of the case is that, not only was there no aphasia (apparently proving the absence of any embolon in the *left* middle cerebral artery), but at one time quite the reverse. Shortly after the first coma, the patient's intellect was active, and her vocabulary preternaturally copious for the expression of thoughts which her tongue was glib to utter. After the second coma, however, the mechanism of speech was for a short time deranged. The oedema of the brain noticed at the necropsy might be *post mortem*, or part of the general anasarca. If the latter, to what extent would it influence the anæmia of the cerebral substance during life?

Treatment could be only palliative, and consisted in quiet, with an occasional hypnotic, or sedative draught; a course to which the parents, on an explanation of the nature of the case, readily acceded.

TWO CASES OF ANIMAL POISONING.*

By JOSEPH HINTON, M.R.C.S., Warminster.

THE cases which I propose to relate may prove interesting, as forming illustrations of the modes by which the human frame may be the receptacle of an animal poison, whilst they also serve to show the danger, sufficiently well known to most of us.

CASE I.—Mrs. C., a stout florid woman, aged about 40, of sedentary habits, was first seen by me on September 16th, 1871. She gave this history. On August 24th, she was bitten between the third and fourth metacarpal bones of the left hand by a rat. She paid but slight attention to it, and in a few days the traces of the accident had almost disappeared. Two or three days before my visit, she felt the hand uncomfortable, and there was some degree of general *malaise*. I found the two smaller fingers puffed, some swelling and redness on both surfaces of the hand, at the heads of the two metacarpal bones, with faint lines of redness extending up the arm; no great discomfort in the axilla. On the dorsal surface there was an indistinct feeling of fluctuation; but on pressure there was but slight tenderness. Her general condition was unpromising; her countenance was anxious; she was feverish, and appetite had left her; the tongue was particularly foul, and the bowels were costive. I ordered her to rest the arm absolutely in a sling, and painted the parts with tincture of iodine, giving her a brisk aperient and some saline. On the following day she was greatly improved; the bowels had acted freely, and the local affection was much less painful. On the 19th, she had a sharp attack of sore-throat and a return of feverish symptoms. Chlorate of potash mixture and the use of a gargle relieved this, and the following day she appeared decidedly better. I prescribed some quinine, and, as she slept indifferently, some chloral at night. For a few days progress was unchecked, but about the 27th the local condition again became more urgent; the palmar surface was now decidedly the more swollen; for several days this continued, till there was a very doubtful appearance of suppuration. This increased, but, just as the propriety of opening became a matter of daily consideration, the swelling subsided, and the local ailment was never again troublesome, though occasionally the parts itched. About this time red blotches, varying in size from a sixpence to half-a-crown, gradually appeared over the body; several round each eye. These were tolerably defined in margin, slightly raised, giving a sensation of hardness. On pressure, the redness did not quite disappear. These spots remained more or less visible for four or five weeks, but disappeared before the fatal issue; they never suppurated or altered in character. With the accession of these spots, the tongue became preternaturally clean and sore, and the vital powers began to give way. Nausea was constant, and in a few days vomiting became incessant. For this latter symptom, the Pharmacopœia yielded up one by one all its vaunted treasures, each for the first day or two of trial appearing useful. Suffice it to say that she was given on October 1st, bismuth with prussic acid; October 4th, bromide of potassium; October 9th, quinine, with mixed acids and prussic acid; October 12th, effervescing mixture, with prussic acid; October 15th, effervescing mixture, with lemon-juice; October 18th, mixed acids; October 22nd, oxalate of cerium, and a blister to the epigastric region; October 29th, oxide of silver; October 31st, creasote mixture; and November 10th, sulphurous acid. Creasote, certainly, was the most beneficial. On

October 18th, she was seen by Dr. Falconer in consultation; and, at his suggestion, the mixed acids were again tried. When vomiting had thoroughly set in, the matters vomited were always of a dark sap green colour; and very rarely did she have twelve hours' freedom. On October 31st the throat again became very sore, the tongue glazed and dry, deglutition difficult, the pulse very flickering, and her general condition so bad that for thirty-six hours death appeared imminent. I then ordered five grains of quinine and half an ounce of brandy, with opium, to be given every four hours by injection. She rallied, and from this date to that of her death, on the 11th November, she was kept alive chiefly by these means. I have said that creasote was decidedly the most successful in allaying the distressing vomiting; and, after she had taken it two days, there seemed just the hope that she would yet weather the storm. She took several meals of bread and milk, small pieces of partridge, etc., and appeared to enjoy it; but this only lasted four-and-twenty hours; the vomiting again returned; she sank into a semi-conscious state, and died on November 11th, very nearly three months after the occurrence of the accident.

My patient lived in the heart of our little town; she was bitten in the cellar, and no doubt the rat was a sewer-rat, and might probably have been just feeding on some decomposing animal matter. The rat-catchers who kill them in the ricks never scruple to lay hold of them, and are often severely bitten, so far as I have seen without any ill effects; but then it must be recollected that the rats are in these instances gaminivorous. My partner Mr. Bleeck saw in consultation a case of rat-bite under the care of my friend Mr. Grubb. This case was near the town, and the man's life was in great jeopardy for several weeks. Since the fatal issue of my case, I have often considered that my patient's position might have been better had I opened the dorsal aspect of the hand at first. Any way, the case has so far impressed me with the gravity of such an accident, that I should in a similar case recommend (if seen at the onset) excision of the wound and caustic; and, supposing the time for this to have passed, I should open any suspicious swelling at the seat of injury.

CASE II.—Mrs. D., aged about 27, a very small and decidedly weakly woman, sent for me hurriedly two years since. A second messenger met me. I found my patient blanched, cold, and almost pulseless—her tongue and breath being also cold, giving me the appearance of a case of cholera collapse. She could only speak slowly, and in a whisper; but by degrees she gave me this explanation of her condition. She was perfectly well, engaged in her domestic duties, when she begged her servant to bring her a certain saucepan. In this identical saucepan, some six weeks previously, mackerel had been cooked. The servant believed her saucepan to be clean. The mistress took off the cover to examine, and was immediately regaled by the most horrible stench, which very nearly knocked my patient down literally. She was immediately very sick and faint, very soon had a great desire to relieve the bowels, and for this purpose went up into the garden. She remained there longer than appeared necessary. She was sought for, and was found there, cold, blanched, and as feeble as possible, looking more dead than alive. She was carried up stairs, and, as I have said, was able to tell me this in a low whisper. She further said that the bowels had acted most copiously in the privy, and that even since she had been in bed the slightest movement brought on a very loose action. No flooding of any kind occurred. By the aid of stimulants and other appropriate measures, she soon rallied from this alarming condition.

Now here, I take it, we have another form of animal poisoning, in which the nasal membranes formed the door of admission; and, though the matter appears trifling enough, the result placed a life in peril for several hours. I have said she was a small woman, but she is particularly so, and is also of feeble powers; still, I have attended her in three confinements, which she has borne pluckily and well, and her powers of endurance are greater than her appearance would indicate; but I have never seen her so utterly prostrated as on this occasion.

THERAPEUTIC MEMORANDA.

CONVULSIONS TREATED BY CHLOROFORM.

IN confirmation of the experience of Mr. Mowatt, recorded in the JOURNAL of May 31st, I may mention that some years ago, in a severe case of convulsions in a child aged seven months, I tried the chloroform treatment; and, finding it beneficial, have continued it to the present time with the best and most successful results. I only use the warm bath, etc., where I dare not treat with chloroform. When I am called to a case of convulsions, the first thing I do is to administer chloroform,

* Read before the Bath and Bristol Branch.

and keep the patient under its influence until the convulsions have passed away; when the child wakes, I give small doses of bromide of potassium, taking care that the bowels are freely opened. I fully agree with Mr. Mowat as to the caution required in treating cases where disease of the brain is at work.—ROBERT M'L. FRASER, Darlington.

CLINICAL MEMORANDA.

TRAUMATIC PARAPLEGIA: REMARKABLE GROWTH OF HAIR.

JOSÉ ZAPATERO Y GOMEZ, eighteen years of age, was brought to my consulta publica two years ago, with complete paraplegia, having an extraordinary growth of hair, commencing at the last dorsal vertebræ, and extending round the body, back and front, to the ankles. Eight years previously to this time, in coming out of school, he was pushed by a companion into a small pit about three feet deep, his companion falling on the top of him. He walked home, feeling no pain or inconvenience from the accident for some days; then he experienced slight pain in the lumbar region, accompanied by a feeling of debility and numbness, which continued progressing until brought to his present state. For the last few years he has suffered no pain. Until he came under my treatment, he had vesical paralysis, accompanied by constant constipation and great aversion to food. A thick growth of hair, forming a belt from the second lumbar vertebræ, extends to the popliteal space of both legs; while from this downwards to the ankles, and again from the seventh dorsal to the second lumbar, the growth is more sparse. The chest and back above are quite smooth and free; and it is only within the last month that the moustache and imperial have begun to grow; but, from the nates to the middle third of the thigh, the hair is so long that it might easily be curled. He has a prolongation of the vertebral column, which accumulates a cheesy-looking solid substance, forming a tumour, which matures and drops off like ripe fruit from a tree about every two months, leaving no ulcer or wound. After a course of iron and strychnine, with shampooing, the bladder has become continent, and the bowels regular, the appetite good, and spirits cheerful. Indeed, he is a bright, sharp, intelligent youth, for a Spaniard, and works diligently at his trade of a tailor.

W. JELLY, M.D., Madras.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

OPERATIONS, JUNE 4TH.

Lithotomy.—Mr. De Morgan performed lithotomy on an old man, aged 68. He had been troubled with symptoms of stone only for four months, but latterly his sufferings had been severe. He could not hold his urine for more than ten or fifteen minutes, and had great pain in micturition. Mr. De Morgan performed the lateral operation. The patient was stout, and the perinæum deep, necessitating a somewhat free incision. The stone consisted chiefly of uric acid, the size of a large walnut, this was covered with a layer of phosphate, which split off under the forceps. As there was some little bleeding, a tube was inserted, and the wound plugged round it.

Excision of Superior Maxilla.—Mr. Hulke operated on a country lad, aged 18, for a large tumour, growing apparently from the orbital part of the left superior maxilla. Instead of the hollow between the eye and the nose, there was a prominent rounded swelling; the left nostril was obstructed, and the eyeball pushed forwards and upwards, though the sight was not affected; there was but little fulness of the lower part of the cheek, indeed, the antrum had been explored, and found to be empty. The tumour had been fifteen months growing, though it had increased more rapidly during the last three months. Mr. Hulke made an incision over the tumour, along the lower margin of the orbit from without, inwards, and then cut downwards, along the side of the nose, into the mouth. The flap thus formed was dissected off, and turned outwards; the malar bone was then divided with strong bone forceps, the nasal process of the maxilla divided in the same way, and the anterior wall of the antrum cut through horizontally, above the roots of the teeth. The malar and upper part of the superior maxillary bone was then removed. The large exostosis was thus exposed, and found to be deeply and firmly attached to the lower and back part of the orbit. It

was seized with the lion-forceps, and removed partly with a narrow-bladed saw, and the rest with the bone forceps. There was free oozing of blood; this was soon stopped by plugging the wound with lint, soaked in solution of perchloride of iron. The operation would have been performed a fortnight before: the patient was placed on the table, and was scarcely under the influence of chloroform, when he had a slight but distinct epileptiform attack, attended with arrest of respiration, muscular spasm, etc., the operation was therefore postponed. Both the patient and his parents declared that he had never had any fit previously. The boy did not take the chloroform very well on the second occasion, but there were no convulsions.

We are indebted for many of the particulars respecting this case to Mr. Lewis, the senior house-surgeon; he informs us that, up to this date (June 9th), the patient has been doing exceedingly well.

UNIVERSITY COLLEGE HOSPITAL.

OPERATIONS, WEDNESDAY, JUNE 4TH.

Mammary Scirrhus following Ovarian Disease.—Mr. Heath first excised the right breast of a middle-aged single woman, on account of a scirrhus tumour. The disease was at an early stage, the axillary glands not enlarged, and the skin over the tumour only just becoming adherent. The only point of interest about the case was that Dr. Meadows had removed the patient's right ovary two years previously; the disease was, however, of the ordinary fibro-cystic description, and presented no evidence of malignancy. Mr. Heath remarked that the occurrence of these two tumours in this patient was probably only a coincidence.

Exostosis on the Humerus.—The next patient was a girl, aged 13, who was the subject of an exostosis of considerable size, growing from the inner side of the humerus, just below the axilla, or about the junction of the upper and middle thirds of the bone. The brachial vessels were pushed aside by the growth, and actually ran over its posterior surface. The tumour had only been noticed a few months before, and had been growing rather rapidly. Amputation at the shoulder-joint had been proposed by some Irish surgeon, who had been first consulted, but the patient's friends would not consent, and sent her to London. Mr. Heath made an incision down to the tumour, parallel to and in front of the vessels; he then separated the muscles with the handle of the scalpel, and cut off the exostosis with a narrow-bladed saw, the artery being at the same time carefully guarded with a retractor; the sharp edges left were then trimmed with the bone forceps. There was no hæmorrhage whatever. The tumour was exceedingly dense and hard, and was covered, as is usual, with a layer of cartilage; it was nearly of the size of a hen's egg. In the centre was a small cavity, which communicated with the medullary canal of the humerus. This, as Mr. Heath observed, was an unfortunate complication, since it increased the danger of osteo-myelitis, etc.

Amussat's Operation.—Mr. Heath performed colotomy on a woman who had been for many months under treatment for a chronic syphilitic stricture of the rectum, rather high up, and attended with extensive ulceration. An O'Beirne's tube was first passed through the stricture, and an enema injected, to assist in distending the gut. Mr. Heath then made the usual incision, about four inches long, parallel to and a little above the crest of the ilium. The transversalis fascia, when reached, was divided on a director, and the fold of peritoneum, behind the colon, separated with the handle of the scalpel. A knuckle of gut was then pulled forward, and a couple of threads passed through it, and through the lips of the wound. The bowel was then opened, the thread inside it cut, and the cut edges of the colon securely attached to the skin by the four sutures thus formed. The rest of the incision was then closed, and the whole covered with a thick layer of picked oakum. Mr. Heath observed, before the operation, that as the obstruction was not complete, he did not expect to find the bowel much distended. There was considerable narrowing of the rectum, and prolonged treatment, with bougies, etc., had not effected any lasting benefit. The chief trouble of the patient was, however, due to the great pain, and the large amount of discharge caused by the constant irritation of the ulcerated surface by the passage of the fæces over it. After the operation, he called attention to a point which is mentioned in Mr. Bryant's *Surgery*. After dividing the transversalis fascia, a yellowish band is seen through the peritoneum: this is the fat on the colon; if one cut down upon this, the peritoneum is opened, and the front of the gut is reached; it is necessary to seek behind it for the fold of the peritoneum, and, this having been separated further if necessary, the bowel can at once be opened. In all the cases the arteries were closed by torsion, and, with the exception of the colotomy, Mr. De Morgan's chloride of zinc solution was freely applied before closing the wound. The picked oakum is largely used at this hospital as a dressing for suppurating wounds, it is very warm and comfortable, and effectually conceals the purulent odour.

REVIEWS AND NOTICES.

RECENT WORKS ON PHYSIOLOGY.*

THOUGH not much known out of Edinburgh, Dr. BENNETT's small work, entitled, *Outlines of Physiology*, was highly prized, and much sought after by the students for whose use it was written; and their urgent requests for a larger and more complete text-book have induced the Professor to issue the present work. For Dr. Bennett's own sake, we greatly regret that he should have yielded to their solicitations, as we fear much that this text-book will detract from rather than add to his reputation. It is distinguished in many parts by the lucidity and force of language for which the author has always been remarkable, but some of the subjects are dwelt upon at undue length, while others of greater importance are entirely omitted, or cursorily treated. Moreover, errors are by no means either few or slight. The scope of this text-book is much more comprehensive than that of the *Outlines*, for it contains, in addition to the special physiology of which the latter chiefly treated, two additional sections, one on general, and the other on practical physiology. The first section deals with General Physiology, and includes chemistry of the tissues, general histology, physical and vital properties of the tissues, and a short account of the different views which have been held regarding life. Almost at the beginning of this section our attention is arrested by a flagrant error regarding fibrin, the coagulation of which is here stated to be due to the action upon it of another substance, termed fibrino-plastic substance, though it is only fair to say that a correct account of the coagulation of the blood is given further on. The question whether tissues originate in molecules or cells is discussed at considerable length, and decision is finally given in favour of the author's own theory, viz., the molecular one. Although we do not ourselves agree with this conclusion, we cannot wonder at the author's arriving at it after the emphatic assurance that he is "prepared at all times to demonstrate that pus-cells really originate in the molecular matter of exudations from the blood-vessels, while German pathologists, firm believers in the views of Professor Virchow, have for three months together, in my clinique, ransacked the inflamed and purulent tissues of the body in the hope of finding and showing me even one enlarged connective tissue corpuscle, containing pus-cells, but have at length admitted that nothing of the kind could be found." Cohnheim's views respecting the origin of pus find no more favour than Virchow's with the author, who tells us that he and his assistants have never yet succeeded in seeing white blood-corpuscles pass through the vascular walls, although they have been carefully looking for the phenomenon since 1843, when Dr. W. Addison's paper on the subject was first published. On the subject of nerves, also, the author differs from the majority of histologists, who regard them as fibres, while he considers them, even in their minutest ramifications, to have a tubular structure. Under the head, "Physical Properties of the Tissues," a short treatise on natural philosophy is introduced. At first sight we are inclined to pronounce this entirely out of place, as it is too elementary for students who have acquired a knowledge of physics, and too imperfect for those who have not; but on second thoughts we are inclined to consider that it may be of service to the class, by no means a small one, of students whose rusty knowledge only wants a little rubbing up to make it again serviceable.

The second section treats of Special Physiology, and contains an account of the functions of nutrition, innervation, and reproduction, as well as a brief notice regarding death, and the different ways in which it may occur. The description of the processes of digestion, circulation, and respiration, and especially of the influence of the nervous system upon them, is very meagre and imperfect. For example, we are told, with reference to the innervation of the submaxillary gland, that there are two nervous arcs, which, through reflex action, excite salivation, the one having for its centre the brain, and the other the submaxillary ganglion; and that irritation of the glosso-pharyngeal lingual or facial and chorda tympani and sympathetic nerves increases the flow of saliva. No further explanation of the phenomenon is given; and, thinking that a full account of it will probably be found under the head of the nervous system, we turn to innervation. Here, however, disappointments await us, for all the information we gain is, that "the incident nerves are the buccal branches of the fifth, and the excident, or secretory, the parotid branches derived from the carotid plexus"—a statement which is calculated rather to perplex than to enlighten the

student. No fewer than four pages are devoted to the peculiarities of the circulation within the cranium, while a quarter of a page suffices for the circulation in erectile tissues. Not a word is said about the nervi erigentes; and the turgidity of vessels and increased circulation which occur during secretion or active growth are ascribed to "the increased attractive force exercised by the tissues on the blood", although most physiologists now attribute them to the action of vaso-inhibitory nerves. A great number of interesting facts regarding the functions of the brain and spinal cord are collected under the head of "Innervation", but most of them are old observations; and the discovery of inhibitory centres by Setchenow, as well as many of the other important additions to our knowledge of the nervous system which have been made in recent years, are left unnoticed. The chapter on reproduction is a very full one, and includes parthenogenesis, heterogenesis, the origin of species, and sexual selection, as well as the subjects to which physiological treatises are usually confined.

The section which treats of Practical Physiology has already been noticed in a recent review in this JOURNAL. We will here merely remark that the introduction of a description of the methods used in physiological experiments into a general treatise is to be regarded as a sign of the times. One of the characteristics of medical teaching within the last few years has been the requirement of practical instead of theoretical knowledge, and to Dr. Bennett's influence, direct and indirect, this beneficial change has been in no small degree owing. To him belongs the credit of being the first in this country to teach practical physiology, and for his earnest and successful efforts to render general the use of the microscope, and other instruments of physical diagnosis, as well as for his constant endeavour to lend exactitude to medicine by abolishing fancies and hypothesis, and substituting facts in their places. Not only the Edinburgh school, in which he has long been an honoured and successful teacher, but the whole medical profession, must ever owe a deep gratitude.

The laws of health are constantly, but unintentionally, transgressed by numbers of people, from sheer ignorance of the functions of the body, and the conditions requisite for their proper performance. Nor are text-books of pure physiology quite sufficient to impart the required knowledge; for although they supply the data, many persons are unable to draw from them the necessary conclusions, or to make the needful applications. What is wanted, in fact, is a text book of applied physiology, and Dr. NICHOLS' work is intended to supply this desideratum. If tried by a scientific standard, it would not bear criticism, but it would be unfair to apply this to a popular work like the present. The author's knowledge of physiology is by no means profound, but his facts are right in the main, and his conclusions and directions usually correct. The work is written in an easy style, and contains much interesting information. It is unfortunate that the author gives no references, as he occasionally exhibits so much credulity—e.g., in regard to mesmerism—as to excite a wish to verify his statements by a reference to authorities. His schemes of political economy are somewhat peculiar, and his reasons occasionally startling. He is a thorough optimist, and draws an enchanting picture of the Utopian condition of society which will prevail when his views are carried out, and physiology becomes the basis of sanitary and social science. Dr. Nichols' work is calculated to make his readers think, and although they may, and probably will, differ from him on many points, they may spend an hour both pleasantly and profitably in its perusal.

THE INDUCTION OF SLEEP AND INSENSIBILITY TO PAIN BY THE SELF-ADMINISTRATION OF ANÆSTHETICS. By JOHN M. CROMBIE, M.D. London: Churchill. 1873.

It is needless to say that the practice of inducing sleep by the self-administration of anæsthetics has most properly been condemned, and that it has been found to be pernicious, dangerous, and unfortunately attended with fatal consequences. Familiarity with chloroform at length breeds contempt, and care gives place to carelessness in its use. It cannot, on the other hand, be denied that we possess in chloroform an agent capable of wide and safe clinical application for the purposes of inducing sleep and no more, for the relief of pain, as in cancer, neuralgia, and other painful affections.

It is with the view of placing in the hands of patients a safe means of inducing sleep by the self-administration of anæsthetics, that Dr. CROMBIE comes forward with the mechanical means of attaining this object. The apparatus is composed of an India-rubber air-ball, a bottle of chloroform, and an inhaler. The supply of anæsthetic vapour is dependent on the patient, who compresses the air-ball, and thereby causes the expulsion, by means of tubes, of a small amount of chloroform vapour into the inhaler. "Unconsciousness, to the extent of sleep, as distinguished from coma, is all that can be produced by this method for the

* *Text-Book of Physiology: General, Special, and Practical.* By John Hughes Bennett, M.D., F.R.S.E. Edinburgh: J. Thin. London: Simpkin, Marshall, and Co. 1873.

Human Physiology: the Basis of Sanitary and Social Science. By T. L. Nichols, M.D. London: Trübner and Co. 1873.

self-administration of anæsthetics. This is all that is necessary for the relief from pain, however severe; it is all that can be reached and sustained with safety." When sleep supervenes, the supply of chloroform, being dependent on the movements of the hands, is arrested.

Dr. Crombie's apparatus appears to be a good one, and to offer increased facilities for the safe application of slight anæsthesia for the relief of pain. We have employed it in suitable cases, and it has acted well. We are surprised, however, to find the inventor inserting in the text of his pamphlet the following:—"The safety of the instrument for use as directed depends entirely on the accuracy of the mechanical adjustments, and, therefore, none will be sold but those examined and approved by the inventor." There is too much of the tradesman about this announcement. We may suppose that his apparatus fulfils the practical requirements for safely producing self-anæsthesia. But is it right to offer to the public such ample facilities of contracting a habit of reliance on chloroform? We know full well the wretched consequences of the household abuse of chlorodyne, morphia draughts, chloral, and the like, and fear that the apparatus of Dr. Crombie may offer further opportunities for the abuse of anodynes, and prove a very mixed good. Moreover, we dread the consequences of patients acquiring a taste for chloroform beyond the capabilities of the air-ball apparatus.

In a second chapter, the author of the pamphlet, in copious verbiage and with some sophistry, recommends for the production of anæsthesia under all circumstances, attention to all the conditions favouring sleep naturally. No one disputes that such attention is desirable, whenever it is practicable. He attacks the American method of ether administration on theoretical grounds, and, although we are not enamoured of the "main force practice" alluded to, our experience has in many cases failed to bear out Dr. Crombie's theories of "suffocation," "chains," "fetters," and the like.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE
ALLIED SCIENCES.

COOPER'S EFFERVESCENT LOZENGES.

MR. COOPER of Oxford Street has added to his set of prepared formulæ lozenges containing each one-fourth of a grain of quinine and two grains of citrate of iron. We have already had occasion to express a very high opinion of this ingenious and useful device for administering medicines in a portable, cleanly, and pleasant form. But many physicians have an objection, which is readily appreciated, and is often sound, to the use of ready-made formulæ and stereotyped preparations. It may, therefore, be mentioned, that any formula (not including liquid or deliquescent materials) can be prepared in this agreeable form in scarcely more time than is required for ordinary dispensing; and many physicians, we learn, now send their own formulæ to suit each case, not much more than a quarter of an hour being required to prepare effervescing lozenges of any suitable composition. This greatly enlarges the sphere of usefulness of Mr. Cooper's ingenious invention.

NEW CANNULA FOR PUNCTURE *PER RECTUM*, AND RETENTIVE TUBE.

By RICHARD DAVY, F.R.C.S., Senior Assistant-Surgeon to the
Westminster Hospital.

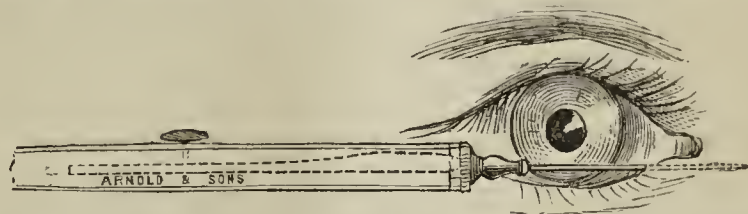
HAVING been taught at Guy's Hospital how useful an operation puncture *per rectum* is for selected cases of retention of urine, and having demonstrated at Westminster how extended its application may become for urinary fistulæ, I beg to introduce these instruments to the notice of surgeons. The cannula consists of a firm curved steel cylinder, pointed at its extremity, and slit throughout its whole length on the convex border. This slit cylinder is fixed into a flattened handle, that permits the free passage of an India-rubber retentive catheter along the cannula. The retentive catheter has been fully described (*vide Lancet*, April 9th, 1870). By extending the catheter along the convex slit, it readily falls into the cylinder, and may as readily be extricated. The flap of recto-vesical tissue, cut by puncturing the trigone, readily adapts itself in the process of cicatrisation. The catheter retains itself; and, by placing the patient on a circular water cushion, the urine is readily conducted into a receiving vessel. It is less disagreeable to have a soft catheter in the rectum and anus than an unyielding silver cannula; and, as neither tapes nor retentive bands are used, the parts are kept drier, and, therefore, cleaner. The motions are passed with less dis-

treass, and, by these instruments, surgical interference and the patient's discomfort are reduced to a minimum. In one case of severe urinary fistulæ, the catheter was retained for six weeks with comfort, the puncture completely healing on withdrawal of the tube.

The instruments have been made for me by Savigny and Co., St. James Street. Mr. Blaise has pleasure in showing them to surgeons.]

INSTRUMENT FOR SLITTING THE PUNCTUM LACRY- MALE AND CANALICULUS.

MR. GREENSLADE has lately invented a little instrument which will certainly prove very useful in ophthalmic surgery. It is manufactured by Messrs. Arnold and Sons. It consists of, as will be seen in the adjoining woodcut, a canaliculus, director, and knife, combined in one handle, thus permitting the operation of opening the duct to be per-



formed with one hand, whilst with the other the surgeon depresses the eyelid. The knife is so constructed as to be hidden in the handle, and with one finger can readily be slid along the director when in the punctum.

By this simple little contrivance, it will be seen that all danger is obviated of wounding other structures than those required to be divided in opening the duct—an accident hitherto liable to occur with an unruly patient.

CHEAVIN'S FILTERS.

A FILTER, manufactured by George Cheavin of Boston, Lincolnshire, has been recently submitted to chemical examination, and found to possess, in a very marked degree, the property of decomposing nitrogenous organic matter; moreover, it filters very rapidly. Like another filter which was examined for this JOURNAL—viz., the silicated carbon filter—it breaks up organic matter, much as boiling solution of alkaline permanganate breaks it up, into ammonia and carbonates; and impure drinking water is rapidly converted by this filter into such water as is supplied by a water-company with efficient means of purification.

We strongly recommend such filters as these to the attention of the occupants of houses in the country, which are often supplied with contaminated water from foetid wells.

The purifying action of the above filter is illustrated by an experiment which Mr. Wanklyn performed with it. He found that water, which before filtration contained 0.16 milligrammes of albuminoid ammonia, was so far purified by the action of the filter as to yield, after filtration, only 0.04 milligrammes of albuminoid ammonia *per litre*.

COLUMN FOR THE CURIOUS.

THE VIRTUES OF WHISKEY.—The following curious extract from Hollinshed's *Chronicles*, 1577, will be of interest to the advocates of whiskey as a therapeutical agent of great power.

"There is used an ordinary drinke of *aqua vite*, so qualified in the making that it dryeth more and inflameth lesse than other hote confections. One Theoricus (*Episc. Hermenensis juxta Bononiam*) wrote a proper treatise of *Aqua Vitæ*, wherein he prayseth it to the ninth degree. He distinguisheth three sortes thereof—*simplex*, *composita*, and *perfectissima*.....*Beyng moderately taken*, sayeth he, it sloweth age; it strengtheneth youthe; it helpeth digestion; it cutteth fleume; it abandoneth melancholie; it relisheth the harte; it lighteneth the mynd; it quickneth the spirites; it cureth the hydropsie; it healeth the strangury; it pounceth the stone; it repelleth grauel; it puffeth awaie ventositie; it kepyth and preserveth the hed from whyrling—the eyes from dazelyng—the tongue from lispynge—the mouthe from snafflyng—the teethe from chatteryng—the throte from ratlyng—the weasan from stiefling—the stomache from wamblyng—the harte from swellng—the bellie from wirtchyng—the guts from rumblyng—the hands from shiueryng—the sinowes from shrinkyng—the veynes from crumplyng—the bones from akyng—the marrow from soakyng.....*And trulie it is a soueraigne liquour, if it be orderlie taken.*"

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 27TH, 1873.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

CASE OF ABDOMINAL ANEURISM SUCCESSFULLY TREATED BY PROXIMAL PRESSURE OF THE AORTA. BY EDWARD HEADLAM GREENHOW, M.D., F.R.S.

IN 1864, Dr. William Murray, of Newcastle-on-Tyne, communicated to the Royal Medical and Chirurgical Society a Case of Abdominal Aneurism cured by Proximal Pressure upon the Abdominal Aorta. The patient remained well for six years, and then died of a second aneurism. It was found that the remains of the original aneurism consisted merely of a fibrous mass, and that complete collateral circulation had been established by the enlargement of vessels both on the outside and inside of the abdominal cavity. Last year a similar case, cured by the same means, was communicated to the Society by Dr. Moxon and Mr. Durham, of Guy's Hospital. These were the only two such cases as yet fully recorded; and the author trusted that the report of a third case would not be considered superfluous, more especially as in this latter some of the results of the compression of the aorta appeared to have an interest apart from that belonging to the cure of the aneurism.

Christopher F., aged 28, warder in the House of Correction at Kendal, was admitted into the Middlesex Hospital, under Dr. Greenhow's care, on May 20th, 1872. He was a strong-looking man, and his health had been good until December, 1868, when he was on board H.M.S. *Princess Charlotte* as an able-bodied seaman. Whilst drawing water from alongside, he suddenly felt something give way in his abdomen. He was soon afterwards invalided, and on his return home obtained employment as warder. In December, 1871, he again began to suffer and lose strength. On admission, he complained of pain in the abdomen and loins, shooting downwards to the groins and thighs. A somewhat globular pulsating tumour, about the size of a large orange, was found in the abdomen, immediately above the umbilicus. It extended more to the right than to the left of the median line, and beat forcibly with an expanding lateral as well as with a forward impulse. Firm pressure over the aorta above the tumour, when the patient was sitting up, stopped the pulsation for the time being. The medical staff of the hospital having agreed with the author as to the nature of the tumour and the means to be attempted for its cure, Mr. Hulke undertook to apply the tourniquet. On May 25th, chloroform having been administered, Lister's tourniquet was screwed down between the tumour and the xiphoid cartilage, until pulsation ceased both in the tumour itself and in the femoral arteries. On account of vomiting, the pressure was withdrawn after three-quarters of an hour. The impulse remained as before, but the tumour felt rather more solid. On the 27th, when the patient was thoroughly under the influence of chloroform, Mr. Hulke applied the tourniquet with the same effect as before, and with two brief intermissions the pressure was maintained during four hours. After some time there appeared marked lividity of the lower extremities, which, as well as the lower half of the abdomen, became quite cold. The temperature taken between the toes was 90 deg. Sphygmographic tracings of the radial pulse showed increased arterial tension. The breathing became very shallow and gasping. Pulse from 100 to 120, respirations from 44 to 56 per minute. The removal of the pressure was immediately followed by the subsidence of all these symptoms. The pulsation in the tumour was decreased, the forward impulse being much less forcible and the lateral expansion only slight. For several days the patient suffered much from vomiting, the vomit containing altered blood, and from pain, numbness and coldness in the lower extremities, more particularly in the right limb, which gradually disappeared as the circulation became re-established. The impulse in the aneurism very greatly decreased, until on June 10th it could scarcely be felt, and the patient was allowed to sit up for a short time. On June 25th, the pulsation in the tumour having decidedly increased in force during the previous week, the tourniquet was once more applied, so as thoroughly to compress the aorta, and the pressure was maintained for three hours continuously. The pulse and breathing showed the same characters as during the former operation, and there was the same coldness of the lower extremities and of the right more than the left foot. When the tourniquet was removed there was forward pulsation of the tumour, but no lateral expansion, and the tumour felt firmer and more solid. During several days the vomiting and coldness of the extremities continued as before. The urine was albuminous for two days. The impulse in the aneurism continued to diminish till

July 1st, when it could not be seen, and scarcely felt. On July 14th the patient was well enough to be discharged home to Kendal. On September 20th, in accordance with Dr. Greenhow's request, he returned to show himself. No pulsation was found in the seat of the aneurism, nor was there any distinct tumour remaining; but above the umbilicus, to the right of the median line, was an undefined somewhat movable hardness. No pulsation could be detected in the aorta from an inch above the umbilicus downwards, nor in the femoral, popliteal, or anterior tibial arteries. Mr. Noble, of Kendal, who sent the patient to the hospital, wrote to Dr. Greenhow quite recently to say that the man was in perfect health.

It would appear certain from this case, taken in conjunction with Dr. Moxon's and Mr. Durham's, that the process of cure by coagulation of blood in the sac of the aneurism is not necessarily a rapid process, as it was in Dr. Murray's case, but may last during many days, and sometimes even for weeks. The direct effects of the pressure upon the pulse and respiration were very remarkable, and not less so the secondary effects of the disturbed circulation on the stomach and kidneys, producing the hæmatemesis and albuminuria which followed the operations. The occurrence of such symptoms would seem to suggest that the intense arterial distension caused by the treatment might be attended by serious danger to persons suffering from any kind of organic disease, especially degenerative disease of the arteries.

Dr. W. MURRAY (of Newcastle) said that the results of the plan followed by Dr. Greenhow and Dr. Moxon confirmed the views which he had expressed. The few cases which he had seen tended to show that coagulation, when it set in, was rapid and complete. Dr. Heath of Newcastle once applied pressure for ten hours without effect in a case of abdominal aneurism; after this, the tourniquet was again applied for twenty minutes, and on its removal the tumour became solid. In nearly all the cases of cure which had come under his notice, the time occupied in coagulation was not more than one hour.—The PRESIDENT said that the case described by Dr. Greenhow must be regarded as a very interesting one; not the less so, that the operation was bloodless. Coagulation no doubt occurred much more rapidly in some subjects than in others. It was a matter worthy of consideration, whether medical treatment tending to favour the coagulation of the blood might be used in combination with pressure. Might not the chloroform that was administered tend to produce liquidity of the blood?—Mr. HOLMES said that rapid pressure, though a bloodless operation, was not free from danger; it had, indeed, sometimes been followed by death. It ought to be carried out only in cases which were not amenable to other measures. He asked whether abdominal aneurism might not be checked by milder treatment, such as low diet and rest. Some cases, again, were amenable to slow compression. There appeared to him to be two ways in which rapid coagulation was produced; first, in the manner described in Dr. Moxon's and Mr. Durham's cases; secondly, by the separation of a portion of the fibrine lining of the artery, and its impaction in the distal end of the vessel.—Mr. HENRY LEE, referring to the supposition that the albuminuria was produced by pressure on the vessels of the kidney, said that he thought that the pressure must have been above the renal vessels. He had seen albuminuria in a case of carotid aneurism on which he had operated.—Dr. GREENHOW had not been aware of any cases of failure in the treatment of abdominal aneurism by rapid pressure. As far as he had been able to find, his case was only the third that had been treated in the special way described. The plan would be dangerous in an unhealthy subject. He believed that the danger lay in shutting off the supply of blood from the lower part of the body, and producing extreme congestion of the vessels in the upper part.

ON THE ETIOLOGY OF ALBUMINURIA AS DEDUCED FROM AN ANALYSIS OF TWO HUNDRED CONSECUTIVE CASES. BY GEORGE

JOHNSON, M.D., F.R.S.

About ten years since, the author made a tabular analysis of nearly 300 cases of albuminuria. In each case special inquiry had been made as to the probable exciting cause of the malady, and in the tabular statement of the main points in the history of these cases one column was set apart for the etiology of the disease. Some recent discussion on the influence of alcohol in exciting diseases of the kidney had led him to refer to his analysis of cases for evidence bearing upon this question; nine-tenths of the cases analysed belonging to the class of hospital or dispensary patients. In 200 consecutive cases, the various etiological influences, single and in combination, came under thirty-three heads. Scarlet fever, intemperance, cold, wet, and gout, either single or combined, accounted for 120 cases out of 200, or 60 per cent. Thus, albuminuria was probably the result of scarlet fever in 24 out of 200 cases, or 12 per cent.; of intemperance in 28, or 14 per cent.; of intemperance and gout in 12, or 6 per cent.; of intemperance and cold in 12, or 6 per

cent.; of gout in 8, or 4 per cent.; of cold and wet in 23, or 11.5 per cent.; of cold in 13, or 6.5 per cent. Intemperance, either alone or combined with other influences, was the probable cause of albuminuria in 58 out of 200 cases, or 29 per cent. Of these 58 cases, in 28 intemperance was believed to be the sole cause; in 12 intemperance with gout, in 12 with cold, in 4 with syphilis, and in 2 with lead. Cold, either alone or combined with other influences, was the exciting cause of albuminuria in 25 per cent. of the cases. In 6.5 per cent. cold alone is believed to have been the cause of albuminuria, in 11.5 per cent. cold and wet, in 6 per cent. cold and intemperance, and in 1 per cent. cold and fatigue. Albuminuria was associated with scarlet fever in 12 per cent. out of 200 cases, with exposure to cold and wet in 25 per cent., and with intemperance in 29 per cent. The following table shows the proportion per cent. of deaths, recoveries, and of persistent albuminuria in cases resulting from—1. Scarlet fever; 2. Exposure to cold and wet; 3. Habits of intemperance.

	Scarlet Fever.	Cold and Wet.	Intemperance.
Deaths	45.83	27.5	67.23
Recoveries	50.	38.88	10.36
Persistent albuminuria ...	4.16	33.33	22.41

Of the 58 intemperate patients, 11 were women, and 47 were men. In 5 cases out of the 47 men the occupation had not been recorded. Of the 42 men whose occupations had been noted, 5 were waiters. The remaining 37 intemperate men had thirty different occupations, not one of them connected with the manufacture, sale, or distribution, of alcoholic liquors. It was then not right to assume that men in the class of hospital patients engaged in the liquor trade, and not notorious drunkards, might be placed in a "non-alcoholic" class. The excess of Bright's disease amongst males, as compared with females, was explained by the fact that, as a rule, men are more intemperate and more exposed to cold and wet than women. Amongst the cases analysed, 76 per cent. were males, and 24 per cent. females. Out of the 58 cases associated with intemperance, 83 per cent. were males; and of the 36 resulting from cold and wet, 77 per cent. were males. In addition to the causes of albuminuria before referred to, the following influences appeared to have been causative, the figures showing the proportion per cent. in a total of 200 cases:—Typhus fever, 4; typhoid fever, 1; erysipelas, 1; pyæmia, 1; measles, 1; rheumatic fever, 1; purpura, 1; cholera, .5; whooping-cough, .5; diabetes, .5; syphilis, 3; phthisis, 2; venereal excesses, 5; poverty and hard work, 2.5; emphysema and bronchitis, 3.5; morbus cordis, 3.5; scrofulous disease of bones or joints, 2.5; scrofulous abscess, .5; pneumonia, .5; lead, 1; tropical climate, .5; hydrophobia, .5; mental anxiety, 1.5; pregnancy, 2.5. The result of the author's later experience would be to add to this long list of causes of albuminuria; particular reference being made to diphtheria, relapsing fever, malarious fevers, yellow fever, and to certain forms of dyspepsia, either with or without an excessive consumption of alcohol or of tobacco, as causative of albuminuria and degeneration of the kidney.

Dr. DICKINSON said that much caution was required in drawing inferences from such evidence as had been brought forward by Dr. Johnson in his paper, which he regarded as an attack on himself. Albuminuria and the use of alcohol often concurred; but it was not to be concluded that one was the cause of the other. A large proportion of patients suffering from any disease, *e.g.*, scabies, might be convicted of the intemperate use of alcohol; yet no one would say that this was the cause of their disease. According to Dr. Johnson, intemperance caused albuminuria more frequently than scarlatina or cold. To syphilis, not a rare cause of albuminuria, only 3 per cent. of the cases were assigned; to phthisis, 2 per cent.; and to disease of the heart, only 3 per cent. Lead-poisoning was given by Dr. Johnson as a cause of albuminuria in only 1 per cent; but Dr. Dickinson believed that no external cause had so much influence as lead in producing granular degeneration. He thought it remarkable that Dr. Johnson had been able to determine the cause of albuminuria in all the two hundred cases. Many must have been cases of granular degeneration, the origin of which is often difficult to discover. If alcohol were a frequent cause of renal disease, such disease would be found distributed over the world. But albuminuria was distributed according to climatic influence. The medical returns of the British army showed that albuminuria was a disease occurring in temperate climates, and that it was most frequent where the variations of temperature were greatest. Referring to his former paper on alcohol and kidney-diseases, Dr. Dickinson said that he had used the words alcoholic and non-alcoholic as general terms of classification; and, referring to the leading articles in the BRITISH MEDICAL JOURNAL, he said that it was not fair to infer that he had imputed drunkenness to any section of the population. But, if there were not an excess in the use of alcohol in one of the classes to which he had referred, how was it that its members were more subject than those of the other to nervous diseases, that their wounds were more difficult to heal, that

they were liable to suppurative inflammation of the serous membranes, and that cirrhosis was more frequent in them? A comparative investigation of teetotalers and drunkards had been referred to in the BRITISH MEDICAL JOURNAL; but the results had not appeared. He did not say that the abuse of alcohol had no effect on the kidney. No doubt it was a cause of granular degeneration, but in a minor degree. Its influence on the kidney was less than that of lead and of climate.—Mr. HENRY LEE said that surgeons met with albuminuria, not dependent on disease of the kidney, after surgical operations and in congestion. He referred to the case of a celebrated engineer who had chronic albuminuria, and was sent to Egypt by Sir B. Brodie, to die. After working hard, however, he came home, and at last died of apoplexy. There was no disease of the kidneys; but he had an intussusception of the right ureter. Inflammation of the bladder and urethra constantly gave rise to albuminuria; so also did turpentine and the balsams.—Mr. CALLENDER asked what was the frequency of albuminuria among Mussulmans.—Sir WILLIAM GULL was astonished to find the Society discussing the cause of albuminuria. In two or three out of every five cases, the cause could not be made out. Boys about the age of puberty frequently had albuminuria, becoming languid, weak, and pallid; but he (Sir W. Gull) did not know the cause. Again, the albuminuria occurring in men about the age of 55 was connected with some change in the blood-vessels, independent of the kidneys. It was a matter of great difference whether albumen was present with a normal or with a deficient secretion of urine. He did not think that any advance in medicine was made by attempting to classify these mere causes of albuminuria.—Dr. GEORGE JOHNSON objected to the plan followed by Dr. Dickinson of dividing persons who had died in hospital into two classes, alcoholic and non-alcoholic; the habits of the living men should be inquired into. As to the small number of cases in which albuminuria was attributed to heart-disease, there was no doubt that disease of the heart and of the kidneys were often associated, but in many instances the heart-disease was not the cause but the result of the kidney-disease. As to lead, many persons were no doubt exposed to the poison of this metal; but it must be remembered that plumbers and other workers in lead were often intemperate. He had not said that he had found the cause of albuminuria in all his cases; on the contrary, he had stated in his paper that in some instances the etiology was a blank. He was aware of the occurrence of albuminuria in young subjects; in most instances, it might be traced to scarlatina, diphtheria, or erysipelas, or to exposure to cold.

ANALYSIS OF OBSERVATIONS ON THE TEMPERATURE, PULSE, AND RESPIRATION IN PHTHISIS AND ACUTE TUBERCULISATION OF THE LUNGS. BY WILSON FOX, M.D.

In this paper the author gave an account of an analysis of the morning and evening observations on the temperature, pulse, and respiration of eighty cases of phthisis made at University College Hospital. The cases were divided by him into five classes—viz., (1) Acute Tuberculosis; (2) Acute Tubercular Phthisis; (3) Chronic Phthisis; (4) Cases with high temperatures not ending fatally; (5) Cases with comparatively low temperatures not ending fatally. The phenomena relating to temperature were considered under the following heads:—1. The maximum and minimum temperatures; 2. The maxima of the morning and evening; 3. The mean temperatures of the morning and evening; 4. The exacerbations and remissions occurring from evening to morning and from morning to evening; 5. Circumstances influencing the degree of pyrexia. In the cases analysed by the author the highest temperatures were most frequently attained in acute tuberculosis, but temperatures exceeding 104 deg. were found in all classes except in the cases categorised as "low temperatures not ending fatally." The highest temperatures were, as a rule, met with in the fatal cases, but in chronic phthisis the temperatures were lower than in other classes, with the exception of the last named. In chronic phthisis high degrees of pyrexia (exceeding 102 deg.) were for the most part due to pneumonic complications. The mean temperatures of the cases not ending fatally fell considerably below those of the other classes, owing to a gradual fall in temperature being observed in many during their stay in hospital. The mean morning temperature might fall within normal limits in certain cases in all classes. This, however, was due in some instances to the extent of the remissions which occur from evening to morning, and which may reach subnormal degrees. Such low averages of the morning were, however, more common in chronic than in acute phthisis. Averages of the evening temperatures not exceeding 99 deg. were only met with by the author in cases of chronic phthisis and the class of low temperatures not ending fatally; he, however, alluded to the fact that these have been recorded by other observers in cases of acute tuberculosis. They were in some cases due to a large proportion of the remissions taking place from morning to evening. The maximum tempera-

ture was usually attained in the evening, but by no means invariably. In 10 per cent. of the cases the maximum temperature of the morning and evening observations was equal. In 23 per cent. of the cases the maximum morning temperature observed was higher than the maximum evening, and in 15 per cent. the means of the morning temperatures were higher than those of the evening. High morning temperatures were more common in the class of acute phthisis than in any of the others. Exacerbations from evening to morning occurred with greater or less frequency in 90 per cent., and remissions from morning to evening in 92 per cent., of 75 cases examined; and these variations were pretty evenly distributed through all classes of cases, being, however, least common in the cases of acute tuberculosis analysed. A morning temperature higher than that of the evening might be found also when the temperature does not exceed normal limits. In a few cases the morning temperature might, throughout nearly the whole series of observations, be found to be higher than that of the evening. Usually, however, these variations occurred irregularly throughout the course of the cases. As the author's analysis was founded solely on morning and evening observations, he thought it probable, from some cases which he had observed where the temperature had been more frequently recorded, that the apparent remissions from morning to evening might be interrupted by a midday exacerbation; but nevertheless, in a fair proportion, an actual rise took place from the evening to the ensuing morning. Equality also between the evening and morning was sometimes maintained, though rarely during long periods; it might, however, extend over thirty-six or forty-eight hours. It might exist both for febrile and for non-febrile temperatures; and, as regarded individual mornings and evenings, might form a large proportion of the observations in any given case. Such approximative equality between the mornings and evenings was usually associated with high pyrexia and with severe forms of the disease. The order of the remissions and exacerbations was thus frequently interrupted by the conditions now described, when the usual course of exacerbations from morning to evening and of remissions from evening to morning was inverted or neutralised. Severe exacerbations were, however, commonly attended with equally great remissions; the maxima of each of those observed being an exacerbation from morning to evening of 8.8 deg., and a remission from evening to morning of 8.4 deg. Fahr. The remissions and exacerbations did not, however, precisely correspond; 10 per cent. had remissions, and 8.4 per cent. had exacerbations exceeding 5 deg. Fahr. The larger exacerbations and remissions were nearly equally distributed among the fatal cases and among those not fatal, but presenting in some part of their course high temperatures. The author, from an analysis of the remissions and exacerbations observed, considered that Niemeyer's statement that acute tuberculosis was distinguished by continuity of high temperature was not borne out by facts; for a greater proportion of large remissions and exacerbations was observed in the highly pyrexial cases of this class than in any others. Although the morning temperature was not unfrequently higher than that of the evening, yet the exacerbations from evening to morning, and the remissions from morning to evening, were usually less great than those following the converse order. In some cases, however, they were greater. Severe exacerbations were sometimes traceable to extension of the disease, sometimes to intercurrent inflammations, but neither of these conditions was always discoverable. Great remissions were most commonly due to exhaustion, and were an unfavourable symptom. Sweating was perhaps not the cause but the consequence of the remission. It might exist when the temperature was high, and remissions might take place without its appearance. Hæmoptysis had no necessary connection with any peculiarity of temperature. Lardaceous disease had no necessary connection with any peculiarities of fever. The fever of phthisis was most closely allied to suppurative fever. The observations on the pulse in relation to the temperature and respiration were analysed in respect of the quickest and slowest pulses observed in the morning and evening of each case, and also of the means of all the observations on the pulse as compared with the mean temperature and the mean number of respirations. The author, on these points, came to the following conclusions. 1. The pulse stands, in respect of rapidity, in the majority of cases, in tolerably definite relations to the intensity of the disease and to the severity of the fever, but that a rapid pulse and a high temperature are not always simultaneously present. 2. The morning pulse is commonly more rapid than that of the evening, thus confirming Dr. Edward Smith's observation on this point. Exceptions, however, were not uncommon, and the rule chiefly applies to the quickest pulses observed; for in the slowest pulses, and also in the means of the pulses in each case, the reverse condition appears to prevail in the periods during which these observations were taken (9 to 11 A.M. and 8 to 10 P.M.) The respirations are also accelerated, but their frequency bears no proportion to the intensity of fever in the

averages of the cases; but this correspondence may be occasionally observed. The relation of the respiration to the pulse is, in respect of frequency, more constant than that to the temperature, but quick respiration may be associated with a slow pulse; or, more commonly, the pulse may be rapid when the respiration is very little accelerated, and the rise of the pulse is commonly greater than that of the respiration. In the more rapid pulses, and also in the means of the pulse and respiration, the ratio of respiration 1, pulse 3 to 4, is commonly maintained; but in the slower pulses the most common proportion is respiration 1, pulse 2 to 3, and occasionally the respiration may be more rapid than the pulse. The pulse-respiration ratio is but little influenced by the temperature; but, as the pulse is commonly slower when the temperature is low, a high ratio of the respiration to the pulse is sometimes found under these circumstances. Great variations, however, exist in individual cases in the relation both of the pulse and respiration to the temperature on different days. Either the pulse or the respiration may be singly accelerated or not, both when the temperature falls or rises, or any one of the three may fall while the others rise in frequency or degree of temperature. The absence of correspondence between the rate of respiration and the degree of temperature is probably due to the variations in the amount of respiratory surface remaining as compared with the requirements of the system. Severe pyrexia may, however, be excited by a comparatively small area of disease in the lungs. Pyrexia, however, *per se*, tends, as noticed by Traube, to increase the frequency of respiration.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, MARCH 22ND, 1873.

GEORGE H. KIDD, M.D., President, in the Chair.

Acute Periostitis of the Tibia.—Mr. TYRRELL showed the leg of a girl, which Mr. Hayes had amputated at the knee-joint. Six weeks before, the patient, hitherto in perfect health, complained of pain in the ankle. On admission to the Mater Misericordiae Hospital, three weeks afterwards, she had diffuse cellulitis of the affected limb. Free incisions were not followed at first by any evacuation of pus, and pyæmic symptoms set in, from which she rallied. Amputation was performed at the lower extremity of the femur. The periosteum was found detached from the whole tibia; there was erosion of the cartilages of the lower extremity of this bone and of the astragalus, but the knee-joint was healthy.

Sympathetic Ophthalmia.—Mr. H. WILSON exhibited two eye-balls which he had recently enucleated. The first was that of a man aged 40, who had lost his right eye in early life. Last winter, the patient received a blow on the blind eye. Great pain then set in, and symptoms of sympathetic ophthalmia became developed. Enucleation gave almost immediate relief. The retina was merely a thread, and between it and the choroid was a space occupied by blood. Tension of the globe was thus increased, and pressure, acting through the lenticular ganglion, had given rise to the sympathetic affection. The choroid was attenuated, and almost devoid of pigment. The ciliary region was thickened, and the iris was in places adherent to the choroid. The second case was that of a girl, aged 16, born blind of one eye. Last May pain set in, and sympathetic ophthalmia followed. Four days after enucleation of the blind eye, she became free from pain. The eye-ball afforded an example of microphthalmus, its antero-posterior and its lateral diameters being each five-eighths of an inch. The cornea was opaque, adherent to the iris, and the pupil appeared to be obliterated. The choroid was detached from the retina in places, and was ossified throughout a fourth part of its section. There was thickening of the retina which was white, devoid of vessels and of its characteristic folds. Inside the retina, a soft white mass possibly represented the vitreous body. The crystalline lens was altered in shape, opaque and degenerated. Mr. Wilson considered that the eye was that of a fœtus, aged about six or seven months, and that there had been an attack of keratitis *in utero*, followed by bursting of the cornea and arrest of development in the eye.

Effects of Chronic Strain on Right Heart: Capillary Bronchitis.—Dr. A. W. FOOT exhibited the heart and lungs of a man, aged 40, who had been a hod-man, and had continued at his severe work, notwithstanding "a heavy cold," until he became quite disabled. He died of capillary bronchitis. The right lung, enveloped in adhesions, was small, condensed, and airless, and traversed by dilated bronchial tubes, especially in its upper and middle lobes. The left was hypertrophied and emphysematous, dark and engorged posteriorly. The heart was square in form, its free inferior border forming a straight line. The right ventricle was very much hypertrophied, and the muscular prominences of its cavity were increased in number and size; the pulmo-

nary valves were relatively stronger and more developed than the aortic valves, and the nodulus Arantii in each of them was very conspicuous. The pulmonary artery was dilated, its right branch very remarkably so. The apex of this ventricle had worked itself so far round to the left that it had passed beyond the interventricular septum, past the usual situation of the apex, so that an incision through the anterior wall of the left ventricle, parallel to and half an inch to the left of the septum, divided at its lower margin some of the trabecular bands of the apex of the right ventricle. The outer surface of the right ventricle had an extensive and well defined patch of chronic epicarditis, and there were some specks of atheroma immediately above the pulmonary valves. The capillary bronchitis had principally affected the disabled lung, and Dr. Foot considered the fatal result to be largely due to the dilated condition of its bronchial tubes.

Emphysema Pulmonum: Functional Mitral Regurgitation.—Mr. C. J. NIXON showed the thoracic viscera of a lad, aged about 19, admitted to the Mater Misericordiae Hospital, in the beginning of March, with symptoms of emphysema and bronchitis. The cardiac impulse was felt in the epigastrium. No cardiac murmur existed, but there was evidence of dilatation of the right chambers. A loud bellows-murmur, restricted to the apex of the heart, became audible in about a week, but it was inconstant and its cadence rose and fell during auscultation, although position did not seem to alter it. There was a faint *frémissement*. Oedema of the lower extremities, ascites, and death followed in quick succession. The lungs afforded an example of vesicular emphysema; in the upper lobe of the right lung, which was covered with a thickened pleural false membrane, the emphysematous condition was, in parts, interlobular. The heart was square, weighing twelve ounces. Its surface was mottled (subendocardial fatty disintegration). There were dilatation and some hypertrophy of the right ventricle; also a dilatation of the pulmonary artery, and at its root traces of atheroma. Numerous foci of fatty degeneration were found in the muscular fibres of the right ventricle. There was very marked mottling of the ventricle, perhaps from the continued overdistention, dependent on pulmonary disease. The left ventricle was normal in size, but its muscular fibres were fatty. The mitral valve was normal.

Gangrenous Diphtheria of Pulmonary Vomica.—Dr. Gerald Yeo presented the lungs of a man, aged 28, who had suffered under chest-symptoms for a long time, and who, after a debauch, was attacked with all the signs of pulmonary gangrene, accompanied by intense pyrexia. Death occurred in six days. A few clear miliary tubercles, and some cicatricial induration, existed in the apex of the left lung; while there was slight congestion posteriorly. The lower lobe of the right lung was engorged; its middle lobe was slightly congested, containing a few miliary tubercles; its upper lobe was solid, friable, of a dirty grey colour, excavated by many anfractuous cavities, intercommunicating and filled with a thin, blackish, most foetid fluid. The walls of these cavities were friable, jagged, of a dirty greyish-black tint, and were studded with tough, elevated, whitish patches. The tracheal mucous membrane, and that of the bronchi leading to this upper lobe of the right lung, were dark grey. The white patches had the microscopical appearances of diphtheritic exudation.

Death from Syncope, due to the want of the Aortic Systole.—Dr. A. W. FOOT exhibited the heart and aorta of a man, aged 73, who had "dropped dead," when apparently recovering from ascites, anasarca, and dyspnoea, for which he had come into hospital. There had been no abnormal cardiac sound, but the action of the heart had been weak, irregular, tumbling, intermitting. With the exception of the ascending and part of the transverse portion of the arch, the aorta to its bifurcation presented a typical example of diffuse atheroma; and, with the exception of its visceral branches, all the arteries springing from it exhibited the atheromatous process in the highest degree. Calcified plates were conspicuous in the rigid femoral arteries, as well as in the intracranial portions of the carotids. The first portion of the arch was dilated and had lost its elasticity, and Dr. Foot considered that the sudden death was immediately due to want of the aortic systole as a factor in the means of closing the aortic valves, which were otherwise competent. The heart was not diseased, and no cause of death was discoverable in the brain or in the cerebral vessels.

SATURDAY, MARCH 29TH, 1873.

HENRY KENNEDY, M.B., Vice-President, in the Chair.

Osseous Union after Resection.—Dr. R. W. SMITH exhibited the bones of the leg of a man whose knee-joint had been excised in 1868, by Mr. Maconchy, of the County Down Infirmary. Three years later, he walked ten miles to the Infirmary, seeking admission for strumous

disease of the testicle. In January, 1872, he died in the hospital of tubercular disease of the mesentery. There was perfect bony union, and the tibia was directed backwards and inwards. A specimen which Mr. Butcher had was the only other example of bony union that Dr. Smith had ever seen.

Enormous Aggregation of Extraneous Matter in the Stomach.—Dr. YEO showed the stomach and part of the intestines of a girl, aged 4, who had died in the Hardwick Hospital. Her mother said she had always been healthy. She was admitted with severe vomiting and purging, which continued till her death. A large hard tumour, which was said to have existed for nine months, occupied the superior part of the abdomen, and could be moved freely without causing pain. She was not emaciated, and appeared not to suffer any pain. She soon lost her appetite, and, two days before her death, was attacked with severe colic, which lasted about an hour, and recurred next day. Shortly after this, she died in a state of collapse. On *post mortem* examination, the tumour was found to be caused by a collection of a variety of materials, such as pieces of cloth, cord, chips of wood, straw, grass, etc., matted into one hard mass, which almost completely filled the cavity of the stomach. A similar smaller aggregation was found towards the end of the jejunum. The rest of the gut was empty, and its mucous membrane appeared healthy, with the exception of a large ulcer in the duodenum over the head of the pancreas.

Ischiatic Hernia.—Dr. CROSSLÉ showed a drawing of this rare lesion, and gave the clinical history of the case. A woman, aged 40, consulted him in August, 1872, about a swelling on her right buttock. She said that two years before, while lifting a heavy weight, something seemed to give way within her. When Dr. Crosslé saw the patient, the lump was about as large as a fetal head at the full period. It sprang from the lower border of the right gluteal fold, had a soft, pulpy feel; was in places dull on percussion, in places tympanitic; and coughing conveyed an impulse to it. When the patient assumed the erect position, or coughed, the tumour increased one-half in size. It could be partly reduced by taxis. A truss adapted to the case was applied, and the woman remained in good health, and without inconvenience.

Double Aneurism of the Arch of the Aorta.—Dr. FOOT exhibited a specimen. The first aneurism was a fusiform dilatation of the root of the aorta, the second a saccular aneurism of the size of a walnut, springing from the convex side of the transverse portion of the arch. The patient, a man aged 40, had died with capillary bronchitis. The pressure of the saccular aneurism, which, situated between the innominate and left carotid arteries, was intimately united to the front of the trachea, had caused a peculiar roaring and churning noise by its obstruction of the profuse secretion of the bronchial tubes. Two-thirds of the aneurismal dilatation of the root of the aorta were intrapericardial, and had, by lateral pressure on the left side, displaced the pulmonary artery to the left, and on the right side had encroached on the vena cava superior. The venous turgescence and regurgitation arising from the over-distended condition of the right ventricle, from the condition of the lungs, was aggravated by this lateral pressure. An intermitting tricuspid murmur was the only abnormal sound afforded by the heart, and this was much obscured by the bronchial *rales*. There was slight increase of transverse dulness over the aortic region of the sternum. The sigmoid valves held water. The left ventricle was moderately hypertrophied, and slightly dilated. The sac impinged upon the most convex and strongest portion of the tracheal hoops, and, though inseparably adherent, had produced no permanent flattening, ulceration, or morbid appearance on the interior of the windpipe; but no doubt, during life, the tumour had exercised considerable pressure. The mode of death was by gradual coma. Neither aneurism had given way, or exhibited any tendency to do so; no pain had been complained of. The larger fusiform dilatation contained a loose clot; the contents of the saccular aneurism, being out of the axis of the blood-current, presented some laminated coagula. A musical systolic murmur was heard shortly before death.

Fracture of the Skull.—Mr. ORMSBY presented the skull and brain of a man, aged 30, who fell into the hold of a ship on the 25th March, striking his head in the fall, and also breaking his left clavicle. Symptoms of compression were present when he was admitted to the Meath Hospital next day, and he died in thirty-seven hours after the accident. A fracture of the skull ran through the lambdoidal suture, to the parietal bone; a large clot was found under the right anterior lobe of the cerebrum, and on this side also the brain-substance was contused and lacerated. The man had been conscious for four hours after the accident. The laceration of brain-substance was situated anteriorly, while the fracture lay far back. There were convulsions of the left side, while the right side was paralysed.

Pericarditis.—Dr. HAYDEN showed the heart of a man, aged 55, who in February, 1872, suffered from bronchitis. Twenty years previously,

he had rheumatic fever, which left him subject to winter cough; and during the last five years, he had a tendency to dizziness. When he came under treatment, he had bronchitis with emphysema; the cardiac apex-beat was in the middle line; præcordial dulness was abolished; the pulse was 72, regular and soft; a loud basic systolic bellows-murmur was audible at the lower end of the sternum, and was carried into the carotid arteries; the second sound was accentuated. A year later, in the end of last February, he was again admitted to the Mater Misericordiae Hospital, with a very similar group of symptoms, except that there was then no second cardiac sound. On March 6th, a very loud to-and-fro præcordial friction-sound, unaltered in rhythm by respiration, was heard. He died on the 12th. The lungs were emphysematous, congested, and covered with dense false membranes. In the pericardium were six or eight ounces of sanguineous fluid. A villous condition of the serous membrane, both visceral and parietal, was noticed, except over the apex, where it was smooth, as Dr. Law has described it in similar cases. The heart, with the pericardium, weighed $23\frac{1}{2}$ ounces, its muscular tissue was in the first stage of fatty degeneration. The left ventricle was hypertrophied, three-quarters of an inch thick. The mitral valve was competent and healthy. The aortic valves were insufficient, and largely calcified. The aorta was very atheromatous. The rings of the trachea were ossified. Dr. Hayden considered that the seat of the systolic murmur was in the pulmonary artery, from which it was conveyed to the aorta. In pericarditis, the friction sound is intensified on deep inspiration, a fact of much importance in the differential diagnosis of endo- and exo-cardial murmur, except where the lungs are emphysematous, or the heart is enlarged.

Resection of Knee-joint.—Mr. TYRRELL exhibited portions of bone, which he had removed from the knee of a girl, aged 16, for three years the subject of pulpy degeneration of the synovial membrane of the joint. There was little pain, but the limb was useless. The articular cartilages of the femur, tibia, and patella were affected, and the synovial membrane was much thickened. The epiphysary line was not encroached upon in the operation, and the limb was put up in Watson's plaster splint.

Branched Renal Calculus.—Dr. YEO showed a large renal calculus (with the kidney), taken from the body of an aged female, who had died of typhus fever. The parenchyma of the kidney had almost disappeared, and the organ was surrounded with a thick cushion of fat. The pelvis was greatly dilated, and the calices distended into numerous sacs, containing a stinking whey-like fluid. The calculus was $3\frac{1}{4}$ inches long. It had a glistening white central part, covered by a thin dull brown external layer. The central part was composed of carbonate of calcium, phosphate of calcium, and ammoniaco-magnesian phosphate, *i.e.*, fusible calculus mixed with chalk. The outer part was composed of carbonate and phosphate of calcium, with a small amount of organic matter. The other kidney was large, and had no fat about its capsule. Dr. Yeo said this case showed an earlier stage of increased development of perinephric fat, excited by continued renal irritation, a good specimen of an advanced degree of which had been recently exhibited to the Society by Mr. E. Hamilton. The chemical composition was not exactly in accordance with that usually accepted as most common in renal calculi.

SATURDAY, APRIL 5TH, 1873.

SIR DOMINIC J. CORRIGAN, BART., M.D., M.P., Vice-President, in the Chair.

Adenoid Tumour.—Dr. QUINLAN exhibited a specimen, which he had removed from the neck of a patient in St. Vincent's Hospital.

Strangulated Omental Hernia.—Mr. W. STOKES showed a specimen from the body of a blacksmith, aged 33. Three days before his admission to the Richmond Hospital (on March 30th), he had felt a sudden sharp pain in the belly, while at work, punching. Vomiting set in, and continued, becoming at length stercoraceous. In the left inguinal region was a tumour strongly resembling an inguinal scrotal hernia. It was, however, flaccid, and the finger could be passed through the inguinal ring. In shape this tumour resembled a hydrocele of the cord. Herniotomy was performed, and the tumour proved to be composed entirely of omentum. The symptoms continued, and the patient died after five days. The irreducibility of the tumour depended on the existence of firm adhesions. The stomach and duodenum were intensely inflamed, but the ileum was healthy.

Resection of Knee-joint.—Mr. HAYES presented portions of bone which he had removed, on December 12th, 1872, from the left knee-joint of a girl, aged 15. The disease had been of several years' standing. The neighbouring structures were extensively burrowed through by

abscesses and sinuses, the medullary canals of both tibia and femur had been opened, and the patella was ankylosed to the external femoral condyle. Considerable hæmorrhage from the interior of the bones was stopped by styptic colloid. There is now fair fibrous union, notwithstanding a protracted healing process from the presence of a loose fragment of bone.

Congenital Malformation of Left Elbow-joint.—Mr. F. T. PORTER showed a specimen, of which it was impossible to obtain a clinical history.

Osseous Deformities in Rickets.—Dr. R. W. SMITH laid upon the table the bones of the lower extremities of a dwarf, aged between 40 and 50 years. The appearances presented bore out all the conclusions of Guérin, as to the order and lessening degree in which the deformities in rickets developed from below upwards. One thigh-bone looked as if it had been the seat of fracture; but somewhat similar, though less pronounced appearances were noticed in the other thigh-bone. Dr. Smith pointed out that fractures in rickets and similar diseases of bone united like ordinary fractures.

Ossification of Crystalline Lens.—Dr. H. WILSON showed an example of this condition, in a man aged 45. The eye had been blind for many years. The anterior chamber was obliterated, and a yellowish-white body floating in the vitreous humour proved to be the ossified crystalline lens.

Epithelioma of the Palate.—Mr. R. P. WHITE presented a specimen which he had removed by the galvanic cautery, without hæmorrhage, from a man aged 66.

Encephaloid and Scirrhus Tumours of the Mamma.—Mr. TYRRELL brought forward two specimens of malignant tumours of the breast—one, an immense encephaloid mass, of six months' growth, from a married woman, aged 45; the other, a very small scirrhus tumour, of fifteen years' growth, from an unmarried woman, aged 60. In neither case were the neighbouring glands enlarged, but both tumours were ulcerating, and painful.

Spindle-celled Sarcoma of the Dura Mater.—Dr. A. W. FOOT exhibited an intracranial spindle-celled sarcoma, springing from the dura mater, lining the ethmoidal fossa, and projecting upwards against the inferior surfaces of the anterior lobes of the brain. It had been taken from the body of a dissipated and much debilitated man, aged 60, subject to occasional attacks of epilepsy for the last twenty years, and who had recently suffered from want of muscular and co-ordinating power in both arms and legs. The tumour, in size and shape somewhat like a Normandy pippin, was firmly attached (except in a few places where it lay in contact with the bone), to the dura mater investing the cranial aspect of the ethmoid bone, the olivary process, clinoid processes, and lesser wings of the sphenoid bone. The tumour was reddish-white in colour, rather soft and friable, indistinctly lobulated, granular, juiceless; above it had embedded itself in, but was nowhere adherent to, the brain, which was softened where in immediate contact with the growth. The tumour was neither calcified nor pigmented. The pituitary body was intact within its capsule of dura mater. The infundibular process from the third ventricle was applied against the posterior rounded border of the tumour; anteriorly the growth extended to the median plate of the ethmoid, on which two cristæ, one behind the other, with an intervening notch, were developed; laterally, the disease spread on each side to the entrance of the Sylvian fissures. The chiasma was upraised from its bed, the left optic nerve was pushed outwards, the right traversed part of the tumour; the olfactory processes could not be recognised. There had been no lesion of sight or smell observed during life. The tumour was composed of delicate spindle-shaped cells, with, in parts, very numerous corpora amylacea, and many large mother-cells. There was no other visceral or lymphatic deposit in the body. The brain and spinal cord, removed together, weighed $52\frac{1}{4}$ ounces. Beyond an increased amount of cerebro-spinal fluid, there was no obvious anomaly in the nervous centres. The cause of death, which had been sudden, was effusion into the bronchial tubes.

VENTNOR HOSPITAL BALL.—A grand ball, under the patronage of their Royal Highnesses the Princess Christian, the Duchess of Teck, and a very large number of the nobility, will be held at Willis's Rooms, on Tuesday, June 17th, in aid of the Ventnor Hospital on the cottage principle. Among the novel features of the ball will be a fancy quadrille of the flowers of the months of the year, which will be conducted by the Countess of Scarborough and Mrs. Baillie Cochrane; a fancy quadrille of married ladies, in which the Viscountess Newport and Lady Muncaster will take part; and also a fancy quadrille representing the months of the year.

BRITISH MEDICAL ASSOCIATION :
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 14TH, 1873.

THE FORTHCOMING ELECTIONS AT THE ROYAL
COLLEGE OF SURGEONS OF ENGLAND.

THE papers of intending candidates for the Council are sent in this week, and have already been the subject of some discussion. We have always abstained from discussing the relative merits of candidates, except where a principle was involved ; and we purpose to do so now, as personal comparisons, always odious, are especially so where professional men of standing and good repute are candidates for an office of secondary importance. The principles of election which we desired to see established have now been successfully established, and have been found to work well.

There are four vacancies. To fill these, Sir James Paget offers himself for re-election ; and Messrs. Haynes Walton (St. Mary's), T. Wakley, Henry Smith (King's College), G. Southam (Manchester), and Cooper Forster (Guy's), are among the candidates for the first time. Sir James Paget is no doubt sure of re-election, not only for his eminent personal qualities, but for the excellent work which he has done as councillor, and for the labour which he is still devoting to the College affairs in connexion with the Committee of Reference on Conjoint Boards of Examination, of which he is Chairman. We have not always concurred in the votes which Sir James Paget has given, and, starting from the same data, should sometimes have arrived at an opposite conclusion ; but his is one of the most wholesome influences in the Council, and one which it is most desirable to retain there. Of the new candidates, only one represents a principle—Mr. Southam of Manchester, who appears as a candidate at the request of a large number of provincial Fellows, to replace Mr. Turner of Manchester. That principle, for which we long contended, has been fully accepted ; and Mr. Southam is, we may hope, sure of the votes of both town and country Fellows. The rest of the candidates represent themselves, and the voting in respect to them may well be left to individual opinion. No doubt, for one or two a very vigorous canvass will be made. We trust, however, that any such proceedings will be discouraged and resented. The practice which has sprung up, of organising a systematic canvass for individual candidates on personal grounds, is peculiarly objectionable, and tends to degrade the position and fetter the independence of the office of councillor. The office becomes thus the sport of an enterprising cabal, who purchase present support by an unscrupulous promise of similar favours in the future, or by appeals *ad misericordiam* and to private ties which have no relation to the duty of election. It can only end by foisting upon the College an inferior class of men as councillors, who reach a high place on the poll without ever attaining or deserving the general confidence of their fellows, and who cannot be trusted to pursue a high and single-minded course. Some of the best men in the profession have declined to be nominated for the Council, in disgust at these proceedings, and decline to enter on such competition. It is for this reason that the names of Pollock and Campbell De Morgan do not appear in the list, and that thus two of the clearest and most able-minded men in the profession are lost to the Council. We sincerely trust, therefore, that the support

of merely personal ambition by canvassing will be utterly discouraged on this occasion, and that it will be generally understood that personal appeals of this sort mean the certainty of defeat.

THE LONDON COLLEGE OF PHYSICIANS.

AT the meeting of the College of Physicians on Tuesday, the Committee of Reference for an examining board to the co-operating medical authority presented their second report. They have already, in a first report, which we have published at length, described the number of examiners and the manner in which it is proposed to conduct the professional examinations. They now discuss the question of payment. This is a matter of much more domestic concern ; but, as often happens with money-questions, although far less important, it was more warmly discussed than the former report. The important points about the report are—first, that the fee for the conjoint diploma is fixed, as was to be expected, at not less than thirty guineas ; and second, that the Committee of Reference propose to pay over to the Colleges one half the fees as spoil to be divided, and to retain the other half for their own expenses. To this proceeding we think there are many objections. In the first place, the Committee of Reference have no right, and ought not to be allowed, to intercept any money, but ought to pay over the whole, and then to receive from the College Treasurers the exact amount of their expenses, according to whatever may be the stipulated scale ; in the second place, we doubt very much whether it is legal for the College of Surgeons to allow an intervening body thus to control and handle their cash ; in the third place, it is extremely doubtful whether any government body, if official sanction be at any time requisite, will sanction the paying over to the College of Physicians of a sum estimated to be about £1,200 a year deducted out of the fees of examined students, as a surplus of the fees exacted from them and to be applied to whatever purposes the College pleases, and without regard to those from whom it is drawn. The proposition, put in the form in which the Committee of Reference nakedly set it forth, savours of unauthorised blackmail. So great, however, was the hurry to get the scheme accepted, that time was not afforded to discuss these points. We doubt very much, however, whether the College will not regret at leisure what it has done in haste. The scheme, as propounded, is not so well-balanced and judicious as might have been expected ; and we do not believe it will work well, or that it will last.

A great debate was raised about the relative amounts to be paid to examiners. With a confusion of thought and impetuosity of manner alike characteristic, Dr. Anstie identified the importance of a given subject with the amount of work required from examiners under this scheme in respect to it, and raised a hot discussion on the £20 a year difference in the total fees allowed to the two sets of examiners in midwifery and in anatomy and physiology, which was so much time wasted. The vital objections to the scheme are, that it goes a step further towards creating the Committee of Reference an independent ruling body, and adds to their already excessive power the control of the purse-strings ; while it places the College of Physicians somewhat in the position of a recipient of a free gift for no service rendered, extracted from the pockets of men mostly poor.

CORONER'S INQUESTS.

WE have received an extraordinary document from the county of Suffolk, of which the following is a copy.

"CORONER'S INQUESTS.—*Instructions to Police in Cases of Sudden Death within the District of the Coroner for the Liberty of Bury Saint Edmund's.*—In all cases of sudden death not attended by a medical man, it is incumbent on the clergyman or parish officers, or both, to institute inquiries in order to ascertain if there is any reason to think the deceased has died from anything but natural causes, and to consider if there is any necessity for a coroner's inquest. You will assist in such inquiry and obtain a medical man's opinion, if it can be obtained. The

law is clear that an inquest is improper and illegal unless there is reason to think that the deceased has died from *other than* natural causes. The mere fact of a person dying without being attended by a medical man, does not make an inquest necessary or legal. Unless there is reason to suspect neglect or foul play, the clergyman can, by law, bury a corpse without a certificate from a coroner, a doctor, or a registrar, and it is his duty to do so. You are desired at all times to show these instructions to a medical man, or to a clergyman, or parish officer.—‘By Order.’”

“By order” of whom this remarkable document has been published there is no information; but it looks so much like a magisterial attempt to put down coroner’s inquests, that we should not be surprised to hear that it came from the magistrates themselves, and had not the sanction of the coroner, who, we understand, is a very respectable lawyer, and would have hardly committed himself to a document like the present.

With regard to the first clause of this document, we would ask by what law it is made either “incumbent” on the clergyman or parish officers to institute inquiries at all about the sudden death of their neighbours. The law of Edward IV, which has never been repealed or modified, is, “That the coroner upon information” (not the information of clergy or parish officers, but on any information), “shall go to the place where any be slain or suddenly dead or wounded”, and then inquire into the cause of that death. Any coroner who refuses to do this may be amerced. The “necessity” arises out of the suddenness of the death, and not out of any previous inquiry. In the second place, it is the duty of the police at once to take any information of sudden or violent death to the coroner, and not to make inquiries of any medical or other man. It is the duty of the coroner to make inquiries. The third paragraph is directly opposed to the law and practice of the coroner’s court. No inquest that is held on the fact of a person dying suddenly can be illegal, although a coroner can be proceeded against for not holding an inquest in cases where the law requires that he should do so. An inquest on a person dying suddenly without medical attendance, is, according to all interpretations of the law, necessary and legal. The last paragraph is, unfortunately, too true. A clergyman who wishes to defy all decency, and open himself to the charge of condoning a manslaughter or murder, can, under the present law, bury a corpse without a certificate from a coroner or a doctor. This has been a long standing disgrace to the English law. A clergyman in a village may bury a poacher who has been shot by the squire’s gamekeeper, and he could not be prosecuted for it. The clergyman is thus made a coroner without a jury. To say that it is the clergyman’s duty to do this, argues a very loose and undefined sense of what is the nature of the duty of a clergyman. Happily, we may hope that the clergy will be excused from exercising this duty of burying their poor neighbour’s bodies to cover their rich neighbour’s sins, by the passing into law the new Registration of Births and Deaths Bill. Scotland and Ireland have long had a compulsory registration of births and deaths, and we trust that England and Wales, before the end of the year, will have the same.

We trust the medical men of Bury St. Edmund’s will meet this document with the indignation it deserves, and that they will not be parties to an attempt to place the clergy, the parish-officers, or the police in the position of the coroner.

AT Darmstadt, the birthplace of Baron Liebig, a monument is to be erected to him.

THE annual distribution of prizes at Charing Cross Hospital will take place on Thursday, when the Bishop of Winchester will preside.

THE Emperor of Germany has sent a thousand florins to the Munich committee for raising a memorial to Liebig.

THE United Hospitals Athletic Sports will be held this year at Lillie Bridge Grounds on the 23rd instant.

AT the meeting of the Royal College of Physicians this week, the Baly Medal was awarded to Dr. Sharpey for his great services to physiology—a tardy recognition of services of the highest order, rendered during a life-time.

MR. RICHARD DAVY has been appointed Lecturer on Anatomy at the Westminster Hospital, in the room of Mr. G. Legge Pearse, who lately resigned.

WE understand that Mr. William Anderson, F.R.C.S., Demonstrator of Anatomy at St. Thomas’s Hospital, has been appointed to the Professorship of Medical Sciences at the University of Yeddo, Japan.

“HOSPITAL SUNDAY” in London is fixed for Sunday next, June 15th. The Queen and the Prince and Princess of Wales will attend at St. Paul’s Cathedral.

THE DUKE OF EDINBURGH presided on Friday last at the distribution of prizes in the medical department of King’s College. The Duke of Cambridge also was present.

WE understand that an additional assistant-physician is to be appointed for the purpose of undertaking the care of an out-patient department for diseases of children, and that Dr. Bruce will be elected to the post.

THE Royal College of Physicians of London has resolved to send to all its Fellows a copy of the resolution passed by the Council of the Royal College of Surgeons, against advertising medical books in the daily papers.

IT is said that the minister of instruction in Munich, at the suggestion of Dr. von Pettenkofer, intends to ask the Bavarian Parliament for a grant of some thousand *gulden* for the purpose of scientific investigations having relation to sanitary science.

THE first Hospital Sunday in London, appointed for the 15th instant, appears to have been satisfactorily arranged for. At a meeting of the council it was announced that 850 ministers had signified their assent to the scheme, while not more than 50 positive refusals had been received. The Lord Mayor was elected chairman of the council.

KING’S COLLEGE.

WE understand that Mr. Bellamy, Dr. Curnow (London), and Dr. Cleland (Galway), are candidates for the appointment of Professor of Anatomy at King’s College.

THE EMPRESS OF GERMANY AND HOSPITAL ARRANGEMENTS.

IN our number for May 17th, we announced that the Empress of Germany had devoted about £600 sterling, to be given as prizes for subjects connected with the treatment of sick and wounded soldiers in time of war, viz., a prize of £300 for the best manual of directions for the practical surgical treatment of wounded (*das beste Handbuch der Kriegschirurgischen Technik*), and one of £300 for the best work on the Geneva Convention. The Berlin *Kriegerheil* now announces that in addition Her Majesty has given a sum of £300 to be devoted to prizes to be allotted to articles bearing on the subject of Field Hospital Equipment at the Vienna Exhibition.

ST. THOMAS’S HOSPITAL.

MR. LE GROS CLARK’S term of office as surgeon to the St. Thomas’s Hospital has expired, and it is most probable that Mr. Wagstaffe, who now fulfils the duties of resident assistant-surgeon will be promoted to that of ordinary assistant-surgeon. A vacancy would in this case occur in the former appointment.

THE DIFFICULTIES OF A PRIVATE MEMBER.

WE very much regret to learn that Mr. Dalrymple’s useful measure for the restraint of habitual drunkards will not be able to attain a hearing this session, owing to pressure of parliamentary business. The only chance for it, indeed, was that the Government, who had accepted the principle of part the Bill, would be able to give place for it on one of their nights; and the Bill was accordingly set down for Thursday, with official assent; but Mr. Foster, by changing the Education Amendment Bill from Monday to Thursday, removed the last chance of this measure becoming law. It must be very trying to a member of the House, who has bestowed so much time and expenditure on preparing

the way for a measure, to find his efforts so baffled. Mr. Dalrymple spent immense pains and made a liberal expenditure, first, in preparing the preliminary evidence and obtaining a hearing for the proposition, and in bringing the question to a position in which it was possible to get a Select Committee. The collection of evidence for the Select Committee was a matter of much greater labour, and involved a protracted and distant journey. The Select Committee reported in a great measure in favour of the Bill originally proposed by Mr. Dalrymple. The present Bill, founded upon their recommendation, is in the main accepted by the Government; yet, at the end of several years' labour, the Bill has not reached a second reading, and it is not certain that time can be found in the course of the session, even for a statement on the subject.

SMALL-POX IN VIENNA.

SMALL-POX is decreasing steadily, though slowly, in Vienna. In the week, ending June 5th, there were 17 deaths, against 23 in the previous weeks. The average number of patients in the criminal hospitals was 103; and in the three general hospitals there were, on an average, 18 patients daily under treatment. On the other hand, scarlet fever is increasing. In the week, ending June 5th, it proved fatal to ten children aged between 1 and 8 years.

OTIATRIC CLINIC IN VIENNA.

ON June 4th, the new department for diseases of the ear in the Vienna General Hospital was formally delivered over by Director Hoffmann to Drs. Gruber and Politzer, the chief medical officers of the two divisions. After they had expressed their thanks, Director Hoffmann delivered an address, in which he insisted on the importance of the establishment of the department, not only with a view to the scientific development of otology, but to the successful treatment of diseases of the ear. He congratulated the two professors on the rich field of activity opened to them, and expressed his satisfaction that the University of Vienna was the first which had decided on the formation of an ear-clinic supported by the State.

THE HULL GENERAL INFIRMARY.

WE have received a copy of the annual report of the Hull General Infirmary, and our attention is attracted to the smallness of the honorary staff compared with the great number of outpatients. We see that six gentlemen monopolise the whole of the advantages, and nominally undertake the whole of the duties connected with 11,216 patients annually. The number of the honorary staff is the same as ninety years ago, notwithstanding that Hull is now twice as large as it was then. The natural result follows. The patients are seen irregularly by those who are professedly appointed to treat them, and in some cases handed over *en masse* to a subordinate. The two senior physicians do not even profess to see the out-patients, and the surgeons do so somewhat irregularly (on account of their other numerous engagements), and then only their own surgical cases. Therefore, the responsibility of nearly the whole out-patient department is thrown upon house-surgeons. The same thing has frequently happened at other hospitals, and there is only one remedy. There should be an increase of the honorary staff, both for the sake of the patients and in the interests of the institution. The appointment of out-patient physicians and surgeons is a measure of justice to all in such cases; to the patients, first and most of all, because they are then seen, treated by experienced and responsible persons and not by their deputies; to the institution, because it is thus enabled to fulfil its public pledges, which it at present partly evades; and to the profession, because it opens to the younger and rising practising medical men of the town the truest and best field of public usefulness and the means of fitting themselves and of demonstrating their fitness for the most important duties. Sometimes the imaginary and selfish interests of the existing medical officers stand in the way. Senior physicians and surgeons, with a jealousy unavowed even to themselves, find it disagreeable to see their junior brethren in the town fulfilling duties nominally theirs, but which they have long since ceased to perform, and in the

nature of things cannot be expected to continue to perform, as year roll on and enlarge their avocations, while they take from them working power. We trust that no such feeling will in Hull obstruct an obviously necessary reform.

THE SAXON ARMY MEDICAL SCHOOL AT DRESDEN.

SHORTLY before the Franco-German war, General Arzt Dr. Roth, Chief of the Medical Department of the Saxon Army, was sent from Berlin to this country to make himself acquainted with the English military hospital system, on which occasion he spent some time at the Army Medical School at Netley. The consequence was the formation of an Army Medical School at Dresden. Although founded on the same principles, however, as the Netley school, the arrangements of the Saxon school seem to differ in some particulars which may be worth notice. Dr. Roth has furnished a report of the second session of the school at Dresden in the last number of the *Deutsche Militairärztliche Zeitschrift*. The Saxon army, it should be remembered, is a small one. Its standard strength is but forty-two thousand men, and constitutes only one army corps (the twelfth) of the whole force of the North German Confederation; so that the establishment of an army medical school is all the more indicative of the enlightend liberality of the Saxon Government. The general course of study is similar to the course followed at Netley. The lectures on army hygiene and the practical study of hygienic chemistry in the laboratory, by Drs. Roth and Fleck, hold a prominent place in it. The course also comprises histological practice and *post mortem* examinations, under Dr. Birch-Hirschfeld; the practice of physical diagnosis, under Dr. Stecher; and the practice of operations on the dead body, under Dr. Beyer—special regard being given to operations capable of being performed on the field, and only the instruments supplied in field-cases being used in performing them. Eye-diseases are treated as a separate subject, under Dr. Tietz. This course seems to have for its object particularly diagnosis by the ophthalmoscope, and other means, of simulated diseases and feigned abnormal refractive states of the eyes. Assumed exaggerations of myopia have long been known to be a common method of trying to avoid military service on the Continent; but, what we have not heard before, Dr. Roth incidentally remarks that German soldiers not unfrequently produce artificial mydriasis for the same purpose. Ear-diseases are also separately studied, under Dr. Schalle. Here, again, the practical diagnosis of real from feigned affections of the organ of hearing seems to be mainly kept in view. Lastly, there is a course of equitation in the riding-school; and the change made in the recent Army Medical Warrant regarding the issue of forage to medical officers in this country makes it opportune to call more particular attention to this circumstance. While in England the tendency of the recent forage regulation must be to lessen the practice of riding among army medical officers, experience has taught the Germans not merely to encourage it, but even to insist upon it as part of every army medical officer's education. In the Saxon school, each medical officer had thirty lessons during the session. The instruction was given four times a week, under the direction of Superior Staff-Surgeon Dr. Ziegler, by a riding-master, and strictly accorded with the regulations on the subject for all other branches of the military service. It is mentioned, that this course includes instruction on the care of horses; it being compulsory, according to the present organisation for field-service in Germany, that all officers to whom horses are issued shall know how they ought to be fed, cleaned, saddled, and generally looked after. There can be no doubt that a knowledge of riding and horse-management is calculated to be of special use as regards the duties of army medical officers. The work of a field-surgeon principally begins after the day's march is finished, and he cannot do his work properly if he have been fatigued by much previous exertion. He ought not to fear to mount any horse that may be assigned to him at a moment's notice, for he may be required to move rapidly to a distance to afford professional aid. During the late Franco-German war, all the surgeons with the German sanitary detachments in the field were mounted. All the in-

structors at the Saxon Army Medical School are military surgeons of the higher grades, with the exception of Drs. Fleck and Birch-Hirschfeld, who belong to the staff of a large civil hospital at Dresden. From Dr. Roth's remarks, it appears that, in addition to the army surgeons attending the school, thirteen civil practitioners took part in the hygienic courses. Some of the army surgeons who attended were sent by order of the military authorities; while others, belonging to the garrison of Dresden, attended of their own accord. Those who came under orders were relieved from all other duties, so that they might give their undivided attention to the subjects of practical study. There was also a Swedish surgeon, whose government had obtained permission for him to attend during the session, with a view to obtaining information on its organisation and merits.

KING'S COLLEGE HOSPITAL OLD STUDENTS' DINNER.

THE King's College Hospital Old Students' Dinner took place at Willis' Rooms on June 6th, when there was a very large attendance of past students. The chair was taken by Mr. Wood, who was supported by Sir W. Fergusson, Dr. Barry, Dr. Johnson, Mr. Henry Lee, Mr. Heath, Drs. Elin (Hertford), Meadows, Rutherford, Fenn, Kelly, Oxley, Playne, Anstie, Buzzard, Walters, and Messrs. Henry Smith, Bellamy, Mason, W. G. Smith, Napper, Teale (Scarborough), Bell, Bond, etc. The various toasts were received with great enthusiasm; and a very pleasant evening was enlivened by some excellent glee-singing by some old King's College men, ably conducted by Dr. Lavies.

WATER-ANALYSIS.

THE *Iron* newspaper calls attention, in a leading article, to alleged facts of some interest. It would seem that, when the modern process of water-analysis, which is now almost universally adopted, was first brought out, the Royal Commission on Water-Supply ordered that it should be used in the investigations made for the Commission; and that considerable sums of public money were paid for analyses done by that process. It is added that some of these analyses were made by the inventors of the process, Messrs. Wanklyn, Chapman, and Smith—who, however, received no remuneration for them; but that the great majority of these analyses were made by Professors Frankland and Odling, who divided the pay between them. It is stated that Mr. Wanklyn's manuscript, which was at that period the only document containing full details for the working of the process, was in the hands of the latter chemist, who had possession of it in virtue of his office as Secretary of the Chemical Society. It is further stated that Mr. Wanklyn read his paper, descriptive of the process, on June 20th, 1867; but that it was not published in the *Journal of the Chemical Society* until October, and that many of the analyses were made in the interval. These facts imply a serious charge against Professors Frankland and Odling, which we hope they will lose no time in rebutting.

GARLAND'S ASYLUM, CARLISLE.

AT a meeting of the Committee of Visitors of Garland's Asylum, held on June 2nd, Dr. John A. Campbell was unanimously appointed Medical Superintendent, in the room of Dr. Clouston, appointed to Morning-side Asylum. Dr. Campbell has been six years Assistant Superintendent under Dr. Clouston, is the author of several articles in the *Journal of Mental Science*, and has also contributed to the *BRITISH MEDICAL JOURNAL*. This promotion has given great satisfaction to the medical profession in the district.

SANITARY AND EDUCATIONAL EXHIBITION.

IN connection with the Social Science Congress, to be held at Norwich, from the 1st to the 8th October next, there will be an exhibition of educational, sanitary, and domestic appliances, based on the experiment which proved successful at Leeds in 1871. The large and spacious Drill Hall has been placed at the service of the Social Science Association (with the sanction of the Government) by the commanding officer. The object of the exhibition is to bring under the notice of the public generally, and particularly those who are interested in social,

sanitary, and educational questions, the latest scientific appliances for improving the public health and promoting education. Among these may be mentioned: all matters relating to house construction, connected with which are building materials, light, warming, ventilation, and interior ornamentation; flues, fire-places, stoves, boilers, furnaces, gas apparatus; cisterns, baths, piping, filters, fountains, lavatories, and all things connected with the supply and use of water; drain-pipes, tubes, sinks, traps, troughs, closets, urinals, filters, and all plans, diagrams, sections, models, and specimens of sewage and drainage contrivances; cooking apparatus and food manufacturing machines, culinary utensils, specimens of food, adulterations, condensed fluids, preserved meats, light and cooling beverages; disinfectants, deodorants, antiseptics, and other things relating to the prevention of disease and preservation of health; hygiene in clothing and dress; plans and models of school-buildings, forms, desks, books, maps, and other articles used in teaching; and all sorts of appliances appertaining to the advancement of sanitary science, the promotion of education, and the improvement of the health and domestic comfort of the community at large. The exhibition will be open to exhibitors from all parts, and the management will be under the superintendence of a committee. A mere nominal charge will be made for space and admission—just sufficient to cover the costs of preparation and defraying the working expenses.

THE SANITARY CONDITION OF CALLAO (PERU).

AN interesting official report upon the sanitary condition of Callao during the past year has just been published. The population of the town is between 15,000 and 20,000; and during the first six months of the past year there were buried in the native cemetery about 1,000 people, 278 having died from fever. This fever is endemic to the town, and proceeds, in the opinion of every one, from the absence of all attempts at hygiene and proper sanitary regulations. During the six months indicated, the number of births recorded only amounted to 614, there being a surplus of more than 300 deaths over the births in this period. Some of the mortality tables of the Guadeloupe Hospital in the city are interesting. In September, there were 483 patients in the hospital, of whom 53 died in the course of the month, being at the rate of nearly 11 per cent. monthly. In October, there were 471 patients in the hospital, of whom 42 died—a mortality of 9 per cent. In January this year, there were 699 patients, with a total mortality of 57, or 8 per cent., which is described as precisely what we find recorded in the great plague of London in 1663. The authorities of Callao, however, were making attempts to remedy this disastrous state of things. There has accordingly been drawn up by Mr. T. C. Clarke, C.E., a scheme for the sewerage of Callao. As the temperature of the place is rarely below 65 deg. Fahrenheit, or above 77 deg., it surely ought to be a healthy town, the more especially as it has always the pure wind blowing into it from the South Pacific. It is certain, however, that improved sanitary arrangements are needed; and to provide these is the object of Mr. Clarke's scheme of sewerage. This scheme consists of—1, a main outlet for sewage; 2, pumping station for lifting the sewage; 3, line of main sewerage; 4, branch sewerage; and 5, flushing and ventilation of sewers. To this succeeds the estimated cost of eighteen miles of sewers with junctions, forty inspection and ventilation shafts, twenty-five flushing chambers, and forty gulleys with gratings—the whole amounting, according to Mr. Clarke's calculation, to over £92,000. The station for pumping (to be worked by a wind-mill, with an auxiliary steam-engine) is fixed at the Callao side of the mouth of the river Runac. By these machines, calculating a provision for 30,000 inhabitants, and allowing 25 gallons a day for each person, or a total of 750,000 gallons of water *per diem*, it is expected that a new era of health would be inaugurated in Callao. Mr. Clarke's scheme has been favourably received by the municipality of Callao, which has caused an advertisement to be issued calling for plans for the construction of sewers through the town, together with a general slaughter-house—a premium of about £400 being given for the plan for the sewers, and about £50 for that of the slaughter-house; both plans to

become the property of the municipality. The general mortality of Callao is thus registered during the month of November last: From small-pox, 111; fever, 44; consumption and pulmonary complaints, 33; dysentery, 9; other diseases, 58; total, 255; while in the same month of 1871 the deaths were only 105, thus showing an increase of a most startling character. The births in Callao in the same month of 1872 were 125. Comparing these births with the number of deaths during the same period, we find the deaths to exceed the births by 130, and the mortality to be at the appalling rate of 20.4 per cent. per annum for 15,000 population, and 15.24 per cent. allowing it to be 20,000. Surely the necessity for some immediate sanitary improvement is imperative. Large numbers of Chinese labours are annually imported into Callao, and undergo, it is said, great sufferings. A terrible instance may be found in the fact that the French barque *Centares* recently arrived at Callao with a cargo of Chinese from Macao, and, out of 263 put on board at the port of embarkation, only 181 reached the port of destination, 82 having died—thus showing the appalling mortality of 31 per cent. on the voyage. There is serious cause for inquiry into this matter. The run from Macao to Callao averages from a hundred to a hundred and twenty days. The Chinese are contracted for during a service of eight years, at the rate of 450 dollars, or about £75, per man. During their period of service, they generally receive about 13s. per month for their food-supplies, besides receiving a pound and a half per day of sweet potatoes, rice, yuca (a kind of arrow-root), and Indian corn—that is to say, a pound and a half of vegetable material. The mortality amongst the Chinese resident in the port is excessive. In the ten months ending October 1871, the mortality amongst the Chinese in the Guadeloupe Hospital in Callao was 30 per cent.; and in the past year it has not been more favourable.

THE ADULTERATION ACT.

THERE is a movement in the milk trade to set aside as nearly as possible the new Adulteration Act, in so far as it relates to their questionable commodity. Their desire is to fix the price of "genuine" milk at fivepence, and of "skimmed" milk at twopence a quart. Meanwhile, the law is being actively enforced; and a licensed cowkeeper was sentenced at Clerkenwell to pay a fine of £2 and costs for selling milk which, even at the higher price, was impure.

THE PUBLIC HEALTH.

MR. DOYLE is, we are glad to find, endeavouring to induce the Welsh sanitary authorities to adopt adequate areas of administration with a superintending medical officer of sufficient acquirements and fairly paid. It should, however, be considered an essential part of such organisation that every district Poor-law medical officer should be a paid health-officer for his district; otherwise the superintending medical officer of health will be helpless and comparatively useless.

SPECIAL LECTURES AT ST. MARY'S HOSPITAL.

A SERIES of special lectures will be given by the consulting officers of St. Mary's Hospital at the Medical School during the present session, on Wednesdays, at 3 P.M., as follows. June 18th, Mr. White Cooper: Recollections of Eminent Surgeons, and of Past Ophthalmic Practice. June 25th: Dr. T. King Chambers, on Hypochondriasis. July 9th: Mr. Samuel Lane, on Tertiary Syphilis or Syphilitic Cachexia. July 16th: Dr. Sibson, F.R.S., On the Influence of Abdominal Distension upon the Function of the Heart and Lungs. These lectures are open to all qualified practitioners and students of medicine, and we shall have the pleasure of publishing them in our columns.

THE DECISION IN FITZPATRICK v. KELLY.

THE case of Fitzpatrick v. Kelly, decided in the Court of Queen's Bench, has settled satisfactorily an important question under the Adulteration of Foods Act of 1872. The facts, as stated, were these. The respondent, a butterman, of Liverpool, had been proceeded against for selling adulterated butter. It appeared that the butter, which was sold at 7d. a pound, was mixed with lard, dripping, tallow, palm oil, and the fat from certain seeds. The stipendiary magistrate

of Liverpool dismissed the summons, on the ground that the respondent could not be "brought within the section unless he represented that the butter was unadulterated, or unless it was shown that he knew it was adulterated." This case was heard at the sittings *in banco* before Justices Blackburn, Quain, and Archibald, who came to the conclusion that the Act was an important and valuable one, and that the construction which the magistrate proposed to put upon it would considerably curtail its provisions. Henceforth it will be the business of tradesmen who sell mixtures to label them as such.

THE ADMISSION OF WOMEN TO STUDY MEDICINE.

A MEETING of the Professors at Queen's College, Birmingham, was held on June 5th, under the presidency of Dr. Russell, for the purpose of considering the resolution of the Council of the College with reference to the admission of female students. Mr. Bracey had given notice of his intention to propose an answer to the resolution of the Council, to the effect that the professors received with satisfaction the assurance contained in such resolution—namely, that the Council recognised the right of women to occupy any field of employment for which they might deem themselves qualified, and was desirous of affording any facilities in its power towards the higher education of women. To enable the Council to carry out those views, twelve of the professors were willing to give lectures to female students under certain conditions; and they, therefore, respectfully requested the Council to sanction the formation of classes for female students next session in all the subjects required by medical students of the first year, except in chemistry, provided that six female students entered, or that the fees for six were paid. They also recommended the opening of the present chemistry class to female students, as it would be inconvenient and expensive to repeat this course on account of the experiments it included; and, in the judgment of the professors, it would be unnecessary to do so, the subjects treated being purely scientific, and such as were discussed in mixed classes at the Midland Institute. As in carrying out these recommendations many matters of detail would have to be settled, the resolution suggested the appointment of a committee of three members of the Council, and a like number of the professors, for the purpose of preparing a complete and detailed scheme. We learn that, on this motion being proposed, another resolution was moved to the effect that, while accepting the principle of Mr. Bracey's resolution, it was desirable to add separate classes for ladies only so far as should be decided by the professors as a body. The latter, however, was not seconded; and an amendment was thereupon proposed, affirming the concurrence of the professors in the reasons assigned by the Council against the admission of female students to the college at present. This amendment was carried by a majority of twelve votes to seven.

EMIGRANT SHIPS.

DR. W. PEEL NESBITT of Edinburgh writes to us:

I have read with interest Dr. Bakewell's letter in this JOURNAL of May 31st, on the subject of emigration; and as I have myself recently held a similar appointment to his, I feel called upon to make a few observations, and to record my experience, which differs considerably from his. I left London on the 21st July last as surgeon-superintendent of the ship *Queen Bee*, 746 tons register, bound for Auckland with emigrants. There were 79½ "statute adults", besides steerage passengers, and about 30 in the saloon, making the total number of passengers 120. The accommodation was as Mr. Bakewell describes; ninety persons were stowed away in pigeon-hole berths in the 'tween decks. But, beyond this, my voyage did not resemble his. There were no serious cases, no fever, no deaths. Whooping-cough, however, appeared and went the round of the children; but, beyond one infant who had it severely, I feel justified in stating that all the passengers were landed in better health than when they started. I may add, there were two births on the voyage. I have stated these facts, not because I take credit for the superiority of my treatment compared with Dr. Bakewell's, still less do I wish to disparage his efforts, but because I think that, if my journey were exceptionally prosperous, his was exceptionally unfortunate; and the facts, as stated by him, would tend to convey an erroneous impression to the public. I should regret this, because I think it would be well if more of our poor emigrated to a country

where there is no pauperism, and where labour is well paid; and I should regret it also, because I consider that the superintendence of emigrant ships is, to a young practitioner, a lucrative way of seeing the world. My chief attention was directed to cleansing and disinfecting. The first I found the emigrants, although personally dirty, able and willing to carry out; and for the second, I used carbolic acid, chloralum, and other disinfectants, of all of which there was an abundance; but more particularly I had recourse to burning sulphur, which had the additional advantage of making the emigrants stay on deck. My duties did not occupy more than an hour and a half daily on an average; and for this attention for ninety-nine days I received about £6 10s. a week, besides board, wine, and beer. I may add, that there was on board abundance of everything, with the exception of preserved milk, considering the number of young children; and this I gave as my opinion in my report to the Government of New Zealand.

PRIZES AT THE KING'S COLLEGE.

At the annual distribution of prizes last week, under the presidency of His Royal Highness the Duke of Edinburgh, the following gentlemen, who were introduced by the various professors, received prizes from the hands of His Royal Highness, namely:—*Scholars*: G. H. Batterbury, senior scholar; H. C. Grimwood, second year scholar; H. C. Grimwood, H. B. Briggs, and John Davies, junior scholars, 1872; Fredk. Willcocks, Harold G. Taylor, and Arthur G. Underwood, Warneford scholars, class 1; and James Fowler, Warneford scholar, class 2. Prizes and Certificates of Honour, Winter Session, 1872-3:—*Warneford Prize*: G. E. Moore. *Divinity Prizes*: R. L. Batterbury, N. J. C. Tirard, and H. C. Stewart, second year men; F. Willcocks, A. Chawner, and A. W. May, first year men. *Jelf Medal*: Arthur C. Hutchings. *Anatomy*: prize, J. B. Footner; certificates of honour, H. B. Briggs, Thomas Evans, R. L. Batterbury. *Physiology*: prize, J. B. Footner; certificate, R. L. Batterbury. *Chemistry*: prize, R. L. Batterbury; certificates, C. A. Blake and H. B. Briggs. *Medicine*: prize, G. E. Moore; certificate, B. Bubb. *Surgery*: prize, R. Brayn; certificate, R. F. Quinton. *Clinical Medicine*: prizes, G. E. Moore, P. Birch, C. N. Griffiths. *Clinical Surgery*: prizes, R. Brayn and A. C. Hutchings. *Practical Physiology*: prize, R. L. Batterbury; certificate, J. B. Footner. *Practical Chemistry*: prize, J. W. Roughton; certificates, E. A. Snell, R. L. Batterbury, F. D. Miller, N. J. C. Tirard, J. B. Footner, and E. Ground. *Botany*: prize, H. D. Stewart; certificates, R. L. Batterbury, N. J. C. Tirard, and J. B. Footner. *Comparative Anatomy*: prize, John Stevenson. *Obstetric Medicine*: prize, H. A. de Lautour; certificates, G. F. Fenton and A. C. Hutchings. *Materia Medica*: prize, G. E. Moore; certificate, H. C. Grimwood. *Forensic Medicine*: prize, A. C. Hutchings. *Pathological Anatomy*: prize, R. B. Miller; certificate, G. B. Clark. *Todd Clinical Prize*: J. H. Philpot. The undermentioned gentlemen received diplomas as Associates of King's College: Robert Argles, G. H. Batterbury, J. R. Baumgartner, R. Birch, W. J. H. Lush, M. G. B. Oxley, J. H. Philpott, and William Rose. Dr. Bentley, the Dean of the Medical Faculty, reported that, taking the average of the past four years, the number of medical students in the College at present was in excess of that average. About one hundred and fifty gentlemen attended the various classes last winter. Since the last prize day, Mr. Mr. Robert Eardley Wilmot, a student, had taken the exhibition and gold medal in Obstetric Medicine at the University of London, and Mr. Philpot had obtained the Radcliffe Studentship at Oxford.

PROTECTION OF INFANT LIFE.

DR. ROUSSEL has laid before the National Assembly in Paris a *projet de loi* for the better protection of infant life. The following are its chief provisions. Every woman receiving for pay a child to nurse or suckle, is to make a declaration of the same to the mayor of her commune within three days, which declaration is to be registered by the *juge de paix*. The declaration must contain a statement of the date when the child was received, of its sex, name (in full), and age; of the names (in full), occupations, and residence of the parents, and of the person by whom the child was placed in the woman's care; as well as the name (in full), residence and occupation of the person who receives the child and

makes the declaration. If the nurse remove to another commune, she must make a new declaration before the mayor of the same. In case of the death or removal of the child, a further declaration must be made within three days, stating the time of death or departure, and, in the latter case, the name, residence, and occupation of the person to whom the child has been entrusted. The register is to be properly kept and verified by the *juge de paix*, who must, within the last three months of the year, make a report of the same to the *procureur impérial*. When the mayor delivers a certificate to a woman desirous of procuring a child to nurse, he must insert (in full) the date of birth and the christian name of her last child. No one is to be allowed to manage an office for nurses, or to be an agent for providing nurses and infants, without the authority of the prefect of police in the department of the Seine, or of the prefects of other departments. In districts where the minister of the interior considers it advisable, one or more medical men will be appointed inspectors of nurses, and will be required to make their visits once a month, or oftener if necessary. They will be paid by the state. Gratuitous committees of inspection and patronage, consisting of the mayor, curé, and the pastor, and of at least three other persons, of whom two must be mothers of families; nurses, or other respectable persons, will be appointed by the prefect if thought likely to be useful. Infraction of the regulations as to declarations and registrations is to render the offender subject to the provisions of the penal code.

THE ROYAL COLLEGE OF SURGEONS AND PRACTICAL TEACHING.

THE Council of the Royal College of Surgeons of England have issued a circular letter to the various medical schools, requesting information as to the manner in which the regulations of 1870, regarding practical surgery, practical physiology and histology, have been carried out; also asking for returns of the number of subjects for dissection secured during the past session.

SCOTLAND.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

DR. BRAKENRIDGE, one of the extra physicians, has been appointed an ordinary physician in the room of Dr. Arthur Gamgee, who has been appointed Brackenbury Professor of Practical Physiology and Histology at Owen's College, Manchester. The vacancy among the extra physicians, caused by the appointment of Dr. Brakenridge, has been filled up by Dr. James Andrew. Dr. J. C. Renton has been appointed assistant to the extra physicians.

KILMUN SEASIDE CONVALESCENT HOME.

THE foundation-stone of a new seaside convalescent home was laid last Saturday. It is situated about a mile to the west of Kilmun, at the head of the Holy Loch. The Home will be a very plain structure built of whinstone rubble, faced with freestone and brick, and will consist of two wings and a centre, with an entire frontage of about 176 feet. The building will be two storeys in height, and in each of the wings there will be sixteen bedrooms. In the centre portion, which is separated from the wings, will be the matron's room and kitchen, and on the upper storey a dining-hall and reading-room. The Home will be ready for occupation in the course of a few months, and will be capable of accommodating seventy patients. The cost is estimated at £2,500, and of this sum £1,600 has already been subscribed. The Home is entirely dependent upon the liberality of the public for support. It will be conducted by the directors of the Glasgow Abstinents' Union.

DUNDEE ROYAL INFIRMARY.

THE annual meeting of the governors of this institution was held on Monday. The report for the year showed that there was a very great deficiency in the revenue. The financial report showed the revenue for the year to be £4,014 : 10, and the expenditure £5,663 : 6, leaving a deficiency of £1,648 : 16 : 9. But there was also a sum of £780 : 3 of extraordinary revenue, which reduced the deficiency to £868 : 13. The

debt on the institution at present is £1,643 : 8 : 10. It appeared from the medical report that during the year 1475 cases had been treated, being 843 less than in 1872. This was owing to the absence of fever and small-pox epidemics. The debt was considered a serious item, and it was suggested that an Hospital Sunday should be promoted. It was agreed to apply the £1,000 presented by Mr. Armisted to the extension of the present buildings. The reports were approved.

THE ABERDEEN ROYAL INFIRMARY.

THERE is at last some good reason to believe from the report of the quarterly meeting of managers, held on Monday, that the Aberdeen Infirmary will in time be, in a comparative sense, efficient. A committee appointed to consider the question of hospital nursing, have discovered that scrubbing, clothes-washing, and other menial work, are hardly within the province of a skilled nurse, and have accordingly suggested that additional assistance should be obtained to relieve the nurses of such employment. They further recommend that measures should at once be taken, and not a day too soon, to provide better sleeping and other accommodation for the nurses. This, together with a more liberal rate of wage, "might," the committee imagine, attract the services of a superior class of women to act as nurses. The committee also wisely propose the appointment of an experienced head nurse. With regard to the infirmary grounds, which have been a standing disgrace to the institution, the committee have at length resolved to have them "placed in a proper condition," and they propose to separate the grounds from the Fever Hospital. They appear, however, to consider that paving stones are likely to afford the most cheerful aspect to a piece of ground which might be tastefully laid out to relieve the no doubt extensive, but at the same time dreary and monotonous aspect of stone walls obtained from the ward windows. The most important enterprise, however, being promoted at the present time by the managers is a convalescent hospital, which would be a most valuable adjunct to the Aberdeen Infirmary. The subcommittee were empowered at their meeting on Monday, subject to the report of a competent person as to the favourable character of the soil and a few other questions, to purchase the suburban house and grounds of Lochhead, which the committee considered to be eligible for the purpose. The question of fever-accommodation, and a communication from the local authority as to the number of zymotic patients to which the Infirmary managers can guarantee admission, have been referred to the medical and surgical staff of the Infirmary for their opinion. It is to be hoped that the staff who have thus been formally consulted in the matter will protect the true interests of the Infirmary and really make a stand against its prostitution to the wants of the local authority.

IRELAND.

DR. CHARLES A. CAMERON, City analyst, was last week appointed by the Corporation of Dublin analyst under the Act for the Prevention of Adulteration of Food and Drink, in addition to the office he already filled; and with this increase of duties his salary has been raised to £300 per annum.

TRINITY COLLEGE ATHLETIC SPORTS.

THE annual athletic sports and foot-races of the University Athletic Club took place on Monday and Tuesday, and were attended by an immense assemblage. The various items are well contested, and the 1000 yards flat race for the Medical School Challenge Cup was run in 2 min. 23½ sec.

THE UTILISATION OF SEWAGE.

LAST week, a meeting of gentlemen interested in the promotion of a company for the purpose of carrying into effect Dr. Anderson's process for utilising sewage, took place at the Royal Dublin Society, to hear an explanation of the process from Drs. Cameron and Reynolds. Both these gentlemen, well skilled as analytical chemists, considered that

the process afforded every probability of success in the way of rendering sewage innocuous. The sewage of Dublin, by means of Dr. Anderson's patent, could yield an immense quantity of manure, the actual money value of which would be worth £100,000. The process may be described to consist in applying to the sewage clay treated with sulphuric acid, and mixed with a little water, in the proportion of 6½ cwt. of the vitriolised clay to every 100,000 gallons of the sewage; to this is added 1½ cwt. of slaked lime. After a few hours, a precipitate forms at the bottom of the receptacle containing the sewage, leaving a clear liquid at the top. The precipitate is the manure; and both it and the fluid are perfectly devoid of odour, and are innocuous. The fluid may be used for irrigating land, or allowed to escape into the sea. The process was illustrated experimentally by applying to a vessel, containing fluid sewage taken from one of the city sewers, a portion of the prepared clay; and the result was extremely satisfactory, the solid matter being quickly precipitated, and the fluid becoming almost as clear as water. The matter precipitated, when removed from the vessel, was found to be inodorous. The cost of producing this manure, it may be stated, would be about 10s. a ton, which can be sold to retail vendors at from £1 to £1 : 5 a ton; and its money value to farmers would be equivalent to £1 : 10 a ton.

IRISH MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

THE annual meeting of this Association was held on June 2nd, at the College of Surgeons; the chair being occupied by Mr. Kirkpatrick, President of the College, who congratulated the members on the position of their Society, their funded capital having reached £15,000. Alluding to the contributions sent by the medical students of Queen's College, Belfast, and Steevens' Hospital, Dublin, he praised their efforts, and said it spoke well for the future of the Association that the young members of the profession should be found so ready to enlist themselves in the ranks of their Society. The total receipts for subscriptions for the past year was £675, while bequests and donations amounted to £749. The applicants for grants this year were 86 in number, of whom 68 were widows, 9 orphans, and 9 physicians and surgeons; the sum of £968 has been distributed among them.

THE IRISH MEDICAL ASSOCIATION.

THE annual meeting was held on June 2nd, in the Library of the College of Surgeons of Ireland—Dr. D. J. Hynes, President, in the Chair. The report read mentioned that the Council of the Association had devoted considerable attention to the Medical Acts Amendment Bill of Mr. Headlam, and had addressed a communication to that gentleman approving generally of the Bill, but suggesting certain amendments, and had forwarded a petition to the House of Commons embodying the same views. Their first amendment had for its object the securing to the graduates of universities and members of colleges a voice in the selection of their representatives, by giving them a right to vote; they suggest, also, that the members of the General Medical Council should not be increased, but that, in order to make room for the additional members provided by the Bill, an equal number of representatives nominated by the Crown should be omitted. The subclause, which provides for the acceptance of examinations in fundamental sciences other than those of the examining board, appeared to the Council unnecessary and objectionable. With these amendments the Association would support Mr. Headlam's Bill as an useful and much required measure. Resolutions were passed, that the Lord Lieutenant should be memorialised for a commission of inquiry into the sanitary condition of the whole of Ireland; that the sanitary laws were in a very inefficient state, and that the extension of the Public Health Act of 1872 to Ireland was much required, and should be sought for by the Association; that the Army Medical Warrant had acted most injuriously, and that it should be amended or withdrawn; and that the Association sympathised with the Irish militia surgeons for the grievances they would sustain by the recent Army Regulation Act. The meeting terminated with a vote of thanks to the chairman.

COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND: REQUISITION TO MR. SOUTHAM.

THE following requisition has been signed and forwarded to Mr. Southam of Manchester. In reply to it, Mr. Southam has expressed his willingness to be put in nomination.

To GEORGE SOUTHAM, Esq., F.R.C.S., *Surgeon to the Manchester Royal Infirmary, Lecturer on Surgery at the Manchester School of Medicine, and President of the Council of the British Medical Association.*

June, 1873.

SIR,—Understanding that Mr. Turner of Manchester does not intend offering himself for re-election on the Council of the Royal College of Surgeons in July next, we trust that you will come forward as a candidate for the seat to be vacated. As a surgeon to a large hospital, a teacher of surgery, and an old-standing Fellow and Member of the College, we are of opinion that you are exceedingly well qualified for occupying a seat on the Council. As we also believe that the interests of the profession require that the provinces should be duly represented in the governing bodies of our licensing corporations, we trust that you will not hesitate to permit of your being nominated for a seat on the Council at the forthcoming election in July.

We beg to remain, yours faithfully,

J. L. Minshall, Henry Stubbs, James Long, W. McCheane, Robert Hamilton, John Fenton, William Mitchell Banks, George E. Walker, Rushton Parker, James Penn Harris, Reginald Harrison, of Liverpool; E. Lund, W. Smith, J. B. Wood, S. M. Bradley, James Whitehead, Thomas Mellor, R. N. Ingle, James Stephens, Thomas Radford, Daniel Noble, James Bower Harrison, John Boutflower, of Manchester; Alfred Baker, Furneaux Jordan, T. Watkin Williams, T. Taylor, W. Thomas, T. H. Bartleet, T. Chavasse, Jas. F. West, Thomas Savage, Pye H. Chavasse, S. Berry, S. A. Bindley, Lawson Tait, W. P. Goodall, James Vose Solomon, R. Middlemore, of Birmingham; C. G. Wheelhouse, T. Pridgin Teale, T. M. Greenhow, S. Hey, W. Hey, of Leeds; John Charles Hall, Samuel Parker, Henry Thomas, John T. Porter, of Sheffield; John Harrison, T. Brittain, of Chester; William Cadge, Edward Copeman, Thomas W. Crosse, of Norwich; Charles H. Higgins, Essex Bowen, of Birkenhead; Wm. Hall, Thomas Howitt, John Broadhurst, Christopher Johnson, J. P. Langshaw, of Lancaster; Robert Craven, G. Woods, John Edward Mathias, S. T. Chadwick, of Southport; H. Terry, John M. Bryan, James Mash, Frank Buszard, of Northampton; Herbert W. Budd, David Everett, T. W. Walsh, of Worcester; A. G. Brookes, Samuel Wood, of Shrewsbury; Nelson C. Dobson, Augustin Prichard, Chas. Steele, of Clifton; Robert D. Goodwin, William Toogood, of Ashbourne; W. Cantrell, W. Webb, of Wirksworth; Samuel Beecroft, Thomas Cooper Leah, of Hyde; William B. Page, Herbert Wm. Page, Carlisle; A. Thom Thomson, Henry Halkyard, Oldham; Edwin Rayner, George Downs, Stockport; William Howitt, Robert Charles Brown, Preston; Henry Cooper, Hull; John Rigby, Chorley; F. F. Lallemand, Macclesfield; T. Heckstall Smith, St. Mary Cray; T. T. Griffith, Wrexham; I. Byerley, Seacombe; Lawrence Bramley, Halifax; W. D. Husband, York; John Higginbottom, Nottingham; Geo. Taylor, Derby; J. Wickham, Penrith; J. H. Kimbell, Knowle; W. W. Saxton, Market Drayton; F. E. Manby, Wolverhampton; D. Ball, Newcastle, Staffordshire; Richard Chapman, Kirby Moorside; James Nance, Eccleshall; James Collins, Maryport; J. E. Moreton, Tarvin; D. Embleton, Newcastle-on-Tyne; E. C. Jepson, Durham; T. G. Roden, Llandudno; T. G. Richmond, Prestbury; Edwin Morris, Spalding; Thomas Fentem, Eyam; D. Henry Monckton, Rugeley; James Smith Walters, Bakewell; E. J. Shearman, Rotherham; Thomas Mills Beaumont, Knaresborough; R. Chambres Roberts, Ruabon; James Garstang, Lytham; E. M. Wrench, Baslow; William Roden, Kidderminster; T. J. Dyke, Merthyr Tydfil; T. M. Ashton, Burscough; Thomas Groom, Whitchurch; W. M. Coultate, Burnley; R. F. Snape, Bolton-le-Moors; R. H. Bowness, Poulton; Thomas Starkey Smith, Warrington; Joseph Holland, Whittingham; Miles A. Wood, Ledbury; O. N. Royle, Milnthorpe; W. C. West, Malvern; Thomas Ebbage, Leamington; W. J. Pilcher, Boston; Edward Hall, Dalton-in-Furness; John Hitchman, Cheltenham; J. Shaw, Bedford; John Ness, Helmsley; C. S. Barter, Bath; John Whipple, Plymouth; W. Statter, Wakefield; W. P. Brookes, Much-Wenlock; R. H. Meade, Bradford; John Spence, Bedale; Charles Trotter, Stockton-on-Tees; T. W. Benfield, Leicester; John W. Teale, Scarborough.

THE REGISTRATION OF DISEASE.

AT the last annual meeting of the British Medical Association, on August 8th, 1872, a resolution was moved by Dr. Rumsey, seconded by Dr. Burke of Dublin, and carried, "That a memorial be addressed to the Local Government Board and a petition to Parliament at the commencement of next session embodying the views of the Association on the subject of the Registration of Disease." A memorial and petition have accordingly been prepared by Dr. Ransome, the honorary secretary of the Committee on the Registration of Disease. The latter, which was presented by Dr. Lyon Playfair on May 12th, is as follows.

The humble petition of the British Medical Association sheweth, 1. That under the Public Health Act, passed last session, medical officers of health are to be appointed to every sanitary district of England. 2. That it is of great importance that these officers should obtain regular and frequent registration of all cases of disease coming under treatment at all public institutions in their districts. 3. That these returns are needed to give speedy, regular, and definite information as to the public health to the officers of health themselves, to the local government board, and to the public. 4. That they would give plain and timely warning of the rise and progress of the various epidemics of fevers, diphtheria, cholera, etc., so that preventive measures might be applied at their outset, when alone they are likely to be effective. Death returns being neither sufficiently prompt in their warning for this purpose, nor giving necessarily either the time or place of origin of these disorders. 5. That these returns would afford a means of estimating the burden of sickness borne by a community in its full weight of money loss, in the suffering and grief it entails, as well as in the mortality arising from it. 6. That they would guide the sanitary authorities as to the need of dealing with non-fatal diseases arising from local causes. 7. That they would show the amount of disease arising from social vices and evil habits of life (e.g. scrofula and syphilis). 8. That they would afford a test of the fitness of the various institutions for the reception of the sick and poor. 9. That they would constitute a valuable series of medical statistics from which conclusions might be drawn respecting the causes of disease, the laws of epidemics, the relations of disease to atmospheric changes, and to seasons of plenty or scarcity, and many other questions of medical science. 10. That they would probably show the influence of trade and manufactures, and of any other circumstances peculiar to a district, and would afford a means of comparing the relative healthiness of different districts, and would thus serve to direct sanitary and benevolent exertions. Your petitioners therefore humbly pray your honourable house to pass a bill for establishing a national system for the registration of diseases.

And your petitioners will ever pray, etc.

Signed on behalf of the British Medical Association,

ALFRED BAKER, *President.*

GEORGE SOUTHAM, *Chairman and President of Council.*

R. WILBRAHAM FALCONER, M.D., *Treasurer.*

ARTHUR RANSOME, *Hon. Sec. to Committee of the British Medical Association on the Registration of Disease.*

A memorial in similar words has been sent to the Local Government Board. A copy of the reply is as follows.

"Local Government Board, Whitehall, 17th May, 1873.

"SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 14th instant, communicating to them a copy of a resolution passed at the last Annual Meeting of the British Medical Association, upon the subject of the Registration of Disease, and to inform you that the representations of the memorialists will receive the attention of the Board.

"I am, Sir, your obedient servant,

"W. S. LUMLEY, Assistant Secretary.

"To Francis Fowke, Esq., General Secretary,
British Medical Association, 37, Great Queen Street."

TESTIMONIAL.—Dr. Lyell of Dundee has been presented with a cheque for £1000 and a silver claret jug by the Bishop of Brechin, in the name of his friends, as a token of their respect for him as a man, and in appreciation of his high professional services.

SPECIAL CORRESPONDENCE.

PARIS.

FROM OUR OWN CORRESPONDENT.]

Fournier on Syphilitic Fever.—The French Temperance Society.—M. Littré.—M. Batbie.

M. ALFRED FOURNIER, a sub-professor of the Faculty of Medicine, and a young distinguished syphilographer, has begun a course of lectures at the Hôpital de Lourcine (the Paris Lock Hospital) on syphilis as it occurs in women. I need hardly say that all his lectures are very interesting, but there is one that deserves particular notice, as it treats of a subject but little known among practitioners, even among specialists, of that class who are in the habit of looking upon the affection about to be described as entirely apyretic, or merely symptomatic of some disturbance in the economy more or less connected with the perturbation caused by the affection in question, and not a sequence of this latter. I allude to what M. Fournier designates "*fièvre syphilitique*", which, he says, is a sort of essential fever of a specific character, and is intimately connected with, or the result of, the syphilitic diathesis. It presents itself in two different forms: it is sometimes purely symptomatic, and at others it assumes all the characters of an essential fever. The former is the less frequent, manifesting itself as an epiphenomenon of the syphilitic eruptions, and assuming the continued type which, however, is of short duration. The essential form principally manifests itself on the appearance of the secondary symptoms; the nervous temperament seems to act as a predisposing cause; while, among the proximate causes, may be named the expectant or want of proper treatment; and, in proof of this latter assertion, M. Fournier observed that, whenever syphilis was early and properly treated, the fever was generally *nil*. This essential fever sometimes assumes the intermittent, sometimes the continued type; it is irregular in its character, and occurs with or without paroxysms. It is, however, distinguishable from the same class of fevers of malarious origin by the following symptoms. In syphilitic intermittent fever, which is nearly of the quotidian form; the paroxysms recur at night; and it also differs from the malarious intermittent type by the absence of the cold and sweating stages, as well as by the absence of those complications generally met with in the ordinary intermittent fever; but the most characteristic feature is that the spleen remains unaffected, whether during or in the intervals of the paroxysms. The continued type of syphilitic fever is like the common continued, either of the simple or paroxysmal form. M. Fournier described also a third form of syphilitic fever, in which the symptoms are very irregular, and therefore cannot be classed with any of the above types. Sometimes the fever assumes an adynamic character, somewhat analogous to typhoid, to which M. Fournier has given the name of "*typhose syphilitique*." The prognosis, however, of this latter, is not so unfavourable as the genuine typhoid, and the patients recover, first from the adynamic condition, then from the fever; but the syphilis runs its course as if nothing else had happened. Another distinguishing character of the syphilitic intermittent consists in its unamenability to the action of quinine, so efficacious in ordinary intermittent fever; and the only agent that seems to have some influence on the progress of the disease in question, is mercury, either alone, or combined with the iodide of potassium; but while its efficacy has been proved in the intermittent form of syphilitic fever, its action in the continued form is *nil*, or at least uncertain. M. Fournier administers the mercury internally, unless counterindicated by the state of the stomach or bowels, in which case he replaces it by mercurial frictions. M. Fournier offers the above, not as a theoretical speculation, but as the result of clinical observations, taken for a series of years, and with the thermometer and sphygmograph in hand.

The Temperance Society recently founded in Paris has already done excellent work, and promises to render still greater service, in putting down habits of intemperance, which are becoming so rife among our Gallic friends, that even the government has been obliged to interfere. At the recent annual meeting of the Society, which was its first, Dr. Lunier, the Secretary-General and one of its principal founders, after having read the report of the working of the Society since its foundation last year, made some remarks about the origin and propagation of spirits in France has within the last thirty years attained enormous proportions, and that a tendency to crime of every description has increased with it. Insanity due to the abuse of alcoholic liquors, and particularly those extracted from grain and beetroot, has also assumed frightful proportions; for, in the greater part of the districts where such liquors are manufactured, insanity prevails to the extent of 25 to

40 per 100 inhabitants; and this is not to be wondered at when we consider the enormous quantity of spirits that are consumed in comparison with what it used to be in former years, as will be seen by the following statement. M. Lunier showed that the quantity of spirits consumed in France amounted in 1820 to 350,000 *hectolitres*, in 1850 to 585,000, and in 1869 to 978,000 *hectolitres*, which of course does not include the quantity smuggled and obtained by other surreptitious means. This M. Lunier attributed to the introduction of the distillation of spirits from grain and beetroot, which has, in great measure, replaced the juice of the grape, and which has been attended with most disastrous consequences, as shown by the police and mortuary returns. Dr. Lunier, in referring to the total abstinence principles of similar societies in England, America, and Holland, observed that, however much he admired those principles, their fulfilment in a country like France, where the vine grows in abundance, is simply impossible; and where, after all, alcoholism has attained such alarming proportions only since the introduction of spirits as a beverage. Dr. Lunier, although a teetotaler himself, does not approve of the absolute exclusion of wine as a dietetic drink, as he does not believe that any wine, whatever may be its strength, can, when taken in moderation, do any harm—provided, of course, that the wine be the natural unsophisticated juice of the grape; whereas alcohol, in any other form or combination, is a poison even in the smallest doses. He never knew of a case of delirium tremens, or alcoholism, brought on by the exclusive use of wine; his object, and that of the Society is, therefore, not to abolish the use of natural wines, but to replace spirituous liquors by more healthful beverages, such as cider, coffee, tea, and beer.

M. Littré, the great lexicographer and savant, has, after having been many years kept out of the pale of the French Academy on account of his materialistic principles, been formally received by that body. The reception took place on Thursday last, and, although it was not so imposing as some that had gone before, it was not one of the least interesting. M. Littré, who had been ailing for some time, not feeling sufficiently strong to read his discourse, handed it over to M. Lagouré, who read it for him. M. Littré's paper contained the eulogy of M. Villemain, his predecessor, to which M. de Champigny replied in the following terms:—"You are not, strictly speaking, a new-comer among us; we have already had the benefit of your talents, and your dictionary, which is a perfect monument of its kind, has been for several years the 'forty-first Academician,' which is frequently consulted, and which, although mute, has a reply for nearly every question."

In my letter which appeared in the JOURNAL of the 24th May, concerning the changes that had taken place in the French ministry, and in which I announced the appointment of M. Waddington as the successor of M. Jules Simon, as Minister of Public Instruction, I have now to inform you that, on the very day on which the announcement was published, M. Waddington had been replaced by M. Batbie, owing to the changes that had again taken place in the French Ministry. M. Anselme Batbie, the new Minister of Public Instruction, was born in 1828. He was Professor of Law at Toulouse, and subsequently at Paris. He is also a member of the National Assembly, and author of several political and literary works.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

THE forthcoming election in the Council of the Royal College of Surgeons appears to have excited considerable interest in professional circles in the provinces. When it became known that Mr. Turner of Manchester did not intend to offer himself for re-election, there was a general expression of opinion that the provincial surgeons should endeavour to maintain the very moderate share of representation in the Council that they have hitherto enjoyed, by inducing a provincial surgeon to offer himself for the seat about to be vacated by Mr. Turner. The choice has fallen, with remarkable unanimity and widely expressed approval, upon Mr. Southam of Manchester, as evinced by the presentation to that gentleman of a requisition requesting him to come forward, and which has already received the signatures of 148 Fellows of the College residing in the provinces including, almost without exception, the name of every leading surgeon in Liverpool, Manchester, Birmingham, Leeds, and other towns, and in every district of England and Wales. To so flattering and spontaneous an expression of confidence Mr. Southam could, of course, give but one reply. He is now in the field, and we hope that the provincial Fellows will use every exertion to secure his election. In the present position of medical education and legislation, it is of paramount importance to secure fair representation of the provincial schools and of the interests of country Fellows in the Council of the English College; and we believe that the metropolitan

Fellows themselves will not fail to perceive the justice of the claims of their provincial brethren, and that they will support Mr. Southam, and thereby evince their desire, as a deliberative body presiding over the interests of the surgeons of England, to include amongst them a representative who evidently possesses the confidence of the majority of the country Fellows as an exponent of their views.

ASSOCIATION INTELLIGENCE.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES.

THE combined annual meeting of the above Branches will be held at the Town Hall, Great Yarmouth, on Friday, June 20th, at 2 P.M.; J. C. SMITH, Esq., President, in the Chair.

Dinner at the Royal Hotel, Great Yarmouth, at 5.30 P.M. Tickets, 12s. 6d. each.

Members wishing to read papers, or to join the dinner, are requested to communicate, as early as possible, with one of the Honorary Secretaries.

B. CHEVALLIER, M.D., Ipswich.
J. B. BRADBURY, M.D., Cambridge.
J. B. PITT, M.D., Norwich. } *Honorary Secretaries.*

May 19th, 1873.

MIDLAND BRANCH.

THE annual meeting of the above Branch will be held in the Board Room of the General Hospital, Nottingham, on Saturday evening, June 21st, at Seven o'clock, when a paper will be read by Sir Henry Thompson, F.R.C.S., Surgeon to University College Hospital, etc., on Urethral Stricture.

JOSEPH WHITE, *Honorary Local Secretary.*
Nottingham, June 10th, 1873.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting of this Branch will be held in the New Town Hall, Warrington, on Tuesday, June 24th, at One o'clock; CHARLES WHITE, Esq., President-elect.

Dinner will be provided in the "Mess House", at Five precisely. Tickets, 7s. 6d., exclusive of wine.

Communications promised:—Dr. Noble: Particulars of Treatment in a Case of Pneumothorax. Dr. Lyster: Case of Intermenstrual Pain. J. Mathias, Esq.: Complications of the Puerperal Condition liable to be mistaken for Peritonitis. Dr. Oxley: Strangulated Umbilical Hernia; Operation; Recovery. Dr. Steele: Injection of Perchloride of Iron in *Post Partum* Hæmorrhage. Dr. Ransome: Instruments for Chest-Measurement. J. H. Gornall, Esq.: Tetanus successfully treated with Chloral Hydrate. Dr. Wallace: One Hundred Cases of Forceps Delivery.

N.B. To secure adequate provision, it is essential that those intending to dine should communicate with the undersigned on or before the 20th instant.

A. B. STEELE, *Honorary Secretary.*
54, Rodney Street, Liverpool, June 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Great Western Hotel, Birmingham, on Tuesday, June 24th, at 3 P.M.

An address will be delivered by the President, FURNEAUX JORDAN, Esq., F.R.C.S.

The annual dinner will be held at 5 P.M., for the convenience of country members.

Dinner tickets, including waiters and dessert, 7s. 6d. each.

Members intending to be present at the dinner, are requested to communicate with the Honorary Secretaries on or before June 20th, in order that suitable arrangements may be made.

T. H. BARTLEET, F.R.C.S.
BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*

Birmingham, May 20th, 1873.

SOUTH EASTERN BRANCH.

THE twenty-ninth annual meeting of this Branch will be held at Ashford, on Wednesday, July 2nd; EDWARD GARRAWAY, Esq., of Faversham, in the Chair.

G. F. HODGSON, *Honorary Secretary.*
Brighton, June 10th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE annual meeting of this Branch will be held at the Bush Hotel, Carlisle, on Wednesday, June 25th, at 1 P.M. *President*, T. S. CLOUSTON, M.D.; *President-elect*, R. TIFFEN, M.D.

Gentlemen intending to read papers, or bring forward cases, are requested to give immediate notice to the Secretary.

HENRY BARNES, M.D., *Honorary Secretary.*
Carlisle, June 3rd, 1873.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE annual meeting of this Branch will be held at Carmarthen, on Friday, June 27th, under the presidency of G. J. HEARDER, M.D.

Nominations for membership, whether of the Association or Branch, and titles of papers proposed to be read, to be forwarded without delay to one of the undersigned.

ANDREW DAVIES, Swansea,
ALFRED SHEEN, M.D., Cardiff, } *Honorary Secretaries.*

NORTHERN BRANCH.

THE annual meeting of the above Branch will be held in the Library of the Newcastle-upon-Tyne Infirmary, on Thursday, July 3rd, at 2 P.M.; G. Y. HEATH, M.D., President, in the Chair.

G. H. PHILIPSON, M.D., *Honorary Secretary.*
Newcastle-upon-Tyne, June 4th, 1873.

SOUTH WESTERN BRANCH.

THE annual meeting of the above Branch will be held at Callington, on July 3rd, at 12 noon; J. KEMPTHORNE, F.R.C.S., President-elect.

The dinner will take place at Golding's Hotel, at 6 P.M. precisely. Tickets, 7s. 6d. each, exclusive of wine.

An excursion will be made to King Dungarth's grave and Trevethy Cromlech, thence to the Hurlers (Druidical remains) and the Cheeswring.

Members wishing to read papers or to join the dinner, are requested to communicate, on or before June 25th, to the Honorary Secretaries.

The South Devon, Cornwall, and West Cornwall Railway Companies, will grant members return tickets to or from any of their stations to Liskeard or Plymouth, available from July 2nd to 4th inclusive, at single fares, on production of ticket of membership.

JOHN WOODMAN, F.R.C.S. } *Acting Honorary*
LOUIS TOSSWILL, M.B. } *Secretaries.*
2, Chichester Place, Southernhay, Exeter, June 9th, 1873.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Belvoir Hotel, Rhyl, on Tuesday, July 8th, at 1 P.M.; R. DAVIES, Esq., of Llanfair-talhairn, President.

The dinner will be at 4 P.M. Tickets, including waiters and dessert, 7s. 6d. each.

Members who have cases to report or papers to read, and those who intend dining, will please to communicate, as soon as possible, with the undersigned.

D. KENT JONES, *Honorary Secretary.*
Beaumaris, June 9th, 1873.

YORKSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Museum of the Yorkshire Philosophical Society, York, on Wednesday, May 28th; S. W. NORTH, Esq., President, in the Chair.

The PRESIDENT delivered an address on some sanitary topics.

Report of Council.—Dr. PROCTER, the Local Secretary, read the report. The Council, in the first instance, drew attention to the Medical Reform Bill now before Parliament, and urged the members to support it, as it involved many of those principles the recognition of which the Association had long exerted their influence to obtain, and which had been seconded by the efforts of this Branch. In relation to local matters, it was stated that the establishment of three meetings of the Branch at one of the large towns comprised within its limits, instead of two as heretofore, had been attended with most successful results. The meetings at Scarborough and Huddersfield, in addition to the annual one at Leeds, had been numerous attended, had been supplied with valuable practical papers, and had led to an increase of members. At the last annual meeting, the Council reported that the number of Branch members were 176; they now amounted to 188, 18 having been added during the year, whilst the vacancies occasioned by deaths and resignations

were six. The Council thanked Mr. Wheelhouse for the eminent services which he had rendered the Branch during the year as President, and the means which he had taken to advance its progress; and recommended that Dr. M. Martin de Bartolomé of Sheffield be president for 1874-75. The report, in conclusion, endeavoured to show the importance of the exertion of each individual member to endeavour to add to the strength of the Association.

Council.—Mr. S. HEY moved, and Dr. HEATON seconded, the adoption of the report, and proposed that the following gentlemen constitute the Council and Representatives for the year. *Council.*—York: B. Dodsworth, Esq.; W. D. Husband, Esq.; W. Matterson, M.D.; F. Needham, M.D.; S. W. North, Esq.; G. Shann, M.D. Leeds: T. C. Allbutt, M.D.; C. Chadwick, M.D.; J. D. Heaton, M.D.; S. Hey, Esq.; T. R. Jessop, Esq.; T. P. Teale, Esq.; T. Scattergood, Esq.; C. G. Wheelhouse, Esq. Sheffield: M. Martin de Bartolomé, M.D.; J. Benson, Esq.; W. F. Favell, Esq.; J. C. Hall, M.D.; A. Jackson, Esq.; J. H. Keeling, M.D. Bradford: R. H. Meade, Esq. Scarborough: R. T. E. B. Cooke, Esq. Wakefield: S. Holdsworth, M.D. *Representatives in the General Council:* T. C. Allbutt, M.D.; W. F. Favell, Esq.; J. C. Hall, M.D.; J. D. Heaton, M.D.; A. Jackson, Esq.; W. Matterson, M.D.; G. Shann, M.D.; T. P. Teale, Esq.; C. G. Wheelhouse, Esq.

Secretary.—On the motion of Mr. WHEELHOUSE, seconded by Dr. MATTERSON, Dr. Procter was re-elected Secretary.

Autumnal Meeting.—It was announced by the Chairman that the autumnal meeting of the Branch would be held at Wakefield.

Communications.—The following communications were made. Mr. Jessop on a Successful Case of Colotomy. Dr. Clifford Allbutt on some Cases of Vertigo. Mr. Draper on a case of Scirrhus of the Pylorus. Mr. Witten on the Non-alcoholic Treatment of Disease.

Dinner.—After the meeting, forty members dined together at the Station Hotel.

SOUTH MIDLAND BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch, which numbers 102 members, was held at the Council Chamber of the Town Hall, Northampton, on Thursday, June 5th; Dr. BRYAN, President, in the Chair. Refreshments were provided by Dr. Bryan in the ante-room. There were twenty-four members and visitors present.

President's Address.—The PRESIDENT gave an address, referring to his long connection with the Parent Association, viz., nearly forty years, and to the interest which he had always taken in it. He spoke of the object and value of the Association in increasing the power and usefulness of the medical profession; in cultivating and warming the social faculties of its members; in inspiring them with a greater love for their arduous calling; in exciting a higher ambition to maintain its dignity and contribute to its advancement; and in making the members better acquainted with each other, and producing increased pleasure and regard. The meetings were important as regarded science, and also agreeable in bringing together members of the profession who would otherwise only be known to each other by name. This produced a friendly feeling, and formed a bond of union. Dr. Bryan hoped that the approaching meeting in the metropolis would prove a great success (of this he had little doubt), and that a considerable number of the South Midland Branch would be present at the same time. He also hoped that each associate would take more interest in the Association, and in his particular locality obtain recruits, so as to increase and keep up its numbers. He referred to the Health of Towns and other Acts, and said that they had been well overlooked by the Representatives in the Parliamentary Committee, of which he was a member deputed by the South Midland Branch.

New Members.—The following were elected. David Thomson, M.D. (Higham Ferrers); Henry Gordon Cartwright, Esq. (Bugbrooke); Charles Lewis, Esq. (Northampton Infirmary); John Turner, M.D. (Northampton).

Officers and Council.—The following were elected for 1873-74. *President-elect:* Robert De'ath, Esq. (Buckingham). *Committee of Management:* F. Buszard, M.D.; W. C. Daniell, Esq.; C. J. Evans, Esq.; John Farmer, Esq.; G. Harday, Esq.; E. Prior, M.D.; H. Terry, jun., Esq.; R. W. Watkins, Esq. *Representatives in the General Council:* Robert Ceely, Esq.; D. J. T. Francis, M.D.; A. D. Mackay, M.B.; W. Newman, M.D.; H. Terry, jun., Esq. *Honorary Secretaries:* J. M. Bryan, M.D.; W. Moxon, Esq. *Treasurer:* J. M. Bryan, M.D. *Representative to Parliamentary Committee.*—J. M. Bryan, M.D.

Conjoint Meeting.—It was proposed by H. TERRY, jun., Esq.,

seconded by Dr. PRIOR, and resolved—"That a conjoint meeting of the Cambridge and Huntingdon, East Anglian, and South Midland Branches be held at Cambridge in 1874, under the presidency of Professor Humplry."

Papers.—The following papers were read.

1. Dr. Newman: On Forcible Flexion of Crippled Joints. Remarks were made by Drs. Prior and Buszard, and Messrs. Mash, Harday, Hemming, and Collier.

2. Dr. Mackay: On Puerperal Convulsions successfully treated by Chloral Hydrate.

3. Mr. G. P. Goldsmith: On Secondary Hæmorrhage after Parturition.

Autumnal Meeting.—It was agreed that the autumnal meeting be held at Oundle in September or October.

Dinner.—The members dined together at the George Hotel. Dr. Bryan in the Chair; Dr. Mackay in the Vice-chair.

CORRESPONDENCE.

ARMY MEDICAL DEPARTMENT AND SIR T. G. LOGAN'S "MEMORANDUM."

SIR,—Now that the memorandum given to members of Parliament other than Dr. Playfair has been published, permit us to point out the inaccuracies of this attempt to explain away the pecuniary rights, prestige, and status of the members of your profession in the army.

Clauses 6, 17, and 21 of the Royal Warrant, 1st October, 1858, solemnly guaranteeing to us as only a first recognition of our services, the right to promotion by seniority of "professionally and physically competent;" the right that our relative rank should "carry with it all precedence and advantages attaching to the rank with which it corresponds," and the further provision that retirement should, for "the efficiency of the service," take place after the completion of fixed periods of service, would be of themselves sufficient answer to this most extraordinary document; for the withdrawal of rights and privileges once granted cannot be explained away, being unjust, unprecedented, and a direct break of contract.

It seems extraordinary that one officer of the Army Medical Department should take upon himself to explain away rights and privileges granted in 1858, upon the recommendation of such men as Mr. Sidney Herbert, Sir Henry Storks, Sir Andrew Smith, Thomas Alexander, Sir Ranald Martin, Sir James Clark, Sir Thomas Phillips, Mr. Augustus Stafford, and Dr. Sutherland, F.R.S., the members of the committee upon whose report the Army Medical Department was reorganised and medical officers liberated, whenever possible, "from all duties not strictly professional—a change indispensably necessary for the efficiency of the medical officers in order to enable them to devote more time to the higher duties of their profession, and the better to perform the sanitary duties with which we have now charged them" (Sidney Herbert to General Peel, Secretary at War, 9th July, 1858).

When the so-called unification of the Army Medical Department was advocated, principally on the grounds of economy, army medical officers naturally looked forward to increased pay and allowances as being only a just recompense for increased duties and responsibility. The reverse has happened, and the anomaly, unknown in civil life, has occurred of increasing duties and withdrawing at the same time pay, allowances, and privileges.

For the following reasons, the medical officers of the army have always held that their services should receive special recognition on the part of the State.

a. Because by their exertion the mortality and sickness in the army have been largely reduced in amount, thus rendering that army more efficient and easily recruited, and in this way leading to large pecuniary savings.

b. Because their pay and allowances are given in full of all demands; they, unlike other officers of the army, having no share in the host of lucrative staff appointments.

c. Because, being professional military officers, sharing with the soldier all the casualties and vicissitudes of war as evidenced in every campaign, they should be entitled to the same honours and rewards as their so-called combatant brother officers, and, in recognition of their profession, receive, as do the Royal Engineers, extra pay and allowances for professional work.

d. Because, by entering upon the study of medicine, preparatory to competing for a medical commission in the army, they must lose at least four years' service towards pay, promotion, and pension, in consequence of having to enter at a later age.

The answers to Sir T. G. Logan's explanations are :

1. *Withdrawal of 17s. 6d. per diem.*—That, in the absence of a clause so constituted as to secure promotion on an average of fifteen years, the withdrawal of 2s. 6d. *per diem* is a direct breach of contract.

2. *Forage Allowance.*—This allowance was granted to medical officers, not because other departmental officers obtained it, but because, as ranking with combatant field-officers, they were, by the terms of the Royal Warrant of 1858, entitled to the same precedence and privileges as combatant field-officers, to draw forage as the appanage of their rank, and to enjoy the status of a mounted officer, which entitles them to a groom and stabling, and the privilege of being mounted on parades. All these were withdrawn by withdrawing forage. The report of the Royal Commission, upon which the Warrant of 1866 was issued, contains a clause that "medical officers ranking as field-officers should provide themselves with chargers and horse-furniture, and appear mounted when required to attend parade," showing the importance given to this point by those upon whose evidence the clause was adopted. The attempt to change the standard of rank is, to say the least, disingenuous.

3. *Medical Officers Junior of the Rank.*—To make the contract perfect in the instance quoted by Sir T. G. Logan, the clause in the medical warrant should have the words "with power of reappointment" instead of "as a rule for five years." But the fact of other field-officers only retaining their appointment for five years is no reason to adduce as the one why a surgeon-major should be deprived of his army rank when brought into a regiment for the benefit of the public service. Such a regulation, hitherto unnecessary, must always place the medical officer junior of three field-officers for choice of quarters ; in other words, leave him no better off than a senior captain. Field-officers' rank and privileges were given to regimental surgeons in order to give weight to their advice with their commanding officers ; and the wisdom of the regulation has been proved by the result. To place an officer, second only in responsibility to the colonel of a regiment, in such a position, is as unjust as it is impolitic and ungenerous.

4. *Promotion by Selection and Removal of Surgeons from their Regiments.*—Promotion by selection has always been objected to by military medical officers, as opening the door to favouritism and as being unjust as long as other officers of longer service are physically and professionally competent. Such a rule does not apply in the corps of Royal Engineers and Artillery, for in them an officer rises from the lowest to the topmost steps of the latter by seniority as a right. An individual must be very hard set for a reason, when adducing the idea of preventing a bonus being given to facilitate retirement. No such bonus has ever been heard of in the Army Medical Department. With regard to the removal of surgeons, we do not think the best manner has been adopted. Combatant officers would at least have been allowed the courtesy of a gazette ; and, if justness had been intended, officers might have been continued in their former regiments until the exigencies of the service actually required their withdrawal from them. They have received not the least compensation for uniform, equipment, or exchange expenses, and at present occupy a most invidious and annoying position.

5. To assert that a junior officer benefits by being promoted to a rank shorn of precedence, privileges, and allowances hitherto appertaining to it, is an assertion not founded on fact.

In addition, it may be remarked that to place surgeon-majors in regiments, battalions, or brigades, subject to all regimental subscriptions without being gazetted, and occupying as other officers a regimental status pure and simple, is in glaring anomaly. Medical officers specially attached to regiments should be either regimental officers or staff officers. If the latter, they should be relieved from all subscriptions. Then, again, no rules have been laid down as to uniform ; all is left to chance, and officers in consequence are led to unnecessary expense. Medical officers consider that in this last respect their uniform is unnecessarily and offensively distinctive.

Being deserted by those who should have guarded our rights and privileges as their own, we must appeal to you, as the representative JOURNAL of our profession, to claim from Mr. Cardwell the fulfilment of his promise to alter the late Warrant in accordance with the dictates of justice, prudence, and honour.

I am, etc.,

ESPRIT DE CORPS.

THE ARMY MEDICAL WARRANT.

SIR,—I see in your impression of the 24th instant, the copy of a communication, bearing the signature of the Director-General of the Army Medical Department, purporting to be an explanatory "memorandum" from him, justifying and upholding those clauses in the above Warrant which all the leading journals of the day, and public opinion itself, have universally asserted to be as unjust, prejudicial, and derogatory to the branch of the service of which he is chief, as it is possible to con-

ceive. And it can be easily realised with what feelings of discontent and indignation, as well as of surprise, this announcement has been received by the entire of this department. Previously to this strange disclosure of his sentiments, it was universally believed that he, at least, was certainly strongly opposed to the various pernicious clauses contained in this Warrant ; but now this memorandum speaks for itself, and most clearly indicates the true source of all this evil, and how sadly the department needs a man like the late Dr. Alexander at its head, to again rescue it from this downward current of disaffection, and loss of privileges, rank, professional status, and dignity, into which it is now fast drifting under present administration. Any comments from me on the various remarks expressed in this extraordinary document would be quite superfluous, considering all that has been lately discussed and published on the subject, in even your JOURNAL alone ; but I cannot help mentioning what my own opinion is regarding it. It is this, that Sir Galbraith Logan never devised this "memorandum" himself, but that he only condescendingly attached his signature to it, at the request of Mr. Cardwell, and to the greatest detriment that he (the Director-General) could possibly inflict on the Army Medical Department ; for, as you will see by the *Broad Arrow* of May 31st, "a similar document, signed by the Director-General, and dated 2nd May, 1873, has been given by the Secretary-at-War to other members of Parliament, who have kindly interested themselves in the welfare of the medical officers, with the view of having the clauses of this most objectionable Warrant cancelled." Thus, sir, through the instrumentality of the head and representative of our profession in the army, has our real condition been misrepresented to those who have the will as well as the power to assist us out of the present grave difficulties, in which our department now finds itself, under his supervision and directorship.—I am, etc.,

P. M. O.

GRATUITOUS DEATH CERTIFICATES.

SIR,—I believe the Scottish Act for extorting and enforcing Gratuitous Death Certificates was passed before the medical men of Scotland well knew what they were about. This English Bill nearly escaped being challenged ; in fact, it did escape in the House of Lords, and looked very like creeping through the House of Commons, but the Government, bent upon injuring medical interests, will have to say something in excuse, and for a government to excuse itself for an injustice does not partake of much dignity of action. The Government may say, only registered practitioners can hold public appointments, or sue for fees. I think they cannot but admit the public propriety of such a provision, considering they demand that a man shall have spent much money and time, etc., in getting a degree, so that he may be registered. Decency, now a days, would forbid an uneducated charlatan to fill a public appointment. Indeed, had no Act of Parliament been passed, rules for filling public appointments would have been so framed, that none but a man with a degree should fill an appointment. As for the miserable alternative of suing for fees, etc., being a government privilege, medical men will be more willing to leave it in abeyance than to take advantage of it. As for the profession enjoying a monopoly, what about patent medicines, quacks, and bone-setters, not assuming titles? Registrars should be forbidden to sell copies of Medical Death Certificates. The granter of the original certificate should have the privilege of selling copies to burial-clubs, etc. By the way, I believe there is an Act of Parliament forbidding medical men to charge more than a shilling for such certificates. You see we allow Acts of Parliament to pass adverse to professional interests, but as the Government puts it, for "the good of the State."—I am, etc.,

WM. REEVES.

FEMALE MEDICAL EDUCATION.

SIR,—I advocate the rights of women, both with respect to academic degrees and the practice of the learned professions. Female animals, whether wild or domesticated, are fully equal to males, physically, mentally, and morally, in numerous instances ; for example, the bear, the tiger, the dog, the cat, and the horse. The mind of the female is differently constituted from that of the male, but difference is not inferiority.

I trust that women will soon have a fair field and no favour shown them by our Universities ; and I doubt not that the graduation-lists will speedily be augmented by female names.

Respecting the practice of medicine, it appears to be desirable that certain women should devote themselves to this profession for the benefit of millions of their own sex. Future generations will think it incredible that society, at the present day, should discourage so laudable an undertaking. As to difficulties attendant on the acquisition of medical knowledge, these arise partly from our resistance to the movement, and

partly from the attempt, on the side of certain ladies, to carry out mixed education. Either we must have ladies' colleges, or we must have certain classes taught separately. Ladies ought to be instructed in hospitals for women and children, or in the female wards of general hospitals. The diseases of males could be taught in children's hospitals, and in children's wards of general hospitals. There is no doubt that in England ladies will practise amongst women and children, and will neither shock themselves nor adult males by unseemly examinations or operations.

I call upon my male professional brethren to extend a helping hand towards our female brethren, and I should feel pleased to see an invitation to become a member of the British Medical Association sent to Dr. Garrett-Anderson, at the annual meeting that will shortly take place.—I am, etc.,

FREDERICK J. BROWN, M.D.

Rochester, June 7th, 1873.

* * Mrs. Garrett-Anderson was unanimously elected a member of the British Medical Association, and of the Metropolitan Counties Branch, at a meeting of the Branch Council, on February 28th. Her nomination paper was signed by Dr. R. Barnes, Dr. Charlton Bastian, Dr. Billing, Dr. Andrew Clark, Mr. Critchett, Dr. Murchison, Sir James Paget, Dr. Priestley, Dr. Tyler Smith, and Dr. A. P. Stewart.

MEDICAL NEWS.

THE TESTIMONIAL TO DR. DRUITT,

LATE EDITOR OF "THE MEDICAL TIMES AND GAZETTE".

AT a meeting of the General Committee held June 7th—Sir William Fergusson in the chair—the proceedings in respect to this fund were brought to an end. It will be remembered that the subscription was opened in order to testify the sense of the community of the public services rendered by Dr. Druitt during a series of years as a medical journalist, and in sympathy with the circumstances of his premature retirement from active work under the stroke of a severe illness. At the first meeting, held last year appropriate resolutions were passed, and a Subcommittee was appointed to carry them out. The Subcommittee now reported that one hundred and seven well known members of the profession had joined the Committee, and that a sum of £1,284 had been subscribed. Of this sum, £45 : 17 had been expended in the purchase of a suitably inscribed silver cup, to be presented to Dr. Druitt; and there were £1,215 in hand, the balance of £23 : 16 : 11 representing the total expenses of printing, postage, etc. It was resolved at this meeting to place a cheque for the amount thus in hand to the credit of the account of Dr. Druitt, who is now in India. A letter was read from Dr. Druitt, expressing a grateful sense of the kindness of his friends, and his satisfaction at being thought in any measure worthy of it. Votes of thanks were passed to the Chairman, Treasurer (Mr. Walton), and Honorary Secretary of the Fund (Mr. A. T. Norton).

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 5th, 1873.

Davis, Harry, Callington, Cornwall
Pain, Tertius d'Oyly, Middlesborough, Yorkshire
West, Rowland Hill, Chippenham, Wilts

The following gentleman also on the same day passed his primary professional examination.

Potter, Henry Percy, St. Thomas's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BECKETT INFIRMARY, Barnsley—House-Surgeon: £140 per annum, furnished rooms, etc.
BELLINGHAM UNION, Northumberland—Medical Officer for District No. 4: £12 per annum.
BETHNAL GREEN, Parish of—Medical Officer to the Schools at Leytonstone: £100 per annum.
BLOOMSBURY DISPENSARY, Great Russell Street—Resident Medical Officer.
BRIDGWATER RURAL and URBAN SANITARY DISTRICTS—Medical Officer of Health: £150 per annum, and private practice.
BRISTOL HOSPITAL FOR SICK CHILDREN—House-Surgeon.
BUCKINGHAMSHIRE—Public Analyst. Applications to Acton Tindal, Esq., Aylesbury.
BUCKS COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £80 first year, £100 per annum afterwards, board, and furnished apartments. Applications to Acton Tindal, Esq., Aylesbury.
CAISTOR RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.
CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY—House-Surgeon: £100 per annum, residence, attendance, coals, and gas.

- COUNTY OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodging, coal, and candles.
DERBYSHIRE GENERAL INFIRMARY—Assistant House-Surgeon. Applications to Samuel Whitaker, Esq., 4, Victoria Street, Derby.
DRIFIELD UNION, Yorkshire—Medical Officer for the Wetwang District: £21 per annum, and fees.
HARRIS—Parochial Medical Officer. Applications to John Cunningham, Esq., Rodel, Harris, by Stornoway.
H.M.'s INDIAN MEDICAL SERVICE—Eleven Surgeons.
HOSPITAL FOR WOMEN, Soho Square—Assistant-Physician.
KANTURK UNION, co. Cork—Apothecary to the Newmarket Dispensary: £40 per annum. Applications to George Smith, Esq., Newmarket.
KEIGHLEY Rural, and Bingley, Haworth, Oakworth, and Oxenhope Urban, Sanitary Districts, combined—Medical Officer of Health: £200 for one year. Applications to George Spencer, Esq., Keighley.
LEEDS GENERAL INFIRMARY—House-Physician: £100 per annum, board, furnished apartments, and washing.
LIMERICK UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clarina Dispensary District: £100 per annum, and fees. Applications to Jeremiah O'Grady, Esq., Ballybrunogue, Patrick's Well.
LISMORE UNION, co. Waterford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cappoquin Dispensary District: £100 per annum, and fees.
MERIDEN, Rugby, Solihull, and Warwick Rural, and Lillington, Milverton, Rugby, and Warwick Urban Sanitary Districts, combined: £800 per annum. Applications to H. Consett Passman, Esq., Leamington.
NEWBURY UNION, Berks—Medical Officer for District No. 1: £170 per annum, and fees.
ROSS RURAL SANITARY DISTRICT—Medical Officer of Health: £60 p. ann.
ROTHERHAM HOSPITAL AND DISPENSARY—Resident House-Surgeon: £120 per annum, board, and furnished apartments.
ROYAL FREE HOSPITAL, Gray's Inn Road—Junior House-Surgeon.
ROYAL UNITED HOSPITAL, Bath—House-Surgeon: £60 per annum, board, and residence.
ST. GEORGE'S HOSPITAL—Assistant Dispenser: £100 per annum.
ST. GEORGE'S URBAN SANITARY DISTRICT, Bristol—Medical Officer of Health: £50 per annum.
ST. GEORGE DISPENSARY, Mount Street—Resident Medical Officer: £170 per annum, and residence.
ST. GEORGE and ST. JAMES DISPENSARY, King Street, Regent Street—Accoucheur.
ST. MARYLEBONE—Medical Officer for the All Souls and Cavendish Districts: £120 per annum.
ST. PANCRAZ—Dispenser at the Workhouse and King's Road Dispensary.
ST. THOMAS'S HOSPITAL—Demonstrator of Anatomy.
SHEFFIELD GENERAL INFIRMARY—House-Surgeon: £140 per annum, board, lodging, and washing.
STOCKTON UNION—Medical Officer for the Norton District: £50 per annum, and fees.
STRAND UNION—Dispenser: £78 per annum. Applications to John Jeffrey, Esq., 6, Bow Street.
SURREY DISPENSARY, Great Dover Street—House-Surgeon: £100 per annum, furnished apartments, and coal. Applications to R. G. Minshall Jones, Esq., 190, Tooley Street.
SUSSEX—Public Analyst. Applications to W. J. K. Langridge, Lewes.
TORMOHAM AND ST. MARY-CHURCH LOCAL BOARD—Medical Officer of Health: £400 per annum.
TRAINING HOSPITAL, Tottenham—Physician.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- BLAKE, J. Ffrench, Esq., appointed House-Physician to the Charing Cross Hospital, *vice* A. W. Orwin, Esq., whose term of office had expired.
CAUTLIE, James, Esq., appointed House-Surgeon to the Charing Cross Hospital, *vice* P. W. Delamotte, Esq., appointed Resident Accoucheur.
*DAVY, Richard, Esq., appointed Lecturer on Anatomy at the Westminster Hospital, *vice* G. Legge Pearce, Esq., resigned.
DELAMOTTE, Peter W., Esq., appointed Resident Accoucheur to the Charing Cross Hospital, *vice* J. Ffrench Blake, Esq., appointed House-Physician.
GODFRAY, Amiraux, Esq., appointed Ophthalmic House-Surgeon to the Royal Westminster Ophthalmic Hospital, Charing Cross.
LAIRD, John, L.K.Q.C.P.I. (late Resident Surgeon to the Bootle Hospital and Dispensary, Liverpool), appointed Medical Officer to Sligo Dispensary District, in the room of R. K. Lynn, M.B., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

- STEELE.—On June 10th, at Clifton Villa, Clifton, the wife of *Charles Steele, Esq., Surgeon, of a son.

MARRIAGES.

- DOUGLASS—NEWTON. At the Parish Church of Lanchester, on June 4th, by the Rev. Moorhouse Thompson, M.A., uncle of the bride, assisted by the Rev. W. Douglass, B.A., brother of the bridegroom, and the Rev. J. Dingle, M.A., Vicar of the Parish, *George Douglass, M.D., to Susanna Ruth, eldest daughter of Joseph Newton, Esq., both of Gateshead. No cards.
HART—BUTLER.—On June 10th, at the Parish Church, Widford, by the Rev. Canon Butler, Vicar of Penrith, uncle to the bride, assisted by the Rev. William Buswell, Rector, *Walter HART, Surgeon, of Great Baddow, Essex, to Mary Frances, fourth daughter of William Slatter BUTLER, Esq., of Widford, Chelmsford, Essex.

DEATH.

- NICHOLSON, John, Esq., Surgeon, at Sheffield, aged 75, on June 3rd.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Medical Microscopical Society, 8 P.M. Mr. Jabez Hogg, "On the Pathological Relations of Diphtheria and Croup."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. KENT JONES (Beaumaris).—It is promised in about a week.

MR. LAWSON TAIT.—Duly received.

INTERNAL USE OF PHOSPHORUS.

SIR,—Will any of your readers who have prescribed the phosphorus pearls mentioned by Dr. Broadbent, be so good as to inform me if they have observed any peculiar appearance in the stools of their patients? A patient of mine has improved greatly while taking these phosphorus pearls; but his stools are of the colour of boiled asparagus, and very offensive. I am, etc., O. P.

AN EXPLANATION OF THE SCANDALOUS AND LIBELLOUS ALLEGATIONS IN DOCUMENTS CIRCULATED RELATIVE TO DR. FORBES WINSLOW.

SIR,—After some hesitation, I have come to the conclusion that I cannot allow the scandalous and libellous printed documents which have recently been circulated, with the evident intention of injuring and annoying me, to pass wholly unnoticed. The subject is, however, so peculiar and delicate, that I find much difficulty in making the matter intelligible without going into further details of a strictly private character, and this I certainly shall not at present be induced to do. I must, consequently, content myself with saying that the husband of the lady whose name is most unjustifiably made use of in the documents is, and always has been, a perfect stranger to me. I have never even seen him, nor have I ever written to, or received any letter from him.

Nearly twelve years ago, I was requested to see professionally the lady who had then recently left her husband's house, and was residing with her mother. She was suffering from an attack of acute melancholia. She remained under my care for about a year and a half, when she recovered. During the lengthened time she was under my treatment, and for many years after I had ceased to attend her, my mouth was hermetically sealed, except to her own mother, as to the nature of her illness, as well as to the sad domestic circumstances which surrounded the case.

After the lapse of six or seven years, I was spoken to by the mother of the lady relative to some proceedings which, I was informed, were contemplated in the Divorce Court, but I did not see the lady to whom I have before referred on that subject. My communications were solely with her mother and her solicitor. I had nothing to do with these intended proceedings, beyond explaining the evidence I could give if called as a witness.

I heard nothing further on the subject until, some years afterwards, I was unfortunately asked to meet, at the house of a medical friend, a widow lady, the sister of the husband to whom I have referred. In the drawing-room of the physician at whose house I had been dining, this lady, in the presence of a number of strangers, addressed me in a most offensive manner in reference to the cause of her brother and his wife not living together, and, by her remarks and manner, appeared to imply that I had interfered in the matter, and was the cause of the separation. This I indignantly denied; but the lady, not being satisfied with my emphatic repudiation of the charge, repeated with warmth her remarks, and asked me why the wife did not return to her husband. Feeling intensely irritated at being so unjustly and offensively attacked in a private room, I said, "if you want to know the reason, don't ask me, ask the wife herself"; and I then (what I immediately afterwards regretted) alluded to the nature of the case which the mother told me was proposed to be set up in the Divorce Court.

I heard nothing more of the matter for nearly a year. I then received an applica-

tion from a solicitor on behalf of the husband, asking me to apologise for observations I was said to have made in reference to himself. I replied that the charge was false, and that I had nothing to apologise for. I subsequently referred him to my solicitor, and an action for alleged slander was commenced against me.

In that action, my solicitor obtained an order upon summons for particulars of the persons to whom it was alleged that I had defamed the plaintiff. Particulars were delivered, with the names of two well known members of the medical profession, who, upon being applied to by myself as well as by the plaintiff's solicitor, denied that I had ever made the slightest reference to the subject to them, thus showing that their names had been very unwarrantably introduced into the case.

The plaintiff in the action, instead of taking the matter before a jury, in which case he would have had to prove his complaints by evidence, thought it right to have the validity of the pleadings first discussed before the judges *in banco*. Upon that discussion, judgment was given in my favour upon two of the three counts of the plaintiff's declaration; and, as respects the third count, the judges held that, *if established by evidence*, the plaintiff would be entitled to recover damages.

A few days after this decision, and without any further communication with me or my solicitors, the plaintiff voluntarily and formally discontinued his action, and submitted to pay the costs of it, which costs were subsequently taxed, and the action thus ended. This was in May 1872. I heard nothing further of the matter until the month of May 1873, when the scandalous documents to which I have referred were, in disregard of all propriety and decency, circulated not only amongst the medical profession, but to others.

I do not desire to dwell upon this extraordinary proceeding; nor do I, for the reasons to which I have referred, think it right to be drawn into further details upon such a delicate and painful subject. I content myself with the undoubted fact that I was fully prepared to defend the action referred to, but was precluded from doing so before a jury by the discontinuance, on the part of the plaintiff, of the suit, without my consent being asked or obtained.

Cavendish Square, June 10th.

I am, etc., FORBES WINSLOW, M.D.

CERTIFICATES OF DEATH.

WILL you, in your next issue, kindly answer the following:—"Is a medical man *compelled by law* to give a certificate of death of a patient upon whom he has been attending previous to such event?"—S.

* * Not in England, unless specially requested to do so by the registrar within eight days after such death; when so requested, it is a misdemeanour to refuse.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, June 7th; The Manchester Guardian, June 11th; The Aberdeen Daily Free Press, June 7th; The Bath Express, June 7th; The Birmingham Daily Post, June 11th; The Melbourne Argus; The Roscommon Journal; The Yorkshire Post and Leeds Intelligencer; The Herts and Essex Observer; The Birmingham Daily Mail; The Sussex Daily News; The Kendal Mercury; The Hull Packet; The City Press; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

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LECTURES ON THE VARIETIES IN THE MUSCLES OF MAN.

Delivered at the Royal College of Surgeons of England.

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LECTURE I.—Monday, June 2nd, 1873.—(Concluded.)

MUSCLES OF THE THORAX.

THE rectus abdominis varies a little in the number and site of its inscriptions and in the range of its attachment to the pubes. The most remarkable varieties, however, associated with it, are the occasional recurrence in the thoracic part of the trunk of two muscles longitudinally disposed and situated, the one on the superficial aspect of the pectoral muscles, and the other beneath them, and lying close upon the ribs. They are interesting reminders of the primitive disposition of the sheets of the ventral muscle at this part, and as such deserve a more particular notice. The names which I would apply to them are "rectus thoracicus superficialis," and "rectus thoracicus profundus."

The former has usually been designated "sternalis." It was found by Professor Turner in about three per cent. of subjects examined; by Professor Gruber in five out of 95.* The following description, taken from a specimen in the Cambridge dissecting-room, gives a good idea of the muscle as it most commonly presents itself. The subject was a well developed muscular male. A flat, nearly vertical muscular band, about an inch wide, overlaid the costal cartilages on the right of the sternum. Below, it was attached, tendinous, to the third, fourth, and fifth costal cartilages; the tendon to the third cartilage being concealed beneath the muscle. Above, it became aponeurotic. Externally it radiated upon the pectoral muscle,† and internally it was partially attached to the middle of the manubrium, and was partially continuous with the mesial tendon of the right sterno-mastoid. The pectoralis muscle extended beneath it in the intercostal spaces, reaching, in these spaces, to the sternum; but on the costal cartilages the fibres of the pectoral stopped near the outer margin of the rectus thoracicus superficialis. Thus the range of the pectoral on this side was curtailed to some extent by the presence of the abnormal muscle. In the instance I am describing, the abnormality was confined to the right side. It has been met with, however, on either and on both sides. In some instances, it was a mere delicate slip, placed more superficially with regard to the pectoral. In some, it extended upon and was lost in the aponeurosis of the external oblique; in one instance, blending with that aponeurosis over one of the inscriptions in the rectus; but it was usually attached to the cartilages of one or more ribs below, and to the sternum. Above, it was usually attached to a costal cartilage, or it was partially or wholly continuous with the tendon of the sterno-mastoid. In some instances, it crossed the sternum to the opposite side. It has been found marked with inscriptions like those in the rectus abdominis; but it has not in any instance been distinctly traced into continuity with the fibres of that muscle. It has been divided longitudinally into two or three muscles, though usually it was undivided. The pectoral muscle was commonly curtailed more or less, as in the example I have given above. In one of Turner's cases, the pectoral muscle was perforated by the sternalis on its way from the costal cartilage to the surface; and in two cases some of the fibres of the abnormal muscle joined the pectoral near its sternal origin. Though situated laterally with regard to the sternum at its lower part, it, in most instances, inclined inwards upon the surface of the bone as it ascended. One of the interesting features of the rectus thoracicus superficialis is its variability, scarcely any two recorded specimens being alike; and, secondly, it does not correspond with any regularly developed muscle in lower animals.

With regard to its morphology, three views present themselves, and have found their advocates. First, that it is to be regarded as an extension of the rectus abdominis upwards. Secondly, that it is an extension of the sterno-mastoid downwards. Thirdly, that it belongs to the superficial or platysma series. Of these, the second hypothesis is, I think, the

most nearly correct. With regard to the first of these views, the rectus abdominis lies in a deeper plane; and when it is continued upon the thorax, in the lower animals or in Man, it lies beneath the pectoralis major, and forms what I designate the rectus thoracicus profundus.

With regard to third view, the platysma, or subcutaneous layer, is in a more superficial plane than the muscle in question. It is lost in the skin, and is not, even in this region, so far as I know, connected with the sternum or costal cartilages, with the aponeurosis of the oblique, or with the tendon of the sterno-mastoid.*

There is, I think, little doubt that the muscle belongs to a plane intermediate between that of the platysma and the rectus abdominis, and is a part or representative of the longitudinal fibres of what I have elsewhere described† as the superficial brachiocephalic layer of the ventro-lateral muscle, of that layer in which the external oblique, the pectoralis, the trapezius, and the sterno-cleido-mastoid are formed. In the primitive state, as in the *Lepidosiren* and the Snake, the layer is continued inwards, without interruption by a pectoralis, from the abdomen, where it forms a superficial stratum of the rectus, over the thorax into the sterno-mastoid and the trapezius. The pectoralis major of higher animals is formed by the diversion to the upper limb of the thoracic, or sternal, part of this stratum; and thus the direct connection or continuity between the sterno-mastoid and the superficial layers of the rectus, or their representative—the external oblique—is severed. The struggling efforts however, as it were, at the formation of this continuity occasionally assert themselves, and lead to the formation of the muscle in question. Being, therefore, an extension upon the thorax of that which, in the primitive condition, constitutes a superficial sheet of the rectus abdominis, but which in higher animals is converted into the aponeurosis of the external oblique, its true character and morphology are best expressed by the name "rectus thoracicus superficialis"; and it is thereby distinguished from, and its relations are shown to, the "rectus thoracicus profundus", which is an extension of the deeper layers of the rectus, that is, of those layers which form the rectus abdominis of mammals.

The not unfrequent appearance of the rectus thoracicus superficialis in Man may, perhaps, be associated with the space or vacancy afforded by the flatness or insinking of the front of his chest in this situation, which affords an opportunity for the development of these muscular fibres. This peculiarity of form, though less evident in the fetal state, may, even then, be so far a feature in the conformation of the human figure as to induce the occurrence of the anomaly in question.

I have already alluded to the extension of the rectus upon the thorax beneath the pectoral muscles forming the "rectus thoracicus" proper or "profundus." This muscle is commonly present in the lower animals, reaching as far as the first rib, but is rare in Man. Indeed, I have not met with a recorded instance which is distinctly of that nature. Muscles, however, are not unfrequently met with in Man, which may be regarded as portions of the deep rectus series, although they are not continuous with the rectus abdominis, and although they are situated somewhat more laterally than it. Such is the muscle, described as "rectus thoracis" by Wood and Turner,‡ extending beneath the pectoralis minor, from the fifth and fourth ribs to the first rib, where it was inserted a little external to the attachment of the subclavius. It was separated from the rectus only by the breadth of the fifth rib, which, as Professor Turner remarks, is comparable with one of the tendinous intersections in the rectus. Such also is the "supracostalis" muscle of Wood and others, which has been observed passing from ribs below the first to the first, and in some instances, extending to the cervical fascia, so coming into contact with or blending with the sterno-thyroid. Such again are those extensions of the scaleni, or of muscles arising immediately in front of them from the cervical transverse processes, which are sometimes found in man and are frequent in animals, and pass down to variable distances upon the ribs.§ It will thus be seen that these several muscles—the *rectus thoracicus profundus*, the *supracostalis*, or *costo-fascialis*, as it has been also called, and the extensions of the *scaleni*—form a series of connecting links between the rectus abdominis, below, and the deep cervical muscles—the sterno-thyroid, the omo-hyoid, and the scaleni—above; while the *rectus thoracicus superficialis* is a connecting link between the elements of the more superficial abdominal stratum—the external oblique which is developed from the superficial elements of the rectus—below, and the superficial cervical muscles, as represented by the sterno-cleido-mastoid, above.

* Such a connection of the platysma with the costal cartilage is, however, indicated as having been seen by Teichmann.—*Henle*, 108.

† *Observations in Myology*, p. 132.

‡ *Journal of Anatomy*, ii, 392; and iv, 300. See also *Guy's Hospital Reports*, xiv, 439; and Bochkalek, *Virchow's Archiv*, 1867.

§ These are sometimes described as muscles arising from the ribs and joining the scaleni.

* *Mem. de l'Acad. Imp. de St. Petersburg*, l. iii, 1860.

† In two of Turner's cases (*Journal of Anatomy*, i, 247), the outer fibres ended superficially in the upper part of the pectoral aponeurosis.

MUSCLES OF THE NECK.

In the antero-lateral region of the neck the muscles are disposed in three layers, viz., a subcutaneous—pannicular, or platysma—layer, a superficial brachiocephalic—sterno-cleido-mastoid and trapezius—layer, and a deep brachiocephalic—sterno-hyoid, sterno-thyroid, and omo-hyoid—layer. These three layers are the produce of stratification from a single primitive sheet which, in some of the lower animals, as the limbless vertebrates, still remains, to a great extent, a single stratum, and retains its direct continuity with the abdominal part of the ventral muscle. The peculiarities of the digastric muscle, I have elsewhere* shown, are in a great measure due to the continued blending of parts of two of these layers, the posterior belly being derived from the deep layer, the anterior belly from the superficial layer, and the intermediate tendon being a remnant of one of the transverse septa of the primitive unstratified ventral muscle. I will now endeavour to show that the greater number of the muscular varieties of this region in Man are due to imperfect separation of these layers, or to imperfect limitation of the segments or muscles which are formed from them respectively.

The pannicular layer of muscle which varies so much in range and disposition in the lower animals is not subject to frequent varieties in Man. It is in him usually limited to the cervical region; though instances of its development in the back in the form of longitudinal slips overlying the trapezius have been met with.† It has also been found extending upon the sternum and connected with the sternal fascial opposite the third costal cartilage; and in one instance a band of it stretched from the sternal fascia, between the second and third ribs, obliquely downwards and outwards, to near the tendon of the latissimus dorsi.‡ Fibres also have occasionally extended transversely from over the trapezius to the parotid fascia, and from the mastoid process and the parotid fascia beneath the chin to the middle line, where they met and blended with similar fibres from the opposite side.§ Thus they formed a muscle which resembled the cervicis submaxillaris and the transversus colli of some Saurians and Snakes.

Occasional remnants, indicative of imperfect segmentation from the subjacent strata, are furnished by slips passing from the platysma to the sterno-mastoid and the sterno-thyroid.

Curious and interesting illustrations of a transverse direction of fibres associated with a blending of the subcutaneous with the deep strata are presented by the three instances of the occipito-hyoid, described by Mr. Perrin.|| The muscle passed from the occiput superficial to the trapezius, across the outer surface of the sterno-mastoid, and dipping inwards, was connected with the great cornu of the hyoid bone in one, with the same cornu and with the body of the hyoid, passing between the hyo-glossus and the middle constrictor of the pharynx, in a second, and with the body of the hyoid in a third. Such a muscle would perform the same office as the stylo-hyoid; and in the third example given that muscle was absent. In the other two examples, however, the stylo-hyoid, as well as the posterior belly of the digastric, was as usual. These occipito-hyoids, as pointed out by Mr. Perrin, much resemble the stylo-hyoid in the bird. This muscle I find in the peacock, arising from the outer side of the angle of the mandible, and passing to the hyoid and the muscles running forward from the hyoid to the tongue. It also, in this animal, receives a slip, which arises from the base of the skull, and takes its course by the inner side of the angle of the jaw, and which therefore occupies much the usual position of the mammalian stylo-hyoid. The blending of these two superficial and deep elements into the one muscle in the bird, is a feature of interest in connection with the anomalous muscle which we are considering, and shows that it may be regarded as an appendage, a superficial appendage, to the stylo-hyoid and the digastric. To this I will recur.

Among the components of what I designate the superficial brachiocephalic layer of the neck, the sterno-cleido-mastoid is sometimes imperfectly segmented from the trapezius, the continuity being maintained by one or more remaining connecting slips, which pass from the one to the other;¶ or a separate band, a cleido-occipital, segmented from between them, may pass from near the middle of the clavicle to the occiput. The muscle, thus named by Wood, is of frequent occurrence, is sometimes connected by slips with the sterno-cleido-mastoid, and is com-

monly more closely related to it than to the trapezius, being thus, I think, to be distinguished from the cephalo- and cervico-humeral slips, also of frequent occurrence, and which are more closely related to the trapezius. I may here observe, that the regular fibres of the sterno-cleido-mastoid, which arise from the clavicle, cross obliquely beneath the sternal fibres and pass to an anterior and deeper part of the mastoid process; but the fibres of the segmented, or non-combined portion, which form the cleido-occipital, instead of taking this course, are inserted behind, and in the same plane with, the sternal fibres, between them and the trapezius. We shall find that a similar disposition to connect themselves with the superficial layers of the respective muscles often holds good in the case of the supplementary fibres, frequently present in connection with the lower edges of the pectoralis major and the latissimus dorsi, although, normally, the lower fibres of these muscles form their deeper layers.

The imperfect limitation of the sterno-cleido-mastoid is further illustrated by instances in which bands have been found passing from it to the mandible and to the platysma, as well as by those, already alluded to, which it extended upon the sternum, in continuity with the rectus thoracicus superficialis.

Macalister* notes an absence of the sternal head. The clavicular portion is sometimes divided into two; but varieties in this muscle, which has important and defined functions not shared by any other muscle and not differing much in different animals, are not very frequent, or of a marked kind.

I have on former occasions† shown that the anterior belly of the digastric is a derivative from the superficial stratum of the brachiocephalic part of the ventral muscle, and that the disposition of the muscles in this submental or submaxillary region varies a good deal in different animals. In some lower animals more particularly, as *Lepidosiren*, *Ceratodus*, Snakes, and many Saurians, the stratum is composed chiefly of transverse fibres passing from the spine, the sides of the head, and the sides of the mandible, meeting or blending in the middle line, and forming the muscles designated in different animals and by different authors as subcutaneous colli, cervicis submaxillaris, compressor faucium, etc. Of these, the mylo-hyoid is the most distinct representative in Man. In some mammals, the fibres of the mesial part of the stratum take a longitudinal direction, and, passing from the sternum to the chin, form a sterno-mental;‡ or it may, as in the Hippopotamus,§ be broken by connexion with the hyoid, in front of which it forms a hyo-mental muscle; whereas behind the hyoid it seems partly to be blended with the sterno-hyoid, and partly with the thick transversely fibred subcutaneous colli. Of these longitudinal muscles—of the hyo-mental part, at least—the anterior belly of the digastric is the representative in Man; and the frequent and numerous varieties to which it is subject in him are interesting reminders of the instability of the muscles of this region, and of the different combinations which the fibres of this part of the stratum undergo in different animals. I have not met with an example of the absence of the anterior belly of the digastric; indeed, its variations are on the side of excess, rather than of deficiency. It is often—in 7 or 8 per cent. of subjects examined—double, or furnished with additional slips. These, or the additional belly, may take a more or less transverse direction, after the manner of the transversely disposed fibres in lower animals. Thus they may pass outwardly to the mandible near its angle, or to any point between the angle and the chin—so constituting, in some instances, simply a wider insertion of the muscle; or it may be a slip passing from the angle of the jaw to the muscle; or the additional portion may pass inwardly, blending with a similar slip or belly from the opposite side, or meeting it in a *raphé* in the middle line, or decussating with it, and inserted into the opposite side of the mandible; or there may be a slip passing from the muscle of one side across the middle line to that of the other side. In one instance, the two anterior bellies simply decussated, each being inserted in the usual site, but on the opposite side from that in which it sprang.|| Again, the anterior belly, or the additional belly or slip, may be imperfectly segmented from—that is, may remain blended with—the mylo-hyoid. On the other hand, the additional portion may take a longitudinal direction, and represent, more distinctly than the regular anterior belly does, the hyo-mental or the fore part of the sterno-mental of the Hippopotamus or the Chlamydophorus. Thus a muscle has been

* *Observations on Myology*, p. 136.

† Turner and Perrin, *Journal of Anatomy*, v, 116 and 241.

‡ Wood, *Proceedings of the Royal Society*, 1866, p. 229; and 1867, p. 522.

§ It was named "accessorius menti" by Kelch, who met with two instances; and is also described by Wood, *Proceedings of the Royal Society*, 1867, p. 522.

|| *Journal of Anatomy*, v, 251. One of these was two-bellied—that is, judging from the drawing, was interrupted over the sterno-mastoid by a fibrous interval. I have seen a similar, though less distinct, interruption in the trachelo-mastoid, where it lay over the transverse process of the atlas. Such intersections in muscles, when they lie upon other muscles or bones, are for the purpose of diminishing their bulk at those parts, and are not uncommon.

¶ In one instance (*Guy's Hospital Reports*, xiv), such a band passed from the sternal portion across, behind the clavicular origin, to the trapezius.

* *Proceedings of the Royal Irish Academy*, April 23rd, 1866.

† See my *Observations on Myology*, p. 136.

‡ *Observations on Myology*, 137.

§ This muscle is well developed in the little Chlamydophorus, passing clear over the hyoid and quite unconnected with it. The "sterno-fascialis", found by Gruber (*Mélanges Biologiques*, 1872, viii, 564), arising, in a man, from the sternum behind the right sterno-mastoid and losing itself in the fascia beneath the hyoid, is probably a representative of this muscle.

|| It is an interesting fact in connection with this muscle, that it decussates and blends with that of the opposite side more often than any other in the body.

found on each side passing from the jaw near the middle line to the surface of the hyoid near the stylo-hyoid.* It is no uncommon thing, for instance, as found this winter in a subject in the dissecting-room at Cambridge, for the tendon of the digastric to be continued from its connexion with the hyoid across the middle line, to be united with a similar tendon from the opposite muscle, and to give off from the anterior surface of this tendon muscular fibres which run forwards to the mental part of the jaw. These fibres filled up the angle which usually exists between the two digastrics. A disposition similar to this is described in the Norway Rat by Wood; and it exists in some other animals. Hallett found a third belly on each side, commencing at the anterior part of the tendon of reflection, and united with that of the opposite side in the median line. Branches of the mylo-hyoid nerve were traced into it. Macalister found the anterior belly in one instance inseparably united with the mylo-hyoid, and in another sending a slip to the fascia under the chin. It is remarked by Hallett, that an increased size of the digastric sometimes replaces the mylo-hyoid.

All these anomalous arrangements and additions to the anterior belly of the digastric are corroborative of the view which I have taken of the morphology of this part of the muscle, and are in accordance with the varied disposition of the fibres of the superficial layer of the brachio-cephalic stratum in the submaxillary region. A continuation of the muscle backwards in the same superficial stratum would seem to be suggested by the occipito-hyoid of Perrin. Indeed, it is evident from the disposition of the corresponding muscle in the Peacock, that the stylo-hyoid and hinder belly of the digastric, regarding them as one, consists, in its entirety, of a superficial and a deep element. Of these, the former predominates in the Bird, but is absent in Man, except in the occasional anomalous instances in which it appears as an occipito-hyoid, and puts in a claim to recognition.

The hinder belly of the digastric and the stylo-hyoid bring us to the deeper stratum of the brachio-cephalic extension of the ventral muscle, which reaches forwards from the sternum to the skull. These two muscles are evidently two segments of an anterior part of that muscle, and they are marked off from the post-hyoidean portion (sterno-hyoid) of the stratum by the hyoid bone and the other remnants of the transverse intermuscular hyoidean septum; just as the anterior belly of the digastric is a segment of the superficial stratum, and terminates posteriorly in the same septum, which thus forms the uniting tendon between the two bellies. I observed in my lectures last year, that the purpose served by this connexion of the anterior belly of the digastric, or chief depressor of the jaw, with the posterior belly, or chief elevator of the hyoid, is to keep the hyoid and base of the tongue fixed during the opening of the mouth and the movements of the jaw in mastication.

The stylo-hyoid may, therefore, be regarded as the one of the two which retains more the primitive form; and the reflection of the posterior belly of the digastric into the superficial hyo-mental muscle which forms the anterior belly, may be regarded as the modification destined to serve a particular purpose. Yet—and it affords an illustration of the principle that utility dominates over other influences in the evolution of muscle—we find that the hinder belly of the digastric varies little and seldom; whereas many varieties of the stylo-hyoid have been described, and they are not unfrequent.† This muscle, indeed, seems to be almost supererogatory. Accordingly, it is not unfrequently absent on one or both sides. In some cases, it has been partly or wholly merged in the digastric. In some, it has been split in two, both parts passing to the hyoid; or one part to the hyoid, and one to the digastric; or one part to the posterior, and the other to the anterior, belly of the digastric.‡ In one interesting example,§ it showed a retention of the primitive form by passing the hyoid, and being connected by fascia with a supernumerary portion of the omo-hyoid. It has been found passing in front, and in other instances behind, the digastric; and in one instance a slip was inserted into the front, and in a second a slip was inserted into the back, of the digastric tendon. In several instances, a second stylo-hyoid has been met with, inserted into the great or the lesser cornu of the hyoid, sometimes replacing the stylo-hyoid ligament, or connected with the muscles in front of the hyoid.|| Gruber¶ found three stylo-hyoids arising and taking their

course separately. In a few instances, the additional muscle has taken the form of a stylo-maxillary muscle, passing alongside, or in the place of, the stylo-maxillary ligament; and Bradley* found a muscle passing from the styloid process to the back of the interarticular cartilage of the temporo-maxillary joint. Thus it appears that, in this muscle, the varieties resulting from imperfect concentration are about as numerous as those from imperfect segmentation, and as those from imperfect development.

In the infrahyoid members of the deep brachio-cephalic stratum—the sterno-hyoid and sterno-thyroid—the occasional persistence of an inscription is a reminder of the transverse septa of the primitive ventral muscle. Other varieties are infrequent. Both muscles are occasionally connected with the corresponding muscles of the opposite side by slips passing across the middle line, and they are now and then joined to one another by connecting slips. This is, however, less frequent than the close superposition of the sterno-hyoid upon the sterno-thyroid, and the similarity and harmony of their action, might have led us to expect. They are, however, now and then, imperfectly segmented from the omo-hyoid, which is a member of the same stratum; and, like it, they occasionally present an attachment to the clavicle. This, which is more frequently the case with the sterno-hyoid, accords with the disposition of the muscles in the Scinc, and harmonises with the view that the clavicle is an ossification in one of the septa of the ventral muscle, in that septum in which the coracoid and the upper part of the sternum are developed. For the clavicle, though lying in a superficial plane to the coracoid, and partly also to the sternum, affords a ready medium for the extension of insertion and for the continuity of the muscles passing from the hyoid to both these bones. Otto† found a slip from the sterno-hyoid ranging to a greater distance, and inserted into the scapula beneath and front of the omo-hyoid. Hallett‡ gives two instances in which the sterno-hyoid was attached to near the middle of the clavicle instead of to the sternum and first rib. The same author found the sterno-thyroid double, wholly or partially, in four instances, the additional muscle being superimposed upon the other. It has also been found divided into two lateral portions, running parallel with one another. Additional instances of imperfect limitation of the sterno-thyroid have been afforded, first, by an extension of a slip from its outer edge upon the sheath of the vessels;§ secondly, by a slip uniting with one from the omo-hyoid, reaching the great cornu of the hyoid, and blending with the hyo-glossus and middle constrictor of the pharynx, thus presenting an example of continuity of the ventral and pharyngeal muscles;|| and, thirdly, by a slip passing over the hyoid to the submaxillary fascia.¶ It is interesting also to note that the division between the sterno-thyroid and the thyro-hyoid, which is imperfect in the foetus, sometimes fails altogether. In such cases, the sterno-thyroideus, missing its attachment to the thyroid, is continued bodily up to the hyoid, a specially segmented thyro-hyoideus being thus partially, or wholly, absent. (*Guy's Hospital Reports*, xvi, 150.)

The only example of absence of the sterno-hyoid, or of the sterno-thyroid, which I have seen recorded, is that of the sterno-thyroid, quoted by Macalister.

I have intimated that the division between the sterno-thyroid and the thyro-hyoid is not always complete, so that fibres of the former are sometimes continued uninterruptedly to the hyoid. I have observed in the foetus, that the line of demarcation between the two is less marked than in the adult, and I have observed the same incompleteness of segmentation in the foetus, between the sterno-thyroid and the middle constrictor of the pharynx, and indeed between some other muscles. This, probably, was an indication merely that the work of separation of the several muscles was only in progress, and that it is completed at a later period of foetal, or in extra-uterine life.

The thyro-hyoid occasionally presents a lateral sector, and more fre-

* BRITISH MEDICAL JOURNAL, 1868, p. 478.

† *Seltene Beobacht.*, s. 39. Gruber (*Mélanges Biologiques*, 1872, viii, 725) describes a cleido-hyoideus on the right side, passing from the clavicle, beneath the sterno-cleido mastoid, crossing superficially to the sterno-hyoid, and inserted near the middle of the hyoid. On the left side in the same subject was a "supraclavicularis" extending from the sternum and head of the clavicle into some of the tendinous fibres of the sterno-cleido-mastoid, and differing from other specimens of the supraclavicularis, which extended from the sternum to some part of the clavicle. Other examples of these two muscles are referred to.

‡ *Edinburgh Medical and Surgical Journal*, 1849, p. 5.

§ Such a slip has been traced across the posterior triangle of the neck to the rib. (*Guy's Hospital Reports*, xvi, 150.)

|| Wood, *Proceedings of the Royal Society*, 1868, p. 485. This anatomist also here mentions an instance in which the omo-hyoid passed between the normal origin of the sterno-thyroid and an abnormal slip to that muscle from the junction of the middle and outer thirds of the clavicle.

¶ *Guy's Hospital Reports*, xiv. Here is also mentioned an instance in which it fell short of the thyroid, being connected with the cricoid only and another, in which it was joined by a slip from the clavicle.

* *Guy's Hospital Reports*, xiv. Macalister (*Proceedings of the Royal Irish Academy*, vol. ix) describes and figures a small mento-hyoidean band, single in one subject but double in another, arising from the inferior surface of the mental ridge on the lower jaw and running backwards to be inserted into the middle of the body of the os hyoides, quite separate from the digastric. This is a good representative of the hyo-mental of the Hippopotamus. (*Observations in Myology*, p. 13.)

† See paper by Macalister on Varieties of the Styloid Muscles (*Journal of Anatomy*, v, 28).

‡ Wood, *Proceedings of the Royal Society*, 1868, p. 486.

§ Wood, *Proceedings of the Royal Society*, 1867, p. 519.

|| *Journal of Anatomy*, May and November, 1870; *Guy's Hospital Reports*, xvi, 150.

¶ Müller's *Archiv*, 1848, p. 424.

quently a median sector, on one or both sides, which constitutes the levator glandulæ thyroideæ.

The scaleni also belong to the deep brachio-cephalic stratum; and they often extend in man, as we have already seen, beyond their usual boundary upon the surface of the thorax, in the same manner as they normally do in many of the lower animals. They may thus approach the rectus thoracicus profundus, when it is present, and so form an almost continuous "rectus" series, extending from the abdomen over the chest, and reaching nearly, or including the rectus capitis, quite to the head. They are sometimes imperfectly segmented from the levator scapulæ; and the frequency of their imperfect segmentation from one another is in accordance with their parallel direction and with their usual harmonious co-operation in action. The connecting slips sometimes pass across the subclavian artery, or between the artery and the brachial plexus of nerves.

LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE VII.—THE TREATMENT OF ACUTE AND CHRONIC BRIGHT'S DISEASE.

I HAVE endeavoured to prove to you that the various forms of Bright's disease are physiological results of the excretory function of the kidney. In accordance with the now fashionable language of modern biologists, we may say that the different forms of Bright's disease are results of a physiological process of evolution, and not of new pathological creations. The kidney is one of the main channels by which effete and noxious materials are cast out of the circulation. During the process of excreting abnormal products, the tissues of the kidney—primarily the gland-cells, secondarily the blood-vessels and the connective tissue—undergo structural changes. It follows from this interpretation of the pathological changes in the kidney, that a leading principle of treatment is to lessen as much as possible the excretory work of the kidney by instructing the patient to avoid the exciting causes of his malady, by a carefully regulated diet, and by such remedial agencies as experience has proved to be beneficial.

In all cases of *acute Bright's disease*, whatever may have been the exciting cause, rest in bed and in a room of moderate uniform temperature, well ventilated, but without chilling drafts of cold air, is an essential part of the treatment. In a large proportion of cases, rest in bed, with a scanty diet and a liberal use of diluent drinks, will suffice for the cure. A convincing proof and illustration of the effect of exercise, food, and cold, upon the amount of albumen in the urine, is afforded by the fact that, in most cases of albuminuria, the urine passed after rest in bed and before breakfast contains much less albumen than that which is secreted after exercise in the open air and after an ordinary meal.

The diet may consist of milk alone, if milk do not disagree, as it does with some patients. Milk is especially suitable for children; and it serves both for meat and drink, so that no other food or liquid need be taken. It may be taken cold or tepid, from half a pint to a pint at a time. An adult will take sometimes as much as a gallon in the twenty-four hours. Children will take less, in proportion to their ages. If the cream disagree, causing heartburn, diarrhoea, headache, or other symptoms of dyspepsia, the milk may be given skimmed. One reason, amongst others, for giving the milk as a rule unskimmed—that is, with the cream—is, that constipation, which is one of the most troublesome results of an exclusively milk diet, is to some extent obviated by the cream in the unskimmed milk. The advantage of milk as a main article of diet is that, as a rule, it is easy of digestion; and that, taken freely, it supplies an abundance of liquid, which, by its diluent action, has a diuretic influence, and so favours the removal of the dropsy. There are some patients with whom, unfortunately, milk in any form, even in small quantities, so decidedly disagrees, that we have to find a substitute in beef-tea, chicken, veal, or mutton-broth, with an egg or two, and some farinaceous addition, such as barley-water, arrowroot, rice, or sago, or a small quantity of

bread. Under this regimen, adopted and rigidly carried out at the very commencement of acute Bright's disease, the urine soon becomes copious, while the albumen diminishes and gradually disappears, and the dropsy quickly passes away.

In my second lecture, I gave you the physiological explanation of the copious flow of urine which usually occurs during convalescence from acute Bright's disease, and especially when there has been a copious dropsical effusion. This abundant flow of urine usually occurs without aid from diuretic drugs, or, indeed, from drugs of any kind. Stimulating diuretics, such as squills, cantharides, or turpentine, would be injurious by increasing congestion of the kidney. The best diuretics in cases of acute Bright's disease are those means which tend to lessen congestion of the kidney; such as dry cupping or hot poultices or fomentations over the loins, warm baths, and a free use of diluent drinks, one of the pleasantest and most efficacious being the "imperial drink", made with cream of tartar and lemon.

Warm baths are particularly useful in the early stage of an acute attack, and more especially when exposure to cold has been the exciting cause of the renal disease. A warm water bath, at a temperature of 98 or 100 deg., may be given every night during the first few days of an acute attack; or a hot-air lamp-bath; or, what I believe in most cases to be still more efficacious, a wet sheet and blanket bath. A sheet is wrung out of warm water; and the patient, either naked or covered only by his shirt, is enveloped in the wet sheet up to the neck. Then three or four dry blankets are closely folded over the wet sheet. He may remain thus packed from two to four or six hours, or even longer. Recently, a boy in the hospital with acute renal disease and almost complete suppression of urine, consequent on scarlet fever, was kept packed incessantly for four days without serious discomfort, and with great relief from very distressing and alarming symptoms. When he left the hospital, all traces of his malady had disappeared. If the packing be long continued, the sheet has to be rewetted as soon as it becomes dry. The evaporation and consequent drying of the sheet will be slow in proportion to the closeness of the blanket packing. If the outer blanket be covered by a mackintosh cloth, the sheet remains wet for a much longer time than when no waterproof covering is used; but patients often complain of a feeling of oppression when surrounded by the impervious mackintosh. The advantage of the blanket-bath over a warm water or a hot air bath, is, that it requires no special apparatus, that the diaphoretic action may be more prolonged, and that in most cases it is more agreeable to the patient. The hot air bath not unfrequently causes an unpleasant throbbing in the head, or a feeling of exhaustion and even faintness. When the wet pack is removed, the patient should be quickly rubbed dry, and enveloped in dry blankets.

The diaphoretic action of any form of warm bath is assisted by copious libations of simple diluent drinks, and it may also be aided by the internal administration of the solution of acetate of ammonia. It has been objected on theoretical grounds, that to promote perspiration in these cases is injurious by diverting to the skin the water which is required to wash out the uriniferous tubes. To meet this objection, you have only to bear in mind that the dropsical patient is oppressed by an excess of water, which has been poured into the areolar tissue and the serous cavities, in consequence of defective urinary secretion resulting from the inflammatory engorgement and obstruction of the kidneys. If, therefore, by the relaxing effect of external warmth, you divert a large amount of blood to the surface, you thereby lessen the congestion of the kidney, increase the freedom of the renal circulation, and so favour the occurrence of that copious secretion of urine which is one of the surest signs of satisfactory progress, and by which the uriniferous tubes may be effectually flushed and cleansed. Whatever fluid is lost by perspiration, may be quickly restored by the liberal use of diluent drinks, which again assist the secretory activity of both the skin and the kidneys. In fact, one of the main objects of treatment is to increase the freedom of the circulation, more especially through the kidneys; and thus to get rid of the excess of stagnant water which has accumulated in consequence of defective action of the skin and kidneys.

Purgatives may be usefully combined with other means for lessening dropsical effusion. In ordinary cases of acute Bright's disease, I do not, as a rule, advise the frequent employment of drastic purgatives. I reserve this method of treatment for cases in which there is an excessive and increasing dropsical effusion which does not yield to other means of cure, but more especially for cases in which cerebral symptoms, the result of uræmia, are either present or apparently impending. Dr. Abercrombie and others, who wrote on brain-disease before Dr. Bright's discovery had led on to our present knowledge of uræmic nervous symptoms, published cases of cerebral disease which they took to be of an inflammatory or an apoplectic character, in which the most strikingly

beneficial results were obtained by free purging. Dr. Abercrombie, in discussing the treatment of inflammatory affections of the brain, states (*Pathological and Practical Researches on Diseases of the Brain*, 3rd edition, p. 153) that, according to his own experience, "more recoveries from head-affections of the most alarming aspect take place under the use of very strong purgatives, than under any other mode of treatment." Our more recent experience is entirely confirmatory of Dr. Abercrombie's statement; but our improved pathology enables us to add a very important qualification—namely, that most of the cases in which formidable cerebral symptoms have been removed by the action of strong purgatives, have been neither inflammatory nor apoplectic in their nature, but cases in which brain-symptoms have resulted from blood-poisoning; and in the majority of instances the poison has been uræmic. Amongst the cases recorded by Dr. Abercrombie as examples of inflammation of the brain successfully treated, there are two (Cases LXX and LXXX) in which the brain-symptoms were associated with anasarca, which had followed an attack of scarlet fever. These were unquestionably cases of acute renal disease, with cerebral symptoms of uræmic origin. I offer for your practical guidance this rule of treatment: when such symptoms as headache, delirium, convulsions, or coma, are the result of uræmia, give purgatives freely; and, if the renal disease be acute, and therefore probably curable, your treatment will often be completely successful. On the other hand, when you have reason to believe that the like brain-symptoms are consequent on cerebral hæmorrhage, or embolism, or thrombosis, be very cautious in the use of purgatives, which may greatly increase the patient's distress and exhaustion, while they can do little to improve his condition. In inflammatory affections of the brain and its membranes, purgatives are often useful, but less frequently and strikingly so than when cerebral symptoms are the result of uræmia. As to the form of purgative in uræmic cases, croton oil is the most convenient when there is coma and consequent difficulty in swallowing a more bulky dose. When there is no such difficulty, two pills, composed of three grains of calomel with seven grains of compound colocynth pill, may be followed in four hours by an ounce of the compound senna mixture; or the following powder, which I think an improvement on the compound jalap powder, may be given: *R* Scammonia resinæ gr. v to viii; potassæ tartratis acidæ \mathfrak{D} i; pulveris zingiberis gr. iii. *Misce*. The dose to be repeated once or oftener, according to circumstances.

When, in a case of acute Bright's disease, the renal congestion is excessive, as shown by the scanty secretion of highly albuminous urine, with vomiting, headache, and other threatening nervous symptoms, local bleeding by leeches or cupping on the loins is often extremely useful, and is quickly followed by an increased secretion of urine. If, by the abstraction of a few ounces of blood from the loins, we relieve the renal congestion, we thereby lessen the destruction of blood-constituents which results from contamination of the blood by urinary excreta. Moderate and timely local bleeding, therefore, tends to economise blood, and to prevent its waste.

It has been asserted that cupping or leeching the loins can help an inflamed kidney no more "than if the blood had been taken from the arm or from the nape of the neck". But this, surely, is a mistake. The lumbar arteries, which supply the integuments of the loins, arise from the abdominal aorta, close by the origin of the renal arteries; and, when leeches or cupping-glasses draw blood through the skin of the back, it is certain that the diminished pressure within the lumbar arteries will divert a certain quantity of blood from the neighbouring renal arteries. The same principle explains the good effects of leeching in cases of pericarditis. The internal mammary artery sends deep branches to the pericardium, and superficial branches to the intercostal spaces and the skin. By the application of leeches over the heart, we abstract blood from the integumentary branches of the internal mammary artery, and thus divert a portion of blood from the deeper pericardial branches. The blood will as surely take the course indicated by diminished pressure within the vessels, as the water in a pump will, up to a certain height, follow the rising piston. It may be thought that the quantity of blood thus diverted is very small; so, when venesection is practised in the arm or neck, how scanty is the stream of blood which escapes from the opening in the vein, compared with the torrents of blood rushing through the venæ cavæ into the right side of the heart; and yet, in a case of obstructed circulation through the heart or lungs, how promptly and decidedly does this small diverted current lessen the distension of the whole venous system. As a rule, I prescribe local bleeding only when, the secretion of urine being extremely scanty, there is a consequent threatening of head-symptoms or other serious results of uræmia. In ordinary cases, I apply hot fomentations or poultices covered by mackintosh to the loins. These act by relaxing the superficial arteries. The skin, therefore, receives a larger supply of blood, and thus a portion of blood is diverted from the renal arteries.

Then, too, there is some degree of depletion from the full cutaneous capillaries by the free local sweating which the warmth occasions.

Dry cupping acts in a somewhat similar way to hot fomentation. It draws an abundance of blood through the arteries into the subcutaneous capillaries, which, when the cups are removed, returns through the veins to the heart. In order that dry cupping may be most effectual, each cup should be removed as soon as the vessels beneath are well filled, and then it should be reapplied. The object is first to draw the blood through the arteries into the capillaries; then to allow it quickly to return by the veins, and not to keep it stagnating in the capillaries, which will happen if the glass be retained long on one spot. Another point is not to draw the blood into the skin with sufficient force to cause extravasation, the effect of which will be to impede the circulation through the skin, and so to divert more blood into the inflamed tissues beneath. The sole object of dry cupping, be it remembered, is not to irritate the skin, but to draw blood rapidly from the arteries, and as rapidly to transmit it through the capillaries to the veins, in its backward course to the heart.

As a rule, it is well to give no alcoholic stimulants; or, if need be, to give them very sparingly in cases of acute Bright's disease. The imbibition of alcohol imposes extra work upon the kidney, and so is opposed to the principle of lessening as much as possible the work of the inflamed gland. Excess of alcohol is, amongst the lower classes, one of the most frequent causes of albuminuria; and a very moderate employment of alcohol may tend to perpetuate and aggravate disease originating from other causes.

When acute Bright's disease is making satisfactory progress towards recovery, the dropsy usually disappears for a variable time before the urine ceases to be albuminous. It is very important to impress upon the patient that, until the urine has regained its normal characters, he should be warmly clothed with woollen next the skin; and he must be extremely careful to avoid cold, fatigue, and errors of diet.

The duration of albuminuria in cases that ultimately recover is very variable. I have seen many cases of recovery after the disease had continued from three to twelve months, and I have seen some recoveries after the urine had been albuminous for one, two, and even three years.

The more I have seen of the disease, the more hopeful I have become as to the ultimate result, when the history and the symptoms, and, above all, the chemical and microscopical characters of the urine, do not indicate extensive and irremediable degeneration of the kidney. In all the cases of recovery from long continued albuminuria, the preparations of iron have entered largely into the medicinal treatment of the disease, and have apparently contributed much to the favourable result. There are two preparations which I have found especially useful; these are the tincture of the perchloride and the syrup of the phosphate—the former in doses of from fifteen minims to half a drachm, and the latter in drachm doses twice or thrice daily. The preparations of iron are best taken soon after food. I have frequently combined with each dose of the perchloride of iron ten grains of hydrochlorate of ammonia; and I believe that this ammonio-chloride of iron is an useful combination.

Amongst other remedial agencies, when acute renal disease is prolonged and threatens to become chronic, change of air and scene is often highly beneficial; and I have seen some most remarkable recoveries effected under the influence of a long sea-voyage, after other means had failed to effect a cure.

[To be continued.]

A SPANISH PHILANTHROPIST.—A recent number of *El Siglo Medico* records, with well merited expressions of praise, the munificent disposal of his property which has been made by the late Don Antonio de Murga y Michelena. Senor Murga has in his will recognised the poor as his heir, and has left the large sum of 6,200,000 reales (about £64,480) to be applied to pious and charitable purposes, including endowments for a medical practitioner and a schoolmaster in his native district of Llanteno. Several of the charitable institutions of Spain have profited by the benevolence of Senor Murga. Among others, the general hospital of Madrid has come into possession of surgical instruments and other necessary appliances amounting in value to 63,374 reales (about £660). Among these are, a table for operations, three cases of amputating instruments, sets of lithotomy and lithotripsy instruments, cases of instruments for diseases of the larynx and œsophagus, for extirpation of tumours, ligature of arteries, for eye-operations, for tapping, etc., as well as a pneumatic aspirator, a microscope, a laryngoscope, clinical thermometers, and other modern aids to diagnosis and treatment.

ABSTRACT OF A CLINICAL LECTURE ON PNEUMONIA.

Delivered at the Liverpool Royal Infirmary.

By A. T. H. WATERS, M.D., F.R.C.P.,
Physician to the Infirmary.

GENTLEMEN,—I wish to call your attention to-day to the results of treatment in seventy-seven consecutive cases of acute pneumonia which have occurred in my hospital practice. I show you a table on which all the leading features of each case are mentioned. The patients were of the following ages: Under 10 years, two cases; between 10 and 20, eleven; between 20 and 30, thirty-five; between 30 and 40, eighteen; between 40 and 50, ten; between 50 and 60, one. Sixty-nine of the patients were males, eight females. Many of the patients were strong robust-looking men, whose previous health had been good, and in whom the disease had existed for a few days only before admission; the attack being distinctly traceable to exposure to wet or cold, or both. The pneumonia was single in sixty-seven cases, double in ten. Of the single cases, the right lung was affected in thirty-three, the left in thirty-four. Of the double cases, the left lung was most involved in six, the right in one case. Both lungs were equally involved in three cases.

With reference to treatment. Venesection was not practised in any case. Only three patients were cupped. In three only were leeches applied. In two, leeches had been applied before admission into hospital. All these cases were amongst the early numbers of the series. Whenever antimony was used, it was given in small doses—one-twelfth to one-fourth of a grain—except in two cases, Nos. 6 and 2, in which a third of a grain and grain doses were given. In fifty-seven cases no antimony was given. In a large proportion of the cases some alcoholic stimulant was given early in the disease. In forty-three it formed, together with carbonate of ammonia, the main therapeutic agent; and in some cases nothing but alcohol in some form was given. In the other cases, alcohol was given after a few days' treatment by other means; as small doses of antimony (in twelve cases), etc. In some cases, marked by a moderate acceleration of pulse only, carbonate of ammonia and spirits of chloroform were given alone. The stimulants were given at regular intervals—every hour, or every two, three, or four hours—generally with food, beef-tea or milk. In the most severe cases, marked with a very rapid pulse, great dyspnoea, and high temperature, brandy was given every hour or hour and a half. In two instances referred to in the table, alcohol given early in the disease aggravated the symptoms. Its omission, and the administration of small doses of antimony, were followed by relief. Calomel and opium were not given in any case. Where there was much pain, opium was given, and one or two full doses were usually sufficient to give relief. Mild counterirritation, mustard poultices, and turpentine fomentations were generally employed in the early stages, and frequently blisters at a later period. Nutrients were allowed freely in all cases: beef-tea and milk from the beginning of treatment, and solid food as soon as it could be taken.

Of the seventy-seven patients, two died—Nos. 7 and 55. The first seemed to have rallied from his attack. The pulse had fallen to 80, and the respirations to 20. Convalescence appeared to have set in; but effusion into the pleura took place rapidly, and death soon followed. The second patient died after being in the hospital forty-eight hours. He was admitted in almost a sinking state; and the *post mortem* examination revealed the existence of hepatization of the whole of the right lung.

The average duration of these cases from the commencement of treatment to the period of convalescence was $8\frac{1}{2}$ days. The average duration from the date of attack to the period of convalescence, in the cases where the date of attack could be clearly ascertained—viz., in fifty-four, was $11\frac{1}{2}$ days.

These are all the cases of acute pneumonia, uncomplicated with advanced organic disease, which have occurred in my hospital practice. They were all marked by the characteristic physical signs, as well as the general symptoms of the disease, and the progress of each case was carefully noted from day to day.

The results of these cases, especially when taken in conjunction with others, tend to prove that pneumonia is far from being so fatal a malady as was formerly supposed; and that, under a treatment which consists in supporting the patient, and in abstaining from depletory and depressing measures, its mortality is low.

As it is only in reference to general results that I wish to speak to you to-day, I shall not enter into any further details as to treatment; but I would remind you that, in estimating the value of any therapeutic measures which you may use in pneumonia, you must never forget the influence of rest in bed, and of proper nursing. In all cases of acute disease, the rest and the nursing, including the regulation of the atmosphere and the temperature of the room, and the administration of nourishment, constitute a most important part of the treatment; and we are, perhaps, too apt to overlook this element of cure.

In watching your cases of pneumonia, there are three symptoms to which you should pay special attention; viz., the pulse, the respiration, and the temperature. As these rise or fall, so may you argue favourably or unfavourably of your patients. If you find, when you are giving stimulants, that the pulse falls from day to day, you have an indication that you are pursuing a proper mode of treatment; but if, on the other hand, the pulse rise, you must seriously consider whether they ought not to be withdrawn. This rise, however, may be an indication that you are not giving enough stimulants, and, by increasing them, you may bring down the pulse.

Speaking generally, the pulse in pneumonia, although in many cases apparently full, is wanting in firmness, and indicates a feeble arterial tension; in fact, it is essentially dicrotic, and this dicrotism has been more or less marked in all the cases in which I have taken sphygmographic tracings of the pulse.

ON ARSENICAL DISEASE, OR THE DISORDERS PRODUCED BY ARSENICAL PAPERS AND COLOURS.*

By WILLIAM MICHELL CLARKE, Esq.,

Consulting-Surgeon to the Bristol General Hospital, and formerly Lecturer on Forensic Medicine at the Bristol Medical School.

THE subject to which I propose to draw your attention this evening, although of great importance, is not one in which I should, of choice, have taken particular interest; but circumstances compelled me to its investigation, and I have come to certain conclusions which will, I think, form excellent material for our discussion. It is well known to you that many cases of chronic illness have been attributed to arsenical colours, especially of paper-hangings: they have from time to time been published, and when I was lecturing some years ago on forensic medicine at the Bristol Medical School, I collected various instances in which sickness had been caused by these pigments; the most were the result of green wall-papers, but others had been caused by green envelopes and green confectionery, and, again, by green used loosely in the colouring of muslin dresses. One curious accident I noted, in which the paint had adhered to bread placed on newly painted shelves, and had been sent out with it (*Taylor On Poisons*). But in my practice I had not until the last two years traced any disease to the use of these colours. During that period, however, I believe I have met with several cases, and have become convinced that arsenical pigments are very frequently the cause of troublesome complaints, which, unless the cause be detected, are very difficult to cure.

There are two principal ways in which they do harm: in the first and more obvious way, they produce the disorder for which the patient comes under treatment, and there is nothing else the matter; but in the second the danger is more insidious, and on that account the greater. The patient is laid up by some ordinary malady, confined to a room infected with arsenic, and then there are gradually, and in a most deceitful manner, added the symptoms that the arsenical contamination produces. In this class of cases, in which the poison merely modifies some other disease, it is difficult to define the characteristics; but the most marked that I have noticed have been sickness and vomiting, sore-throat, sore-eyes, and occasionally eczema and diarrhoea. On the other hand, in the first class the signs are well marked. First, there are cases in which the patient suffers the usual symptoms of dyspepsia; there are more or less nausea or sickness, a troublesome cough, capricious sore-throat, and redness or soreness of the conjunctiva. In a second group, nervous symptoms predominate; there are headache, prostration, and marked restlessness and excitement at night; generally, also, more or less decided gastric symptoms, with especially a very coated tongue. In a third group, and the most common, I must say that until the last year or two I should not have attributed the mischief to arsenical poisoning, but should have called the cases low fever, or perhaps have considered them to be cases of aggravated dyspepsia.

* Read before the Bath and Bristol Branch.

I have more than once isolated such patients, thinking they were about to have typhoid, or, when sore-throat has predominated, scarlatina; and, finding them become worse when confined to their bed-room, I have had them removed, and they have recovered. In these there have been great prostration, headache, wakefulness, great nervous excitement, often an irritable stomach, and always a very coated tongue, with red edges—very much the symptoms of slight typhoid, but without elevation of temperature, and with only slight quickening of the pulse. My attention was first drawn to this group of cases in a house in which the poison was abundant, and I certainly did not for a time consider that they were produced by arsenic; but circumstances led me to that conclusion, and I have seen others since in which removal from the green-papered room has rapidly produced a cure. I shall refer at greater length to the house in which these occurred by and by, in order to illustrate this part of my subject.

These three classes include the most of the cases that I have seen; but other conditions are, I believe, sometimes produced, such as violent and intractable sneezing, eczema, and sores of the mucous membrane of the nose.

No doubt, on a subject like this, it is not difficult to exaggerate; but I am convinced that a very large number of people are suffering from the cause about which I am writing, and that it is our duty to make a raid upon these papers and get them abolished. There ought, of course, to be some legislative enactment rendering the use of such poisons for colouring papers penal: that alone would meet the danger properly; but in the meantime we ought, I think, to instruct the people not to buy these injurious ornaments. In Clifton, although a great many people are well aware of the danger, I believe that the use of arsenical papers is on the increase, and they are to be found in almost every other house. I think, also, that before I close, you will agree with me that this subject has an important medico-legal bearing; for I shall show you that in the secretions of people inhabiting arsenically papered rooms the poison can be detected, and even in quantity that may be weighed.

I am glad to say that I have had no opportunity of any *post mortem* examination, although in one case my patient nearly succumbed to sickness; but I cannot doubt that arsenic must be present in the liver, the tissues, and the blood. On this point, Taylor says in his work *On Poisons* (1848, p. 21), "The fact that arsenic may be detected in the blood and urine of a person who survives its effects, is a point of considerable importance in a medico-legal view. Thus an analysis of either of these fluids may furnish evidence otherwise only satisfactorily obtained by a *post mortem* examination of the body; and cases of criminal administration of arsenic to the living, which have hitherto escaped the hands of justice, owing to the want of chemical proof, may become as clearly established to the satisfaction of a jury as if the poison had operated fatally, and had been found after death in the stomach." When I have proved to you that arsenic has been found in the course of my investigation, in the expectoration and urine of a person suffering from an arsenical paper, and in the perspiration of another inhabiting one of these poisonous rooms, you will at once see in what an awkward predicament any one accused of poisoning such an individual might be placed.

It is quite possible, taking another view of my subject, that to some people living in these rooms the arsenic may act medicinally and be beneficial, and I think I have seen it to be so. This would be likely in cases like those in which we should prescribe it.

I will now proceed to place before you, in as condensed a manner as I can, the data upon which I found the conclusions above stated.

Between two and three years ago, one of my patients, a gentleman residing in one of the best houses in Clifton, consulted me about a sore on the inner side of the right nostril. I had no idea but that it would get well soon, and did not think much of it. It proved, however, very intractable; sometimes being almost healed, and then again becoming irritable and bleeding. This went on for several months, and during this period my patient several times drew my attention to a red and sore condition of the conjunctivæ, especially of the lining of the lower eyelids. During the same period, on three or four occasions one or other of the housemaids came under my care with symptoms like those of febricula—such symptoms as I have already described—sometimes with sore-throat, sometimes without. Now, this gentleman was well aware of the danger of arsenical colours; he was living in his own house, newly built, and had, as he thought, taken the greatest care to assure himself that there was no arsenic in any of his papers or colours. The walls were papered, and then washed with a dull sage green, for the production of which an arsenical preparation was quite a superfluous and unnecessary danger. As, however, he did not recover, and the subject had been under consideration, he decided to send some of the colouring matter from his walls to an analytical chemist.

A portion was scraped off and forwarded to Dr. Voelcker, Consulting Chemist to the Royal Agricultural Society of England; and I quote from a letter written on April 27th, 1872. Dr. Voelcker says: "I have made a qualitative analysis of the sample of colouring matter which you sent me, and find it contains lots of arsenic." After some remarks on the relative safety of different papers, Dr. Voelcker says, "but if an arsenical water-colour, the body of which, like the sample you sent me, is composed of carbonate of lime, be used, some dust may come off, and such dust containing arsenic cannot but be injurious to the inhabitants of the rooms painted with water-colours containing arsenic. As far as I can judge, there is enough arsenic in the small sample you sent me that, if swallowed by a couple of persons, it would, no doubt, make short work of them." On receiving this report, I advised my patient, as a matter of interest, to collect some of the dust from the furniture and pictures, so that we might ascertain whether there were any of the poison floating free in the room. The house was kept so clean that it was not easy to collect a palpable quantity of dust; but some was obtained and sent to Dr. Voelcker, who, after analysing it, writes: "I have carefully examined the dust which you sent me, and find unmistakably arsenic in it. There is, of course, not a large quantity in it; still, there is enough in about one-fourth of the quantity of the dust you sent me to prove without difficulty the presence of arsenic in that small quantity of dust."

After these reports, I need hardly say that my patient decided to strip his walls and to repaper them. After he had done so, and a considerable time had elapsed, he again sent specimens of the dust from various parts of his house to Dr. Voelcker, who, in a letter dated March 11th, 1873, reports that he finds no arsenic, or a trace so doubtful that he cannot distinctly identify it. It was very unfortunate that the gentleman of whom I have been writing had several other large houses papered and coloured in the same way, and to one of these I shall refer again by and by.

I never was able to satisfy myself that the sore in the nose depended upon the arsenical dust, as I have seen others like it; but it certainly healed when the house had been cleared of the poison. I have not had a single case of a low febrile character in any of the servants since, and I feel pretty sure that their illnesses were caused by the arsenic, because I have seen several exactly similar in people living in green-coloured rooms; and the fact that they had no such cases in the house after the arsenic was got rid of is strong evidence.

These cases would be classed under my first division; but that which I am now about to relate was one in which symptoms due to the paper were added on in the course of an illness whose origin could have had nothing to do with arsenic.

At the end of December last, a little boy came under my care with pleuropneumonia. He was extremely ill, and a large quantity of fluid rapidly collected and filled the left pleura. On January 4th, on introducing an exploratory trocar, I found that the fluid was pus. I let out as much as would come through the trocar. This afforded sufficient relief, and I closed the aperture. No irritation followed; but the chest having tensely filled again, on January 16th I made an incision, and conducted a drainage-tube into the opening, and then out again at the lowest part behind. The result was very favourable; the pleura was drained, and the boy was doing well for such a very bad case, when about five or six weeks after the operation he began to be very sick. The vomiting proved intractable, spite of careful dieting and medicine, and I thought I should lose my patient. I had noticed more than once that the room was lined with a very bad green paper; and when this vomiting continued so obstinate, and the boy became so ill, I said that he must be moved into another. The only one available was, unfortunately, a cold room with a north aspect; but when we had succeeded in raising the temperature to 60 deg., we moved the boy into it. Within two or three days of the change, the sickness had entirely ceased, food was taken readily, and he proceeded to convalescence again.

Now, in this case I have no doubt that the sickness was caused by the paper, and it probably was the worse, because the boy had been so absolutely confined to the room that there had been no chance of cleansing it.

About two months since I was consulted by a lady, who said that she had had a bad cold for five or six weeks, which she could not get rid of, although she had carefully staid in doors, and taken great care of herself. She laid great stress upon the violent fits of sneezing that she had, and these were certainly very uncommon. The character of her coated tongue, and some other features, suggested to me the possibility of arsenical dust; but the paper of the room in which she sat more decidedly attracted my notice. It was one of the usual green papers, but the pigment was very loosely applied, and easily brushed off; indeed, large bare patches on the badly worn surface showed how much

of the colouring matter must have been detached from time to time, and mixed with the dust of the room. I gave this patient some medicine, but soon told her that I thought her illness, and particularly the fits of sneezing, were caused by the irritating dust that was coming off the paper.

Patients are not often very willing to change their lodgings in the winter, and mine did not; but after I had been in attendance for two or three weeks, the illness continuing much the same, her mother fell ill, and she was obliged to go away and nurse her. She had not been more than three days in another house when the sneezing altogether ceased, and she felt better. The tongue, however, remained coated, and she had certainly not got rid of everything that was hurting her; when, her mother being better, she returned to her lodgings, where she was scarcely settled before her fits of sneezing returned with all their original severity. I now insisted upon her changing her rooms, and she soon went into another house. Three or four days after the change, the sneezing came to an end, and gradually in the course of three or four weeks her tongue became quite clean, and, except that she retained a cough, she became quite well.

Upon such evidence as the symptoms and histories of these cases, we all of us daily make diagnosis and treat patients, and I must say that I felt quite satisfied that both this lady and the boy had suffered much from the bad atmosphere in which they were placed; but, upon thinking over their cases, and others carefully, I regretted that I had not subjected them to a more critical analysis, and resolved that, if I met with another example, I would, if possible, collect not only the dust of the room, but also the secretions of the patient, and submit them to an analytical chemist for examination. I had not to wait long for an opportunity; for, within a week or so, a patient came under my care with the symptoms that I have several times enumerated, and which I have said are like what we meet with in a mild case of typhoid. I advised her to remain in her bedroom, and when I visited her there next day, I found that she occupied a room that was ill-ventilated, and papered with a very bad arsenical paper. Each day in this room she became worse, and, it was not until I made her spend as much as possible of the twenty-four hours in her sitting-room, that she began to get better. I will not detail the symptoms from which this patient suffered, for the time hastens me to more important matter; but proceed to say that I requested her to collect some of the dust of the room, and also as much of the secretion from the nose as there might be, also the expectoration, and two quart bottles of the renal secretion. All this was very intelligently done, and I gave the several things into the hands of Mr. Stoddart for chemical analysis. I certainly expected that he would find arsenic in them, but I was not prepared for results so distinct and decided as he discovered.

I have Mr. Stoddart's report before me; it is too long to read in detail, but I may say that the several specimens were submitted to the most searching scrutiny by the best approved tests for arsenic; and Mr. Stoddart says that the presence of arsenic was plainly evident in each; and, after giving a circumstantial account of the various processes employed, he gives the following as the result of his investigation. The quantities found by the several tests are calculated into representative quantities of white arsenic and Scheele's green.

	White arsenic.	Scheele's green.
1. 100 grains of dust from top of wardrobe...	=0.2 grs.	.36 grs.
2. 100 grains from same room	=0.16 grs.	.30 grs.
3. Expectoration	Trace.	Trace.
4. 48 ounces of urine	=0.26 grs.	.5 grs.

This gives, as you will have noticed, the character of the dust of the room, and also the condition of the inhabitant of it as to the presence of arsenic; and I think you will be surprised, as I was, at the positive answer to my inquiry into the absorption of arsenic by individuals occupying apartments papered with arsenical colours.

In less than two days this patient, whom I had diagnosed to be suffering from arsenical disease, had eliminated by the kidneys alone more than a quarter of a grain of arsenic. No doubt this was a bad case, for, besides the symptoms being very marked, it was a very loosely coloured green paper, and there was a large accumulation of dust in the room. I was also able to get a large quantity of the urine so as to make the examination more satisfactory.

I consider that, in this case, the illness was altogether what may be very properly called arsenical disease, or fever, and that it was due entirely to the noxious dust of the room; but, if that be not admitted, it certainly is proved that the arsenic present in such an atmosphere is largely absorbed. It is not to be expected that such a positive result will always be obtained even when there is little doubt that the illness is due to these papers, for although arsenic is present in the body, it may not appear daily in the urine. On this point Taylor says (*On*

Poisons, 1859, p. 36), "It is important to observe that, as in the case of antimony, arsenic may still remain in the body, while it may not appear daily in the urine. In the case of the Duc de Praslin, who died six days after he had taken a large dose of arsenic, the poison was found in the liver and in the intestines, but none was found in ten ounces of the urine passed shortly before his death. In giving arsenic to dogs for a period of nine months, in doses gradually increased, Danger and Flandin state that they repeatedly analysed the urine without finding arsenic. It was probably removed from the blood and temporarily deposited in the soft organs. This deposition may be regarded as vicarious of elimination." It is difficult to resist the temptation to write more on the absorption of arsenic and its elimination; but as my paper is already too long, and the rest may be read with more profit in the books on poisons, and especially in Taylor's work, I forbear; only saying that the "quantity of absorbed arsenic lost by elimination is sometimes very small even when the dose of arsenic has been large; and, citing one remarkable instance to shew how long a time it may be present in the urine after it has been taken. Taylor says, "From the experiments of M. Bonjean of Chambéry, it would appear that arsenic was detected in the urine of a patient, who, one month before, had taken in twenty-four days only three-quarters of a grain of arseniate of soda."

I gave Mr. Stoddart another specimen of urine and one of expectoration, both from the same patient, who, suffering from phthisis pulmonalis, occupied a room with a green paper, but he failed to detect arsenic in either. I gave, also, dust from still a different room; in this he found distinct traces of arsenic, but not enough to estimate quantitatively. I may state here that in no case in which I have submitted the dust of a room papered with a suspicious colour has the chemist failed to detect arsenic, and that very distinctly.

I have had several other cases in which injury has resulted from this cause; but those that have been detailed are, I hope, sufficient to prove the proposition with which I began this paper. I would however, say, that new-born children seem peculiarly susceptible to the influence of the poison. The result is sometimes diarrhoea and sickness; sometimes eczema of the face, and perhaps thrush. In the room from which I removed the little boy whose case I have narrated, his mother was subsequently confined. The baby, which when born was a remarkably fine child, was attacked after a week with eczema of the face, and afterwards with thrush, of which I should not have thought much; but this very week an infant was brought to my consulting-room with eczema and thrush, looking so like the other child, that I was led to inquire after green paper, when I found to my surprise, as I thought that, being a gardener's child, she would have been living in a cottage, that her mother was keeping one of the houses, which have figured so largely in my report, and in which she told me the men were then at work preparing to remove the deleterious colours.

One other example shows how thoroughly the poison permeates the body. In a patient suffering from profuse perspiration, not caused, I believe, by arsenic, but who occupied an arsenically papered room, Mr. Stoddart found distinct evidence of arsenic in the perspiration.

Mr. Stoddart, in his report, draws attention to the peculiarity of the fact that, although arsenic was found decidedly in the urine, no trace of copper could be detected. I mention this merely on account of its interest, as showing the power of selection of the different organs; the kidneys seem to be the chief excretories by which arsenic is eliminated, whilst copper is more liable to be accumulated by the liver, or excreted in the bronchial secretion. It is further interesting as it agrees with the results that Orfila obtained. Thus, Taylor says (1859, p. 528-29), "Orfila has found the metal (copper) in the lungs, heart, liver, spleen, and kidneys of animals poisoned by it; but he could discover no traces of it in the blood or urine, although it must undoubtedly be conveyed into the blood." MM. Danger and Flandin have stated that, in cases of poisoning, copper may be detected more readily in the bronchial secretion than in the urine. Christison says, "that in the experiments of Wibmer and of Orfila the poison (copper) was accumulated in particular organs, especially the liver" (Christison, 1845, p. 463).

To return, however, to the immediate subject of this paper. I know that many people are sceptical as to the injurious influence of arsenical papers and colours, and it may certainly be argued that, because in the majority who occupy rooms with these pigments in them, no sign of bad health is found, therefore they are not deleterious; and I imagine that in ordinary circumstances when the rooms are occupied for the shorter period of the twenty-four hours, not much harm takes place; what is absorbed during the night is eliminated by day. But when in consequence of sickness the rooms are inhabited day after day, and week after week, the case, I believe, is far otherwise, and the occupants are liable to become the victims of arsenical disease. Again,

some people, and the number of these is not small, are peculiarly susceptible of the influence of this poison, and they suffer in proportion to their susceptibility.

In more than one of the instances that I have seen, this idiosyncrasy has appeared. In one that I have cited the patient had suffered considerably on a previous occasion; and, in more than one instance, I have heard of the symptoms being increased by arsenic having been prescribed for a person living in one of those places. These idiosyncrasies are familiar to all of us. In administering arsenic, I myself have seen several in which it was impossible to give the ordinary medicinal doses of Fowler's solution from the severity of the irritation produced.

It is fortunate, and the wide-spread use of these pigments seems to prove the fact, that arsenic is not an accumulative poison, and that it is got rid of so easily by the kidneys. If it were not so I cannot but think that we should have much more obvious proofs of the poisonous character of the papers.

In this record I am only anxious to relate facts that have come under my own notice; but I believe that the workmen who make and who hang these papers are liable to suffer considerably. The quantity of arsenic used in their manufacture is something startling. Taylor says: "A manufacturer has informed me, that so great was the demand for this 'cheerful' but poisonous colour, that his average consumption of arsenic amounted to about two tons weekly" (*Ibid.*, p. 430.)

It is generally supposed that the danger is limited to green paper; but this is by no means the case, as I have myself proved. There are various shades of grey and mauve and other colours that are produced out of this poison; and I believe that the only safe plan to adopt is to have the papers analysed before they are employed. Other noxious ingredients are used besides arsenic, but the consideration of them is beyond my present purpose.

It becomes a serious question whether the use of papers for ornamenting walls is not, for more than one reason, an unsanitary proceeding, and whether some other method equally artistic might not be adopted with advantage.

I have already adverted to the medico-legal bearing of this subject. In former times, when great stress was laid upon the finding of very minute quantities of arsenic, and when juries were moved to a verdict by the demonstration of test-tubes containing infinitesimal portions of arsenical products, the absorption of arsenic from a residence in one of the rooms that I have been noticing might have placed a man in danger of his life: but it is to be hoped that the time has quite gone by when the chemical evidence in a case would be allowed to outweigh the moral circumstances and the general history. I can, however, imagine that in case of suspicion of the criminal administration of a poison to a person still living, the finding of so much poison in the secretions as in the case that I have cited, might give rise to serious results, unless the source of the poison could be clearly traced.

In conclusion, I would say that I believe and think that the evidence I have adduced fully proves the existence of disease produced by arsenical papers. I believe, also, that it is very common, and not only so, but the presence of these poisons is apt to modify and influence the course of other diseases and injuries. I have pointed out the symptoms that I have observed, and am sure that by a careful observation of them, the mischief may be detected and remedied.

I know that a great many maladies are attributed by some to arsenical papers which own quite another cause; for, whilst some people are too sceptical, others are far too credulous; and it would be absurd to hold that a case of cancer, or catarrh, for instance, was caused by these poisons, because it should happen to be discovered that the patient was living in a noxious atmosphere; nor would the finding of arsenic in the urine or other secretions prove more than that the person was absorbing arsenic; it would not show at all that their disease was caused by it. But when certain symptoms, which have again and again been noticed by different observers, are found, and then disappear when the patient is removed from the poisonous room, I think we may safely conclude that the disease has been produced by the arsenical colour. At all events, I hold that there is a sufficiently strong case to call for some stringent legal enactment that shall prevent such a deadly poison being scattered broadcast amongst us; and, as in Prussia, the employment of it should be made a crime. But I am afraid that there is not much hope of such an Act of Parliament, for the British mind, notwithstanding modern radical tendencies, is amazingly content with what is, whether it be poisonous or whether it be salutary. Upon us, however, the duty lies to inform the people of the existence of an arsenical disease; and when they are sufficiently educated by us, as they have been in other sanitary matters, action will be taken to prevent it.

CASE OF PUERPERAL CONVULSIONS AFTER DELIVERY.*

By ALLAN D. MACKAY, M.B., Stony Stratford.

AT our annual meeting held in this town in 1865, I had the pleasure of reading notes of a case of puerperal convulsions coming on after the completion of labour. This case afterwards formed the basis of a paper upon this subject, published in the second volume of the *St. George's Hospital Reports*, to which I had been asked to contribute by my friends the editors. In that paper, I ventured to suggest a treatment from which (as the rule) blood-letting was excluded—a plan of treatment, no doubt, at the time thought heretical, yet one which I see is insisted upon, as, in his opinion, the proper and rational treatment of such cases, by Dr. Barnes in those admirable lectures which he has this year delivered at the Royal College of Physicians of London, and which you all, no doubt, have read in our JOURNAL. I have nothing to qualify in the remarks made in the paper alluded to above, nor should I wish to do so after the support of such a skilled and original teacher on the subject; but, when my paper was written (1865), the hydrate of chloral had not been added to our armamentarium of drugs where-with to combat disease. Now, in the hydrate of chloral I hope we have a most valuable aid in dealing with puerperal convulsions. And this brings me to my case, a few brief notes of which I will now read.

On the evening of February 8th, 1873, I was asked to see a woman who had been confined (by a midwife) at 7.30 A.M. The labour was perfectly natural, though it came on about a month before the expected time. The patient was a handsome and well-made woman, with a good healthy colour. Her legs had been for some little time œdematous, and on February 7th she had headache, her sight failed her, and her husband "could make nothing of her." She was delivered, as I have stated, at 7.30 A.M.—naturally, though the midwife said that, when she first came to her, "she was queer in the head." At 11 A.M., she had "a slight convulsion;" at 1 P.M., "a bad convulsion;" and at 5 P.M., "a still worse convulsion." I saw her about half an hour after this, and found her with a partially furred tongue (she complained of its being sore), a pulse of 112, weak, and her legs slightly, but decidedly, œdematous. She was not quite clear in her head, and was very drowsy, but easily waked up. Her pupils were dilated, and, though they did contract, did not do so thoroughly to light applied quite close to them. I drew off more than a pint of urine with the catheter, and found it of specific gravity 1018, and containing much albumen. I prescribed perfect quietude, broth and milk for her diet, and a draught containing twenty-five grains of hydrate of chloral to be given as soon as she could swallow, in case another convulsion should come on; if none recurred, that she should be left alone, as far as medicine was concerned, till I saw her the next day.

On the following day, I found her with a tongue loaded with a creamy fur, very swollen, and showing traces of having been bitten. Her pulse was 100. She had headache, but could "see a little." No urine had been passed, so I again drew it off with the catheter, and it was still albuminous. The legs still pitted a little. But now for the practical part of my paper, and it is solely for this that I bring the matter before you to-day. Soon after I left her on the previous evening, about 7 P.M., she had "a severe convulsion." There had not been then time for the medicine to reach her. At 11 P.M., she had "a still more severe convulsion;" when this ceased, she was able to swallow the draught (twenty-five grains), and was soon afterwards asleep. She slept for four hours; then woke, saying she "could see a little," and slept again and again. At night, the chloral was repeated, and she had an aperient dose to take during the day.

On the 10th, the tongue was cleaning; pulse 80. The urine was passed last night and this morning. She could see, though still "a little misty." She had to-day no headache, and there had been no more convulsions.

On the 11th, the milk had come, and the urine was passed well. I need not detain you with the progress of the case. She got better each day, and is now perfectly well, the albumen quickly passing away from the urine.

In chloral, then, it would appear we have a grand assistant in these cases. For some time I doubted with myself (hating to believe too soon that the *post hoc* is *propter hoc*) whether the cessation of the convulsions could be due to the chloral or not; but, considering that they were increasing in severity, it seemed that such might be the case. And this is more confirmed in my own mind now, since the appearance in last week's JOURNAL of a similar, though more severe, case occurring

* Read before the South Midland Branch.

in the practice of Dr. Barclay of Leicester. I should have reported this case earlier, because it appeared to be an eminently practical question to bring before the profession, whether chloral had a beneficial effect upon cases of puerperal convulsions, but that I thought the question would not be one unfitted to lay before my friends at this our annual meeting.

I will detain you no longer, gentlemen; my paper professes to be a practical one, and nothing else. The pathology of these cases I do not touch upon here. It has been so well and ably set forth by Dr. Barnes in his late lectures, that it would be folly on my part to reproduce it.

ON HÆMATOMA AURIS.

By WILLIAM YEATS, M.D., Coton-Hill Institution, Stafford.

THIS affection, also named Othæmatoma, or sanguineous tumour of the ear, almost without exception peculiar to the insane, has, at different times, been treated of in the current medical journals, both in this country and on the continent, and is generally referred to in the more recent works on insanity. Seeing that the presence of the affection is almost sufficient in itself as a symptom to stamp the insane individual as mentally incurable, the case recorded below, being a decided recovery, is rare enough to be worthy of record. Before, however, detailing the case, it may not be out of place to give a brief *résumé* of the received facts regarding the nature, causes, and prognosis of the affection. The diagnosis and treatment require no notice, as the former is unmistakable, while the latter is unnecessary, and never enforced, as far as I am aware, as the disease tends to a spontaneous cure.

A learned essay on the subject was written by Dr. Fischer, of Illnau, and translated by Dr. Arlidge, in 1854. Dr. Stiff, of Nottingham, gave a very full account of the affection in the *British and Foreign Medico-Chirurgical Review* for 1858; and more recently, Dr. Nicol, now of Bradford, contributed to the same periodical a well-written paper on the subject in 1870. From these papers, and from my own observation, the nature of the affection may be briefly stated.

The tumour, as it is so called, may occur in one or both ears simultaneously, but generally in one at first. The particular parts affected are those where cartilage is present, viz., the helix, its fossa, the antihelix, triangular fossa of the antihelix, concha, antitragus, and tragus. Several of these parts usually, sometimes the whole of them, are affected together. The lobule is absolutely exempt; for this reason, that it contains no cartilage. The swelling is more prominent on the anterior surface of the ear. Its size varies in different individuals, and in the different stages. In most cases, on its first appearance, the swelling ranges from the size of half a walnut to double, or even more than that; the organ becomes much misshapen, as the natural elevations and depressions become obliterated in the parts affected. In colour, the tumour is purplish; the temperature is often locally increased; common sensation is more acute than usual, and the integument is tense and tender to the touch. Sudden in its onset, and rapid in its growth, its maximum size is reached in a few—often four to six—hours. The swelling commonly begins to lose its acute-looking character, and gradually to subside in about a week, and appears quiescent about the tenth day, although three or four weeks may elapse before such a condition occurs, depending, as I believe, on the usage to which it is submitted. The swelling at first essentially consists of blood, effused between the cartilage and the perichondrium; and here it may be mentioned, that this effusion has been seen to be preceded by a hyperæmic condition of the parts. By and by the effused blood resolves itself into its visible physical constituents, blood-clot and serum; and later on these contents become partly absorbed, partly organised, the result being a tough, irregular, misshapen mass, composed in part of newly formed yellow-fibrous cartilage, and in part of the original cartilage hypertrophied. In many cases, after a year or two, the tumour shrinks a good deal, almost disappearing, leaving the ear shrivelled and puckered, and its cartilages hard, as if they were ossified, although only very little thickened. Regarding this affection, it may be remarked, that it is very unusual for a second attack to present itself in the same ear; also, that it does not seem in any way prejudicial to correct hearing; on the contrary, in some instances it has appeared that the special sense was intensified. The case of a gentleman in the Aberdeen Asylum was striking in this respect. He was the subject of chronic mania, and had hæmatomatous disease of both ears so extensive, that both apertures were almost occluded, yet the acuteness of his hearing was something remarkable.

The affection does not seem to be confined to any particular form of mental disorder. Some have considered its presence more common in dementia, and certainly it does occur quite as frequently in that as in any other form; yet cases of it are present in all the classes. Before me are

the notes of fourteen cases that have come under my notice in the Aberdeen Asylum, and in this institution. To enumerate these: the affection occurred in two cases of acute mania; in four of chronic mania, one of which threatened dementia; in four of dementia, one of epileptic mania, one of epilepsy, one of melancholia attonita, and one of general paralysis. Several other cases were known to me, but unfortunately no accurate notes were kept of them. The affection is generally observed to take place when the general physical health is below par, when the circulation is feeble, and the respiration inactive; exceptions to this, however, are not wanting, although they are few. The tumour may occur soon, or years after the commencement of the mental affection, and is common at any age after thirty. Its occurrence is not frequent, and is less so than formerly, yet it is impossible to give an average percentage, as the comparative numbers in each asylum are so widely different; e.g., in Dr. Nicol's report it is stated that two cases only were present among seven hundred females, while in this institution there are three well-marked cases among seventy females, and six among seventy males. These latter numbers may be considered large. It is noticeable that in most asylums the disease is more frequent in men than in women.

The sane, I think we may safely say, are free from this affection. Two cases, certainly, are mentioned in Dr. Fischer's essay, but their nature has been considered doubtful, the individuals being more insane than otherwise, if we may judge from the description of them.

The causes to which the affection is attributed are almost as various as the writers on it. Here it is only practicable to mention one or two of them. In Dr. Fischer's time it was the generally received opinion that the invariable antecedents of the affection were some dyscrasia, almost or quite peculiar to the insane, as the predisposing, and some external irritation, or violence, as the exciting cause. Dr. Stiff concludes, that the affection is the result of a true hæmorrhage, consequent upon impaired texture of the coats and laceration of the small blood-vessels of the perichondrium, and that it is produced by causes analogous to those that excite cerebral apoplexy. Dr. Sankey's view of the cause is, that the bones of the skull in lunatics become, in many cases, more compact and dense, causing obstruction to the flow of blood through them, and that the result is œdema of the parts from which the veins come. Such a mode of causation is legitimate enough, and very ingenious, however, I would here state, that hæmatoma does not invariably result from such a condition of the cranial bones, for in my possession is a skull of most unusual density and thickness (in some parts more than half an inch thick), the subject of which was a lady who died while in a state of chronic mania, yet no hæmatoma was present. The prevailing idea is, that the cause of the affection is a blood-dyscrasia, casually connected with some general excitement and some mechanical influence. The mechanical irritation may be violence, self-inflicted or otherwise. Many deny that violence has anything to do with it; yet, although believing it to be of very rare occurrence, if we consider that a person is predisposed, it cannot be denied that, if violence were administered, it should be a highly exciting cause. At one time it was believed that a blow was the common cause, and that idea was favoured by the fact that the left ear was more often affected; which, indeed, would be naturally struck by the right hand of an aggressor. Dr. Nicol states that sufficient external irritation is supplied in every case by the unfavourable condition of the ear during recumbency, and that the disease is less frequent in women, on account of the protection afforded by the natural and artificial coverings of the head.

The prognosis of the mental condition in individuals the subjects of hæmatoma is most unfavourable. Recovery is mentioned as possible, and as occurring now and then; yet all observers are agreed that the presence of the affection is of very evil augury. The only individual whom I have seen or read of, as having made an absolute recovery, is the subject of the following case.

E. J., female, aged 33, married, was admitted to Coton Hill Institution on 10th January, 1870. She was under size, but plump, and well made. She was fairly educated, in average good health, and had borne several children. All the bodily functions were normal except the catamenial, which was suspended. She had been brought up in humble circumstances, under the direction of an indulgent and somewhat eccentric parent, and allowed to practise her notions, which were the opposite of sedate or slow. Her charms secured her a very respectable marriage settlement, but her married life was somewhat marred by domestic worry. On her admission, it was stated that this was the first attack, and that its duration was three months. No particular cause was given, beyond that she had been grieved and disheartened at their unhappy and apparent embarrassed condition. From the time of her coming here, until August, 1872, she was the subject of acute mania, with strong suicidal and homicidal tendencies, having attempted drowning, starvation, and even to bury herself alive. At times she re-

fused her food, tore her hair, pinched her skin, destroyed her clothing, was violent to those around her in a marked degree, cunning and malicious, foul in her language, and raved and fumed with passion, rendering it often necessary, during the paroxysms of excitement, to hold her, or to place her in the padded room for safety's sake. She was sleepless and noisy in the night time, and dirty in her habits. She entertained, also, some of the more common delusions, viz., that she was not a woman, that she was dead, etc., and was malevolent to her husband, whom she threatened with hideous punishments. She caused great anxiety on account of her proclivity to elude the surveillance of those in charge of her, in her endeavours to administer her own destruction. She lost flesh, became thin and wiry, and her hands and feet were cold and clammy. She was subjected to several modes of treatment, principally for the purpose of subduing the excitement. At different times she was packed and repacked. She underwent courses of the cold shower-bath several times. Chloral was administered in doses of from forty to sixty grains, night after night, without producing the least effect; at other times the drug was tried in the day time, in twenty-grain doses every two hours, but its administration proved equally futile; one day, as much as one hundred and twenty grains were given in this way, yet no rest or sleep was procured. Bromide of potassium was then administered, in half-drachm doses every three hours, but only to prove as great a failure as its predecessor. The same salt, in combination with cannabis Indica, was given with the same result. About thirteen months after her admission, hæmatoma appeared in the left ear, and followed the usual course, which has been already described. Although inactive, the swelling has shrunk but very little, and at present a very considerable cartilaginous tumour exists, involving the antihelix, concha, anti-tragus, and tragus, in an unshapely irregular mass. The meatus is quite patent, and hearing equally acute, as on the unaffected side.

The case was considered hopeless until August, 1872, when the excitement became gradually less, her conversation more coherent and rational, her sleep restored, and her habits improved. These conditions continued to develop a return of reason; and in October it was noted that she conducted herself with propriety, could comprehend, and act correctly; the most prominent symptom left being her inability to identify individuals, as she mistook persons before her for some of the actors in her previous history. About the middle of November, the remaining cloudiness of her perceptions cleared up, and she was then considered perfectly sane. A great improvement in her physical condition had also taken place. Continuing perfectly well, with her intellect seemingly as good as it had been originally, her memory vigorous, and moral sense restored, and in good health and condition, she was removed from the institution on the 6th February, 1873, cured.

Seeing that the system had sustained no shock, that no strong emotional affection had been perceived, and that no intercurrent disease had substituted itself, it is impossible to assign any particular agent which influenced the patient's condition and brought about her recovery, beyond systematic moral discipline.

RUPTURE OF THE JEJUNUM, FROM A FALL, IN A GIRL ELEVEN YEARS OF AGE.

By E. HOLLAND, M.D. Lond.

H. P., described as a delicate, lively, and "flyaway" child, fell, at 4 P.M., and struck the umbilical region forcibly against the edge of the stairs. She uttered a sharp cry, got up, walked upstairs alone, vomited the contents of the stomach untined with blood, complained that she could not draw her breath, and lay down and slept for half-an-hour. On awaking, she got up, walked about, talked freely, and, though seeming faint, made no complaint of pain. At 9 P.M., she went to bed, without supper, and slept soundly till 4 A.M., when she awoke and asked for water. Afterwards, she slept till 6 A.M., when she awoke and again asked for water. At 8 A.M. she walked in her night-dress to an adjoining room, and, without complaint of pain, asked for water and ice. At 12, she walked alone down stairs and lay down on some chairs, and, complaining a little of pain, had some hot flannels applied, but requested them to be removed on account of the "weight". At 4 P.M., for the first time, she asked for something to eat, and, after taking a few mouthfuls of an egg pudding, she vomited, fell back pale, and died without movement.

At the necropsy, thirty-six hours after death, the abdomen was found to be distended with flatus and fluid, and the umbilical region discoloured by bruising. The peritoneal cavity was filled with a sero-flaky fluid, deeply tinged with bile. The peritoneum generally was minutely injected, and more or less universally covered with soft lymph. The jejunum was ruptured for nearly half of its circumference, twelve

inches from the pylorus, and presented a bruised appearance on each side of the rupture. On cutting open the gut, it was found healthy, and its mucous membrane upraised by extravasated blood in the neighbourhood of the rupture. There were no adhesions externally around the rupture, no thickening of the edges, and the latter dovetailed when laid side by side.

COMMENTS.—The interesting features of this case are—first, the slight cause, which can only have its results explained in the delicacy of fibre resulting from youth, and a state of health below par; secondly, the apparent absence of any severe suffering or shock, so that the friends did not consider her ill enough to require medical attendance until the fatal syncope set in, twenty-four hours after the inquiry; thirdly, the sudden termination, with vomiting, after taking food.

SELECTIONS FROM JOURNALS.

MIDWIFERY.

ACTION OF ERGOT ON THE BLADDER.—In an article in the *Centralblatt für die Medizinischen Wissenschaften*, May 24, Dr. Wernich of Berlin directs attention to the distension of the bladder which has very frequently been observed in cases of poisoning by ergot. The distension is attributed to the action of the drug on the vesical sphincter; and practical application of it had been made in the treatment of paralysis of the sphincter vesicæ after typhus, by Oppolzer; in the nocturnal enuresis of children and senile incontinence of urine dependent on simple weakness of the sphincter, by Clarus; and in paralysis of the sphincter in cases of paraplegia, by Barbier, Arnal, Monneret, and Brown-Séquard. The point on which Dr. Wernich especially insists is, that this action of ergot may produce an impediment to labour when it is given for the purpose of assisting this process. He relates two observations. In one, a woman pregnant for the fifth time, was in labour with twins. The pains having ceased for eight hours, and the os uteri being fully dilated, the first child was removed with ease; immediately after this, the bladder was emptied. To obtain the expulsion of the second child, ergot was given. In the course of three hours, severe labour-pains set in, but no progress was made. On revisiting the patient, Dr. Wernich found the bladder enormously distended, and drew off the urine. Immediately afterwards, a moderate pain brought the head below the brim of the pelvis, and labour was soon completed. In the second case, that of a primipara, the head remained deep in the pelvis, and the pains had ceased for some hours. The os uteri was fully dilated. Two doses of powdered ergot soon brought on pains; but, at the end of two hours, these had produced no effect. The bladder was found to be much distended; on passing the catheter, a very large quantity of clear urine escaped. The head of the child was at once propelled beyond the brim by the uterine contractions, and, as the woman was much prostrated, delivery was easily completed by the forceps. Dr. Wernich hence advises a careful examination of the bladder in all cases of labour where ergot is given, and the use of the catheter whenever the employment of the drug for some time is not followed by the expected result.

THERAPEUTICS.

ACTION OF COLD WATER ON THE SPLEEN.—Dr. F. Mosler (*Virchow's Archiv*, 1873, part 1) has arrived at the following conclusions from experiments on the action of water on the exposed spleens of animals. 1. The immediate contact of water with the normal spleen produces a visible contraction of the organ, varying in degree with the temperature of the water and the duration of the application. 2. In a less degree, cold water exerts the same action on the spleen through the intestinal walls. The effect of a cold douche is greater than that of the application of cold compresses or pieces of ice; probably the mechanical influence plays a part here. The action of water is inferior to that of quinine in causing contraction of the spleen. 3. Cold water also produces diminution in the size of splenic tumours, both acute and chronic. 4. The febrile paroxysm in ague may be arrested by cold douches applied after Fleury's method. 5. The cold douche does not supersede the use of quinine either in recent or in chronic cases of intermittent fever. 6. The therapeutic action of the cold douche in intermittent fever is not complete. It does not prevent relapses nor the formation of splenic tumours. 7. The splenic tumour in typhus is reduced in size by the use of cold water. 8. Much good is to be expected from a combination of the application of cold over the spleen, either in the form of ice or of the cold douche, with the administration of quinine.

SURGERY.

EFFECT OF CARBOLIC ACID ON FRESH AND PUTRID PUS.—Rosenstein of Göttingen has made experiments on dogs and rabbits, to ascertain the effect of carbolic acid on the action of pus injected subcutaneously. Fresh pus, the injection of which was followed by phlegmonous inflammation, constitutional disturbance, increased temperature, and often by death, produced, when 5 parts per cent. of carbolic acid were added to it, merely local suppuration. The addition of 0.25 per cent. of carbolic acid had no effect; and the addition of 1 per cent. was effective in a few cases only. The addition of 5 per cent. of carbolic acid made little or no difference in the action of pus which had been allowed to decompose until it had a strong odour of sulphydric acid.

DRAINAGE IN SUPPURATION OF THE KNEE-JOINT.—A. Jaschke (*Deutsche Zeitschrift für Chirurgie*, Nov. 1872) describes some experiments which he has made on the best plan of applying drainage-tubes in suppurative inflammation of the knee-joint, in such a way that all parts of the cavity may be effectually drained. The plan which he adopted was, to distend a healthy joint (in the dead subject) with a watery solution of ferrocyanide of potassium, and then to inject chloride of iron, so as to form Berlin blue. The solution of ferrocyanide having been first injected through an aperture in the patella, the joint was moved so as to ensure the passing of the liquid into all the crevices; and the crucial ligaments were then divided by a tenotome, introduced into an incision made between the lower edge of the patella and one of the condyles of the tibia. This latter proceeding Jaschke believes to be necessary, in order to simplify the cavity of the joint and favour the introduction of the drainage-tubes. A drainage-tube (of tin, as recommended by Hejberg) was introduced into an opening made between the patella and the inner condyle of the tibia, the knee being bent at a right angle. It was pushed towards a point on the outer side between the sheath of the vessels and nerves and the tendon of the triceps; and, being there felt with the fingers, was brought out through an incision made over it. In the same way, a second tube was carried through the joint from a point between the patella and the external condyle of the tibia, to the neighbourhood of the tendons of the semimembranosus and semitendinosus muscles. While the tubes were being introduced, most of the solution that had been injected escaped. A diluted solution of perchloride of iron was now injected into the tubes by an Esmarch's irrigator. On opening the joint, the synovial membrane was found to be stained blue at every point, except the large recess beneath the quadriceps tendon. This was in consequence of that part being shut off from the rest of the cavity by the flexed position of the joint while the injection was made. Six experiments were made in the way already described; and, in six others, a third tube was introduced through the anterior recess under the quadriceps tendon. When this was done, the whole of the membrane of the joint was stained blue. The inference which Jaschke draws is that, as the synovial membrane was stained at all points, the injection of water, solution of carbolic acid, or other fluids, in cases of suppuration, will reach all parts of the joint, when applied through tubes arranged in the manner described.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE PATENT PORTABLE TURKISH BATH.

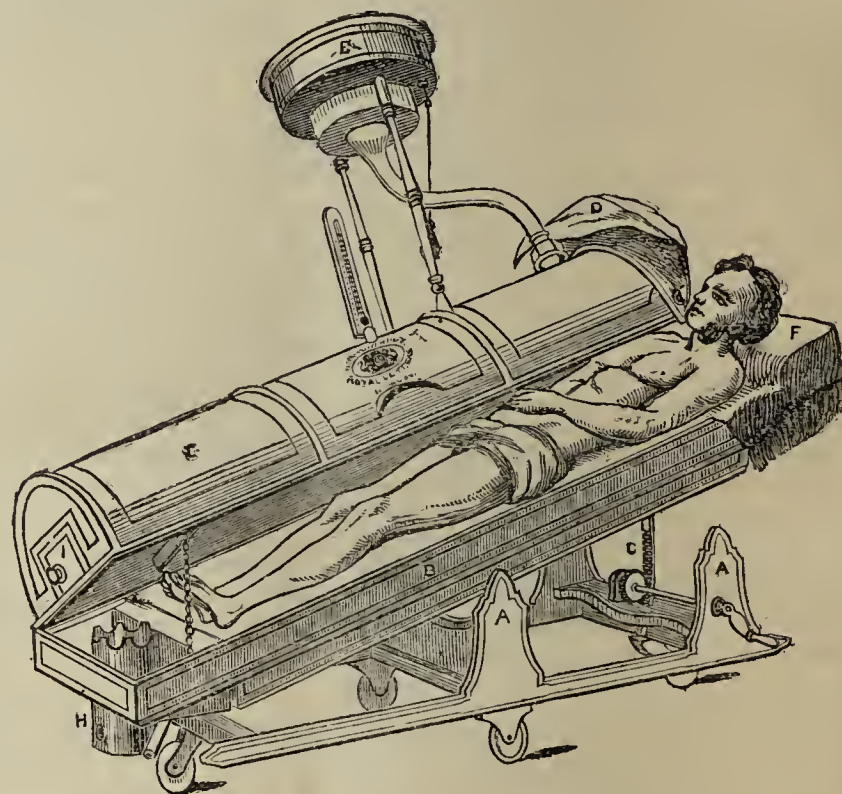
THIS invention is designed to supply to the public a portable Turkish bath in a complete and simple form. The advantages of the patent over the ordinary public Turkish bath are these. It secures absolute privacy. The heat can be raised in less than ten minutes to 180 deg. Fahr., and to the full temperature of 220 deg. Fahr. in fifteen minutes. The heat is obtained from gas, spirit, or other suitable means; it is under perfect control, and can be maintained at any degree up to 220 deg. Fahr. that may be required. There is every facility for shampooing; the arrangements in this respect leaving nothing to be desired. A shower-bath is attached, by means of which a copious discharge of tepid or cold water can be suddenly or gradually, at the pleasure of the bather, or attendant, as the case may be, be made to flow.

One of the great advantages of the patent Turkish bath is its port-

ability. It can be turned completely round in a space a little more than its own length, which is about that of an ordinary couch. It can be taken to the bedside of an invalid and brought to a level with the bed, by means of a rack and pinion, so as to cause the least possible amount of inconvenience to the invalid. It can also be used as a medicated or vapour bath, and is supplied with the necessary requirements for these purposes. An ordinary domestic servant can take it to pieces, and re-adjust it in a few minutes, great care having been taken by the manufacturers to render the whole apparatus as easy of management and as simple as possible.

Although the patent Turkish bath has been described as portable, the same apparatus is constructed so that it can be fixed in an ordinary bath-room.

It differs from the ordinary Turkish bath in two essential particulars. The head may, if required, be kept out of the bath in the cool air. The bath offers in this respect one of the advantages of the sand-bath, in which the entire body, with the exception of the head, is covered. It is probable that the therapeutic effects of the bath, with and without the exposure of the head to the heated air, may be very different. It might be supposed that the comparatively small hot chamber of the portable Turkish bath would be insufficient, and that the atmosphere would become immoderately saturated with moisture, and reduce the bath in this way to a vapour bath; but we can affirm that, after employing the bath on several occasions, we have not felt this to be the case in any material degree.



A A. The carriage upon which the bath rests, the wheels of which are so arranged that the whole apparatus can be turned completely round in a space little more than its own length. B. The frame and spring-mattresses fitted with centres to the carriage A A, and forming the bottom of bath. C. Enamelled metal cover, hinged to frame B, forming chamber for heated air. D. Waterproof and air-tight apron to prevent escape of heated air at the top of the bath. E. Cistern for shower bath. F. Pillow, with hinged head-board, to turn up when the bath is not in use. G. Rack and pinion for raising or lowering the bath to the level of a bed, for use of an invalid. H. Heating apparatus.

The patentees and sole manufacturers are Messrs. Wyatt and Jones, 189, St. John Street Road, Islington, E.C.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

HISTOLOGY AND OSTEOLOGY.—Professor Humphry gives notice that the class for Practical Histology will meet at the Anatomical Museum on Tuesdays, Thursdays, and Saturdays, during July and August, at 9 A.M., commencing on Tuesday, July 1st. The class for Human Osteology will meet on Mondays, Wednesdays, and Fridays, at the same hour, commencing on Wednesday, July 2nd.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 21ST, 1873.

THE ARMY MEDICAL SERVICE.

WE devote a considerable space to-day to the report of a statement made to Mr. Cardwell, on the part of the Parliamentary Bills Committee of the Association, on behalf of the army medical officers, who are aggrieved by the provisions of the recent Army Medical Warrant, and by the method adopted in carrying it out. Communications on the subject have been received from a considerable number of army medical officers, and great pains were taken to ascertain that the details of the statement made, and of the suggestions offered, were such as wise and experienced members of the service endorse as reasonable, equitable, and, indeed, necessary to restore the department to a sound footing. If the unification of the department involve, as it probably must do, the removal of officers from regiments to which they have been long attached, at least the change should be effected so as to cause the least possible inconvenience. The men should be absorbed, the changes carried out gradually; and, where a medical officer has paid a handsome sum for his regiment, he has certainly an equitable claim to compensation, either by direct repayment, as was done in the case of over-regulation payments of combatant officers on the abolition of purchase, or by some equivalent method. The questions of forage, of quarters, of expenses for uniform, etc., matters which have been unfavourably influenced by the recent Warrant, will, we have some reason to believe, be satisfactorily settled. There are other broad questions, which it was thought opportune to raise. The Army Medical Service will, we believe, from many communications which we have received before and since the deputation, be grateful to the Association for its timely advocacy of their just claims. Mr. Cardwell showed every disposition to "consider very carefully" all the details of the question. His reply will not probably be long delayed, and it will be anxiously anticipated. He has a good opportunity of achieving a valuable result by judicious and kindly concessions. No great things have been asked, and we trust he may be able to grant what is claimed at his hands.

THE FORTHCOMING ELECTION AT THE COLLEGE OF
SURGEONS.

ONE hundred and sixty provincial Fellows of the College of Surgeons have within the space of a very few days expressed the opinion that the interests of the profession require that the provinces should be duly represented in the governing body of the College: they have at the same time made choice of a candidate whom they consider to be a fit and proper person to represent them in the Council. It must be expected that they will now use their best efforts, and make the necessary sacrifice of time and trouble, to secure the success of Mr. Southam, by attending personally at the College to tender their votes in his favour on the day of election. Country Fellows, and especially those connected with medical schools, may rest assured that the forthcoming election will involve an issue of considerable importance to the interests of medical education throughout the country. As at present constituted, the Council of the College includes but one actual representative of the provin-

cial schools, in the person of Mr. Turner; for, although Dr. Humphry is a provincial surgeon, still his connexion with his University isolates him from direct identification with the schools of the provinces. If, therefore, the seat about to be vacated by Mr. Turner be not filled by a candidate chosen from among the provincial Fellows, they will not only be deprived of their sole representative, but their chance of success at a future election will be greatly lessened, as they will then have to displace a metropolitan Fellow to make way for their own candidate; whereas on the present occasion all they seek for is, the maintenance of the moderate share of representation which they have hitherto enjoyed.

That our contemporary the *Lancet* should ignore the plain right of the provincial Fellows to a share of representation in the Council of their own College, and should sneer at their candidate, is significant, but not surprising, since it has long since ceased to represent anything but a very narrow metropolitan clique of the West-end hospitals. It is not, however, to be assumed that the metropolitan Fellows are indifferent to the claims of their provincial brethren. We believe, on the contrary, that they will show themselves well disposed to support the rights of the country Fellows to be represented in the Council; and we confidently claim for Mr. Southam, as the representative of the provincial schools, the support of independent metropolitan Fellows. In voting for a provincial candidate, they will recognise the principle involved in the last charter of the College, which transformed it from a London institution into an institution including in its scope and interests the whole of England. Provincial Fellows may be reminded, however, that an important principle is at stake in this election—a principle worth contending for, and one which will amply repay any efforts made to secure it.

The election of a candidate who has already obtained the suffrages and promised support of one hundred and sixty Fellows might be regarded as tolerably certain, were it not for the special difficulties under which the country Fellows labour, in consequence of the necessity of voting in person. For this a remedy might be found in the future. On the present occasion, however, the result will largely depend upon the personal attendance of every Fellow prepared to support the unquestionable rights of the provincial surgeons of England to representation in the Council of the College. The metropolitan Fellows, we hope, will vote for the provincial representative, though provincial Fellows should certainly feel it a point of honour to attend for the purpose.

SPECIAL HOSPITALS.

WE have on various occasions pointed out that one of the evils accompanying the institution of special hospitals is the immodesty and inaccuracy of the professional claims which are publicly put forth in glorification of the medical officers who attend them, and who have commonly founded them for the good of the human species and the expansive exercise of their own talents. We lately had occasion to notice the immodest pretensions put forth in the reports of the Cancer Hospital, which so far deluded the innocent chairman of the annual meeting, that he imagined that the medical officers really had claims to the possession of methods of treatment unknown in other hospitals, and could shew such success in treatment that their skill should be trumpeted "not only throughout this country, but throughout the civilised world;" as accordingly was done in the columns of the daily papers. We read now in the *Pall Mall Gazette* of Tuesday a paragraph which sets forth that "a bazaar in aid of the funds of the Hospital for Diseases of the Throat—one of the most important of the special London hospitals, and an institution which has proved of considerable value to the progress of medical science, by the improved methods of operation which its honorary medical officers have introduced—takes place to-day and to-morrow at Willis's Rooms, under the special patronage of the Princess Christian, the Duchess of Cambridge, the Duchess of Teck,

and many of the nobility. The Marchioness of Ailesbury and many other ladies preside at the stalls."

Now we venture to say that this discreditable sort of puffing of the genius of the medical officers, this open bid before an uninstructed public for the glory and profit of possessing "improved methods of operation", is one of those disreputable professional proceedings which are offensively characteristic of special hospitals. It is in the worst taste; it is suggestive of constructive untruth, being easily interpreted into a claim to the possession of secrets unknown to the professional practitioners in other hospitals; and it has a directly degrading and demoralising influence. The professional men who, while aspiring to a high position in their profession, allow such statements to be made in the public papers concerning them—for such a paragraph refers to them—do themselves no honour. It may probably be asserted with truth by them, that they did not read the paragraph, and had no foreknowledge of it; and that they thus decline to be responsible for it. But if Dr. Morell Mackenzie and Dr. Prosser James, and whoever else may be medical officers of the institution, should make this reply, we should still say that they are "solidary" with the institution which they medically administer, and with the officers who thus vaunt its medical administration; and that they cannot easily be held separate in credit from such acts. We venture also to say that such lapses are hardly possible in discreetly conducted institutions. The secretaries and other officials would know beforehand that the medical officers would disapprove of newspaper claims to superior skill, and would rest their claims to public support on other grounds than those of the superior skill of the medical officers. Knowing this, they would not, and do not, venture to allow such claims to be put forward; nor would newspaper writers gather from any one about the hospital that such claims would be allowable, agreeable, or proper. Whosoever may be the lapse, we denounce it on the broad ground that it illustrates one of the bad characteristics of the atmosphere which surrounds special hospitals.

RESEARCHES ON PYÆMIA.

IT may be hoped that Dr. Sanderson's recent researches on infective secondary inflammation may be fruitful in the dissipation of some of the difficulties and obscurities which involve the etiology and treatment of pyæmia. They should stimulate our young English pathologists to follow out this fruitful line of research. We gave recently (BRITISH MEDICAL JOURNAL, May 24th and 31st) an abstract of the more recent researches of German pathologists on the subject, and we now give some account of the yet more recent researches of Dr. Birch-Hirschfeld, for which we are indebted to Dr. Dreschfeld of Manchester.

Dr. Birch-Hirschfeld, on examining daily the pus coming from a wound, found that, with the ushering in of the first symptoms of pyæmia, the pus also showed a corresponding change, consisting in the presence of micrococci, either in pairs, strings, or colonies (the latter especially when pyæmia was far advanced or rapid in its course), and in an altered appearance of the pus-corpuscles, which were finely granular, of less definite outline and lustre, and which showed their nuclei very distinctly without the addition of any reagent.

The *blood* of such pyæmic patients contained similar micrococci, and its white corpuscles had undergone a change very similar to that of the pus-corpuscles. Sometimes the pus of a pyæmic patient would contain, besides these, a quantity of the *bacterium termo* or *bacterium lineola*, which are the common bacteria of most putrescent matter; while micrococcus is, according to Cohn, Klebs, and Hirschfeld, not to be considered the ferment of putrefaction.

Healthy pus coming from a healthy wound or from a simple abscess showed no micrococci and no altered pus-corpuscles, while putrescent pus (either after exposure to air or coming from an unhealthy or gangrenous wound) contained only the bacteria (*termo*, *lineola*, and *bacillus*) due to putrefaction.

The difference between pyæmic and putrescent pus was now further shown by inoculations on rabbits. Healthy pus, injected subcutane-

ously into a rabbit, gave rise only to a local abscess, without any further disturbances. Putrescent pus gave the symptoms of septicæmia, as described by Bergmann, Sanderson, and others—larger quantities only being fatal, and the fever appearing almost immediately after injection, showing the sepsis curve of Bergmann very well; while pus from a pyæmic patient, similarly introduced into a rabbit, gave rise to a different course of symptoms. The animal remained well for five or six days; and this period was followed by one of high and intermittent fever, diarrhoea, emaciation, and eventually and almost invariably by death from the sixteenth to the twenty-fourth day. Pus, blood, and the metastatic changes in such rabbits, showed again all the distinctive pyæmic properties described.

The importance of these researches, which not only show us the important part which the micrococci play in the production of pyæmia, but which also define pyæmia as quite distinct from septicæmia (in opposition to the researches of Tiegel, Klebs, and Eberth), is not to be underrated; but a repetition and further extension of them would be highly desirable. Dr. Birch-Hirschfeld examined the different morbid products without any further reagents.

THE HOSPITAL SUNDAY FUND.

THE amounts of the collections in the metropolitan churches on Hospital Sunday, although they will not exceed, are not likely to fall far short of, the estimated results. The expectations of the Committee did not go beyond thirty thousand pounds for this year, and the total of contributions from all sources is not likely to fall far short of this. The falling off, so far as there has been any, from the previous anticipations, is, oddly enough, chiefly in the Established Churches; the response from all classes of Dissenters having been even more liberal than was anticipated. Enough has been effected, however, to show that much more may be expected in the future. The organisation, although very skilful, and, considering how short a time was at disposal, very complete and very creditable to the Committee, and especially to Mr. Ramsay, the *interim* Secretary of the Committee, and author of Hospital Sunday for London, could not be made all-embracing, as in future years it will. It is a noteworthy fact, that some hundreds of cheques have been received at the Mansion House from persons belonging to congregations whose pastors held aloof from the movement, and who have thus availed themselves of the means of doing a charity of which the opportunity was withheld at the churches where they attended. The work of distribution will begin presently: its principles have already been decided. The fund will be divided among hospitals, dispensaries, and infirmaries of all classes, in proportion to their average annual income for three years, excluding that from endowments and investments and legacies of sums above £100. The Committee will retain the power of withholding grants from charities where it shall appear that the expenses of management are out of proportion to the general receipts and expenditure. Thus a first step will be made towards something like a general censorship of public charities, which cannot fail to be beneficial. Subsequently, we hope that the existence of palpable abuses in the out-patient departments will also be taken into consideration.

BICYCLE CLUBS.

THOSE whom it delights to collect the rising dust on the rapid wheel of the bicycle may be congratulated on selecting a healthful and rational kind of exercise, in which athletes may delight with great advantage to their personal health and little chance of injuring it by excess. It is less trying than rowing, running, or "athletic sports" generally. English lads are slow to undertake novel sports; but we should not be sorry to see a bicycle club added to every public school, and scores of rivals of the feats of the Middlesex Bicycle Club, who have just completed the trip from London to John O'Groat's at an average pace of sixty miles a-day.

DEPUTY SURGEON-GENERAL A. BARCLAY has assumed the duties of the Statistical Branch of the Army Medical Department, in place of Surgeon-General Balfour, who has been appointed Principal Medical Officer at Netley. Dr. Barclay was lately Principal Medical Officer at Edinburgh, and has served for several years previously with great credit in the Statistical Branch under Dr. Balfour.

HOSPITAL SUNDAY IN THE PROVINCES.

"HOSPITAL SUNDAY" in Cardiff was celebrated in the churches for the first time on April 27th last. The balance-sheet, signed by Dr. Alfred Sheen, Honorary Secretary of the Hospital Sunday Committee, which is before us, shews the receipts to have been £442 : 3 : 6, of which a net sum of £409 : 3 was available for the local charities.

THE COUNCIL OF THE COLLEGE OF SURGEONS OF ENGLAND.

THE complete list of candidates for the four vacancies in the Council is announced, in chronological order, as follows. Mr. Francis Hird, Charing Cross (1843); Mr. Haynes Walton, St. Mary's (1848); Mr. Cooper Forster, Guy's (1849); Mr. Edward L. Hussey, Oxford (1849); Mr. John Marshall, University College (1849); Mr. Thomas H. Wakley, Royal Free (1849); Mr. William S. Savory, St. Bartholomew's (1852); and Mr. George Southam, Manchester (1853). It is considered probable that the choice of the Fellows will fall upon Mr. Cooper Forster, Mr. John Marshall, and Mr. Savory, among the metropolitan candidates; and Mr. Southam of Manchester as representing the country Fellows. Mr. H. Smith, finding himself junior on the list, has not sent in his papers. It would be no great stretch of liberality if two country Fellows were admitted to the Council by returning Mr. Hussey of Oxford, as well as Mr. Southam of Manchester.

AN UNPUBLISHED LETTER OF DR. JENNER.

THE following highly interesting extract from an unpublished letter written in 1805, by Dr. Edward Jenner to Mr. John Bolton, of Savannah, Ga., is published in the *Virginia Clinical Record*:—

"Cheltenham, September 8, 1805.

"My dear Sir,—You were good enough to express a wish, during our conversation on the subject, to be acquainted with my history as far as relates to the vaccine discovery. I will, therefore, give you the following outline. Pray make what discretionary use of it you please, but don't publish it, as I think it would dishonour my country. Near thirty years ago my researches into the vaccine disease commenced. Although much accustomed from my earliest years to the investigation of subjects in natural history, I found this so involved in obscurity, so intricate and complex, that I did not develop it to my complete satisfaction till the year 1798, when, in a publication, entitled *An Enquiry into the Causes and Effects of the Variola Vaccine or Cowpox*, I immediately laid the whole before the world. My situation at this time was that of a physician in full and lucrative practice in my native county, Gloucestershire. But, being necessitated to quit my situation in the country and live in London, in order to establish the new practice, my increased expenses, and the subtraction of my former professional income, reduced my possessions from a state of plenty to that state which gave me some alarm. In this situation I made an explanation to Parliament, and was heard. £10,000 was the sum proposed by one member as a compensation, and £20,000 by another. The lesser sum was voted, the Minister, Mr. Addington, alleging that he should certainly have consented to a grant of the large sum, but was well convinced that my practice in town would speedily and amply remunerate me. I made the trial, and, according to my own expectations, failed. It could not well be otherwise, as I had concealed nothing, but, on the contrary, took the greatest pains during my residence in town to make everyone as good a vaccine inoculator as myself. Whereas, had I (looking forward to the amassing of riches more than diffusing the incalculable advantages of the discovery) kept it a secret, my fortune might have been made to any extent. This opinion was given in evidence before the Committee of the House of Commons by some of the medical gentlemen of the metropolis. I am now again a resident, for the most part, in Gloucestershire, and, from a combination of circumstances which I need not detail, am doomed to feel the pressure of an expense of more than £500 *per annum*, without scarcely any provision being made for me. The vote of Parliament having done little more than make up the losses and expense incurred in the prosecution of that inquiry which led to the fortunate discovery and establishment of Vaccine Inoculation—a dis-

covery which, I trust I may be allowed exultingly to say, will add more to the stock of human happiness than any which has preceded. Believe me, dear sir, with every good wish, your obliged and very faithful humble servant, EDW'D JENNER."

ANOTHER LADY HOUSE-SURGEON.

DR. ELIZA WALKER has been appointed House-Physician to the Bristol Hospital for Women and Children, in accordance with the vote passed by the Governors last week, to the effect that future medical and surgical appointments in that institution should be open to lady candidates.

BIRMINGHAM LADIES' ASSOCIATION FOR THE MEDICAL EDUCATION OF WOMEN.

AN Association has been formed, having for its objects—1. To obtain admission for women, as students of medicine, into Queen's College, Birmingham; 2. To obtain admission for female medical students into the hospitals of Birmingham, for the purpose of study; 3. To promote generally the medical education of women; 4. To render assistance to ladies desirous of becoming students of medicine.

RISK FROM FIRE OVER STABLES.

THE recent lamentable fire in Grosvenor Mews has, says the *Pall Mall Gazette*, suggested to Dr. Whitmore, the medical officer of health for the district, a few remarks in his last report, not only as to the risk which persons living over stables are exposed to from fire, but as to the general objections to such dwelling-places from a sanitary point of view. Each of the 128 mews in Marylebone contains an average of from twelve to fifteen stables, the lofts of which, with but few exceptions, are in part occupied by human beings. At a most moderate calculation, the number of persons so living in the parish cannot be less than 4,000, while the horses beneath them are double that number. As a general rule, the staircase leading to the dwelling-rooms rises directly from the stable; so that, when the room-doors are open, there is nothing whatever to keep out the close and vitiated atmosphere of the stable, which, in warm weather, becomes most offensive, and on sanitary grounds objectionable in the highest degree. To open the window is merely to admit the aroma from the manure-heap immediately beneath, or not far off. The situation is clearly not a pleasant one; but Dr. Whitmore points out that the persons living under such unfavourable conditions do not, in Marylebone at least, seem to suffer in health. These are, he says, in no degree more subject to fever or other contagious diseases than other inhabitants of the parish, and certainly not so much as the poorer classes generally. This is explained by the fact, that the class of persons living in the mews suffer little or no privations, but enjoy a fair share of the comforts of life, and are thereby enabled to resist malarious influences.

HOW SMALL-POX IS SPREAD.

AT the ordinary meeting of the Board of Works for the Greenwich district on Thursday, June 12th, Mr. Thomas Norfolk in the chair, Dr. Pink, the medical officer of health, made a report on the circumstances attending the removal on Saturday last of a seaman suffering under small-pox from a Norwegian ship lying in the Surrey Commercial Docks to the Seamen's Hospital at Greenwich, where he was twice refused admission, and thence conveyed to the Stockwell Small-pox Hospital; the whole journey from Rotherhithe to Greenwich, and afterwards to Stockwell, being performed in a public cab hired by the captain of the vessel. Dr. Pink said the cab had to pass through some of the most populous portions of the metropolis; and, as he had had his attention drawn to similar cases which had occurred recently, he thought it time that the Board made an effort to stop these frequent and dangerous conveyances of small-pox infection from place to place in the district. He recommended that an application be made to the Local Government Board to induce the City authorities to carry out the duty which they undertook at the passing of the Public Health Act, to appoint a medical officer of health for the port of London, one of whose duties would be to prevent vessels from passing Gravesend which had on board men suffering from

disease. On the motion of Mr. G. B. Richardson, member for the district at the Metropolitan Board, seconded by Mr. H. Pook, the clerk was directed to draw up and transmit a statement of the facts to the President of the Local Government Board, with a request for a movement, such as that suggested by Dr. Pink, on the part of sanitary authorities of the port of London.

HARVEY TERCENTENARY MEMORIAL.

A LIST of subscribers to this Memorial has been recently published, from which it appears that the sum already contributed amounts nearly to £750. Lord Derby (the Chairman of the London Committee) and Baron M. de Rothschild have each given twenty guineas; the Archbishop of Canterbury, Duke of Devonshire, Earl Granville, Bishop of Exeter, Lord Pelham, Mr. W. H. Smith, M.P., Professor Rolleston, Professor Huxley, and other influential persons have also sent large donations. A meeting of the Executive Committee was recently held, at which Dr. Burrows, Sir William Gull, Dr. Sibson, Dr. Quain, and Mr. George Eastes (the London Honorary Secretary) were present, when it was determined that a public meeting should be held at an early date at the Royal College of Physicians, which has been kindly offered for the purpose by the President and Fellows. It is hoped that the Prince of Wales will preside on the occasion; but nothing definite respecting the matter can be settled until the festivities at court, occasioned by the visit of the Shah, are drawing to a close. There is now every prospect of the erection at Folkestone, the birth-place of Harvey, of a first-class memorial-statue of the father of English physiologists. Dr. Burrows and Sir James Paget will be proposed at the next meeting of the General Committee, as joint-treasurers, in the place of the late Dr. Bence Jones. Mr. Eastes requests us to mention that all donations may be sent by crossed cheque to him, or to the Memorial Fund, at the Western Branch of the Bank of England, Burlington Gardens, London.

CHOLERA.

THIRTEEN cases of cholera, with five deaths, were reported on June 11th to have taken place among the Polish boatmen on the Vistula, above Dantzic. In Dantzic itself and its neighbourhood, no cases had occurred.—A report from Dresden, dated June 4th, states that two cases of cholera occurred during the previous week on board two Elbe boats. In each case, the origin of the disease was traced to Bohemia. One of the patients died; the other recovered. No other cases had occurred in the city.

MEDICAL REPORT UPON BUCHAREST (ROUMANIA).

A MEDICAL report has been issued with regard to Bucharest, from which we glean some interesting information. The hospitals and asylums of Bucharest are numerous, and, according to the statements of British medical men who have visited them, they bear favourable comparison with the principal establishments of a similar kind on the Continent. The Brancovana Hospital was founded in 1837 by the Brancovana family; it is endowed with considerable revenues, and is under the management of a council of which the metropolitan is the president. It makes up 215 beds, to which 100 can be added if required. The Military Hospital has 300 beds, and has two branch establishments making up 130 beds. All the other hospitals of the city are under the direction and control of an ephory, administered by the descendants of the principal founders. These establishments are the Culza Hospital, with 200 beds; the Philanthropic, with 160 beds; the Pantelemonu, with 120 beds; the Asylum of Marcutza, accommodating 220 insane persons; the Hospital for Children, with 100 beds; the Asitu Eleni, for 220 orphan girls; and the Lying-in Hospital, for 40 women. The relief afforded at these establishments is invariably gratuitous. The Jews have likewise a hospital in Bucharest, with 20 beds exclusively for the use of their own community. The sanitary state of Bucharest, and, indeed, that of all Roumania, is far from satisfactory. The fevers of the Lower Danube are virulent in the extreme; pulmonary complaints, scrofula, and insanity prevail extensively. Angina diphtherica has

also been raging in epidemic form, especially among children, for some years past. One of the saddest signs of Roumanian affairs is reflected in the movement of the population. Whilst the annual budgets are based upon an increase in the population, there is really a decrease, the number of deaths exceeding that of the births. The following statement from the report now referred to is significant. "Our country is moving with fearful rapidity towards its destruction and the waste of its powers of life, if we turn our attention to the statistics of births and deaths. Thus, in the statistical annals of 1866, the movement of the population of the country was: births, 130,857; deaths, 158,275; excess of deaths, 27,418; from which, deducting 24,034 deaths from cholera recorded in the same statistical annals, there still remains an excess of 3,384 deaths over births, a result of the saddest description." With regard to the city of Bucharest, the movement of the population in respect of births and deaths, was as follows: in 1867, births, 4,776; deaths, 5,975; excess of deaths, 1,197; 1868, births, 4,688; deaths, 5,033; excess of deaths, 165. Thus, without war or cholera, the number of deaths in Bucharest is still in excess of the births. It may be thought that this cruel sign of the decay of the country arose from general climatic causes, from the unhealthiness of localities, or from the prevalence of particular diseases beyond the control of man. This, however, it is stated, is not the case; and a proof of it is, that the Israelitish population in the country is not subjected to the law of excessive mortality. Thus at Bucharest, in 1867 and 1868, the following results are shown:—Jews born in 1867, 408; died, 221; excess of births, 187; 1868, Jews born, 464; died, 248; excess of births, 216. At Jassy, for the first quarter of 1872, we have the following figures:—Jews born, 1,030; died, 446; excess of births, 584. According to the facts thus brought to light, it is certain that the excessive mortality amongst the Christian population of Bucharest, etc., cannot be attributed to climatic influences, the unhealthiness of the place, or to any particularly virulent disease, as such causes would operate with equal effect upon the Jewish residents. This excessive mortality, therefore, is attributed by good local authorities to the different manners, customs, and mode of life of the Christians as compared with those of the Jews; for it is a remarkable fact that not only do Roumanians die in larger numbers than they are born, but the same may be said of all Christians, whatever their nationality, resident in the country. The report thus significantly concludes:—"Foreigners who come to our country adopt our customs, and, as a rule, the bad ones first; they begin to eat as we eat, and from this entrance into our social system we may account for their being included under the law of mortality by which the Jews, who remain aloof, having different manners and a different mode of life, are not influenced."

THE RECENT DEATH FROM CHLOROFORM AT BROADMOOR.

DR. ORANGE, Superintendent of the Broadmoor Asylum, writes to us on this subject.

"With reference to the case of death under chloroform which occurred recently in this Asylum, and which was noticed in the BRITISH MEDICAL JOURNAL of the 24th ultimo, I desire, with your permission, to make a correction as to the strength of the mixture of chloroform-vapour and air which was used. It was stated that chloroform was administered with Clover's apparatus, and that at the time of commencing the operation the bag contained 11,000 cubic inches of air, in the proportion of 25 minims of chloroform to each 1,000 cubic inches. Since the notice of the case was published, the apparatus has been carefully examined by Mr. Clover and by the maker (Mr. Coxeter) in my presence, with the result of showing that the quantity of air which the bag was supposed to contain was over-estimated, and that, instead of there being 11,000 cubic inches, the quantity was probably not more than 8,400 cubic inches, which would make the proportion $32\frac{3}{4}$ minims of chloroform in every 1,000 cubic inches, or 3.76 per cent. This over-estimation of the amount of air arose from the fact that the bellows were stiff from unfrequent use, and did not measure out the full quantity of 1,000 inches at each inflation which they were supposed to measure; and, as in using the apparatus in question, it is of great importance that the administrator should have no doubt as to the exact strength of the vapour inhaled, I have suggested to Mr. Coxeter, that if

the number of cubic inches which every bag is capable of holding were marked upon it, ready means would be thereby afforded for checking the correct action of the bellows."

THE UNIVERSITY OF BERLIN.

THE number of matriculated students in the University of Berlin during the summer session is 1,590. In the winter, there were 1,918, of whom 652 have left, while 324 new students have joined. The faculty of theology comprises 170 pupils, law 465, medicine 340, and philosophy 615. Besides these, the lectures are attended by 61 students of pharmacy, 10 of dentistry, 133 pupils of the Frederick William Institute, and 52 of the Medico-Chirurgical Military Academy. There are also 1,205 other persons attending the lectures, making a total of 3,051. Of the 1,590 matriculated students, 1,270 are Prussians (247 being in the medical faculty), 106 Germans of other states (23 medical), 7 Austrians and Luxemburgers (2 medical), 131 natives of other European states (43 medical), and 76 from countries beyond Europe (25 medical). Of the foreigners, 24 are Russians, 12 Asiatics, and 11 Americans. The number of matriculated students has decreased by about 300 below the average of the ten years 1860-1870. The *Berliner Klinische Wochenschrift*, in commenting on this diminution, says that it depends less on the increased cost of living, than on the imperfection of the arrangements for teaching. No other university in the world is so strong in the materials for instruction, and in none other is scientific labour carried out to a greater extent; but the manner in which the material is distributed is faulty. The material for clinical teaching is abundant; but, instead of being distributed among a number of teachers, so that it may be made useful to the students, it is concentrated in a few hands. Our contemporary asks how it is that so many students go to Vienna rather than to Berlin, and he finds the answer in the different arrangements of the two universities. While concentration is the rule in Berlin, every department in Vienna has its special clinical teacher, who has abundant material at his disposal. He further points out that the Berlin University has no great general clinical hospital like that of Vienna; there being only a surgical clinic and a lying-in institution attached to the university, and the only hospital available for clinical teaching being the Charité, which is not regulated with regard to university interests. He advocates the building of a great University Hospital, with means for teaching scientific and practical medicine in all their departments.

IRELAND.

DUBLIN SANITARY ASSOCIATION.

THE first annual meeting of this Society was held on June 11th; Lord James Butler in the Chair. The report read showed that the Association now numbers 236 members; and that during the year 482 nuisances were reported by the Society to the Public Health Committee of the Corporation with only a certain amount of success, many nuisances having been reinspected and reported several times before any adequate means had been taken for their removal; and in some cases no steps whatever appeared to have been taken to abate nuisances of long standing. It is quite evident that the sanitary machinery in the hands of the Corporation is not only quite insufficient for the work, but that which at present exists is not employed with as much vigilance and discretion as might be desired. The current expenditure for sanitary purposes in Dublin is represented by a trifle over three farthings in the pound on the Poor-law valuation, or at the rate of twopence a head of the population, a sum which will require to be considerably augmented before we can expect Dublin to be healthier and the death-rate lower than at present. The Association, indeed, have charged the Public Health Committee with an apathy and indifference in regard to the sanitary condition of affairs in Dublin that can scarcely be refuted. Should another epidemic break out soon—such as cholera—it will find us as unprepared for it as we were for the late visitation of small-pox. There is no isolated hospital near the river for cases arriving in port;

no systematic supervision of shipping, nor sufficient accommodation in connection with the existing hospitals; no adequate means for the removal of the sick, nor sufficient arrangements for the disinfection of houses, clothes, etc.; and no convalescent home for persons recovering from infectious diseases. The registration of births was also alluded to, and the suggestion was made that the law in England which provides that no one shall be buried without a certificate of registration should be extended to Ireland. The Association, under the auspices of the Royal Dublin Society, gave a course of scientific lectures on matters relating to public health, which attracted large audiences; and it is to be hoped that, by gradually educating the minds of the citizens to a proper knowledge of sanitary subjects, these lectures may have done good service; but it must be remembered that this instruction must not be spasmodic, but be continuously pressed on every possible opportunity, so as to engage the attention of both rich and poor. We wish the Dublin Sanitary Association success in their task—one of Herculean proportions, and which will require constant and vigilant attention for its success.

CASE OF ICHTHYOSIS.

DR. E. D. MAPOTHER, of St. Vincent's Hospital, Dublin, has at present under his care an instance of the above rare disease. The patient is a woman, aged 42, who first noticed the affection about two years ago. The forearms and front of the thighs and legs are the parts affected, the colour resembling the upper surface of the turbot, and divided in quadrilateral masses; the cuticle can be removed in plates about two lines in thickness, leaving a raw abraded surface exposed. There is abnormal dulness of the cardiac region, owing evidently to hypertrophy of the heart, arising from the checking of secretion and irregularity of circulation in the cutaneous vessels. The disease is, of course, incurable; but Dr. Mapother's patient has obtained relief by using daily tepid baths containing six ounces of washing soda, and inunction with equal parts of glycerine and cod-liver oil.

ETHER *versus* CHLOROFORM AS AN ANÆSTHETIC.

THE committee appointed last winter by the Surgical Society of Ireland to investigate and examine this vexed question, have had returns furnished them from various hospitals in Dublin which have used ether and chloroform in various operations up to April last. In 200 operations, the longest time any patient was rendered insensible by ether was eighty minutes, and the shortest two minutes; the maximum quantity of ether used was eight ounces, and the minimum one ounce; the oldest patient operated on was aged seventy-four years, and the youngest four years; vomiting took place eleven times. Chloroform was administered in only nine cases; the longest time a patient was under its influence was fifteen minutes, and the shortest four minutes; the largest quantity used was four drachms, and the smallest one drachm; the oldest patient was forty-six years of age, and the youngest seven years; in three instances sickness of stomach took place. No death nor any disagreeable incident occurred when either ether or chloroform was given.

DISEASED MEAT.

LAST week, in Dublin, a butcher named O'Brien was convicted of having a quantity of diseased meat in his possession for sale, and sentenced by the presiding magistrate to three months' imprisonment with hard labour without the option of a fine. A few more convictions like this will do more to stop the trade in unsound meat than all the pecuniary penalties that could be inflicted.

THE REQUISITION TO MR. SOUTHAM.

THE following additional names were appended to the requisition to Mr. Southam published at page 686 of last week's JOURNAL. R. Jones, Leamington; J. H. Keeling, Sheffield; T. Sympton, Lincoln; R. Bowes, Richmond; G. F. Bodington, Kingswinford; C. P. Stevens, Biggleswade; C. W. Jenner, Hunmanby; Jonathan Wilson, Withington; Charles Bradley, Langport; Junius Hardwicke, Rotherham; E. Holroyde, Clitheroe.

THE RECENT ARMY MEDICAL WARRANT.

DEPUTATION TO THE RIGHT HONOURABLE MR. CARDWELL,
SECRETARY OF STATE FOR WAR.

A DEPUTATION of the Parliamentary Bills Committee of the British Medical Association waited on Mr. Cardwell, Secretary of State for War, on Friday last, at the House of Commons. The deputation consisted of Sir William Fergusson, Bart., F.R.S., President of the Metropolitan Counties Branch; Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee; Mr. F. Fowke, General Secretary; Dr. Farquharson, Surgeon-Major Haverty, Mr. J. Lord, Mr. Curgenvin. The Director-General, Sir F. G. Logan, and Sir Henry Storks, were with Mr. Cardwell.

MR. ERNEST HART, in opening the business, said: Sir,—The subjects I have to bring before you are rather numerous, so that I think it hardly possible to be excessively brief, but I will confine my observations within as short a limit as possible.

MR. CARDWELL: As you have been kind enough to come here, I shall place myself entirely at your disposal.

MR. HART: I attend as Chairman of the Parliamentary Bills Committee of the British Medical Association, an association including on its list about five thousand members of the medical profession, spread throughout the country, a large number of whom are officers of hospitals belonging to the three kingdoms, and which has appointed delegates from each of its twenty-one branches to sit on this committee. This deputation is a small one, because we understood that that arrangement would be more convenient to you. The British Medical Association have a sort of historical connection with the subject. As you are probably aware, on an earlier occasion, the British Medical Association took an active part in representations to one of your predecessors in office on the subject of rank and remunerations of the medical officers of the army and navy; and those representations were followed by the appointment of a mixed Military and Civil Commission, which issued a satisfactory report, and the changes that ensued had a very favourable effect in improving the position of medical officers, and strengthening the service. Since the issue of that Warrant there has been, on the whole, a tolerable state of satisfaction throughout the medical department, and the teachers in schools have felt themselves able to advise their students to enter the service. As to the present Warrant, the civil department of the profession, and the army medical department, have been disposed to concur with what appeared to be the general objects of the Warrant; although there are many persons of consideration who have thought it would be desirable that there should have been a formal statement on the face of it, of its apparent object, the unification of the departments. There are, however, among the provisions of the Warrant, many which have caused a discontent, not confined to any one rank, but universal throughout the Army Medical Service, and representations have been made to the Parliamentary Bills Committee from medical officers of all ranks, and from all parts of the country, which they think right to bring under your notice, so that, with your permission, I propose very shortly to go through some of the paragraphs of the new Warrant to which our attention has been called. I will also, with your leave, refer to one or two matters of importance which are relevant, but which are outside the four corners of the Warrant. [MR. CARDWELL: Certainly.] The first subject has reference to paragraph 3. The general effect of this paragraph will, it is considered, be to take away the additional 2s. 6d. per day which was formerly granted to assistant surgeons of more than fifteen years' service. Now in answer to the statement that it does so, it has been alleged, that the present arrangement will result in many officers receiving their promotion and 20s. a day after less than fifteen years' service. Now in answer to that, we have to point out that there is nothing on the face of the Warrant to establish such a constitution of the senior service as would lead to this result, nor is there anything on the face of that Warrant to secure the promotion of all medical officers after fifteen years, and that no such guarantee has yet been given. Our attention has been called to the fact, that in India, medical officers are promoted under regulations after twelve years' service. It is admitted, that if the proposed change be carried out (all vacancies being filled up as they occur, besides special promotion of seventy surgeons in 1874, and fifty in 1875), promotion from the rank of surgeon will for the future be very much more rapid than it has hitherto been. Nevertheless, it might happen, at some future period, that medical officers might be found serving as surgeons with over fifteen years full pay service, and in view of this, it will give much satisfaction if the former ruling be still carried out, a surgeon of fifteen years full-pay service receiving an extra 2s. 6d. per day, or that an absolute rule of promotion after fifteen

years' service be established. Now we come to the fifth paragraph, which states that the relative rank of these officers shall regulate choice of quarters, rates of lodging-money, servants, fuel and light (or allowances in their stead), detention and prize money, as well as allowances granted on account of wounds or injuries received in action, and pensions and allowances to widows and families; except that, in the case of medical officers attached to regiments, their choice of quarters shall be according to their seniority. In reference to that paragraph it has been pointed out that the omission in the last part of it of the word "precedence", as one of the advantages of relative rank, will lead to disagreeable results. Its omission is all the more marked, in view of the fact that it was one of the advantages distinctly inserted in a former warrant. The question of choice of quarters is likely to be injuriously affected by the wording of that paragraph; the effect, in fact, will be, that the medical officer will be the junior of three field officers, and no better off than a senior captain. The obvious result of this will be to interfere with the status as well as comfort of medical officers; and it is highly desirable that the rights of a medical officer to choose his quarters should depend on his relative rank and the date of his commission. On looking into the question of relative rank a little more broadly, we find a wide-spread opinion that a general re-adjustment of relative rank is desirable.

MR. CARDWELL: This is one of the subjects you mentioned as outside the Warrant.

MR. HART: Yes. I will not make any lengthened remarks upon the subject, therefore, but will merely submit to you the following, as an outline of what we believe would be an equitable and advantageous re-adjustment of relative rank of medical officers.

a. Two years is long enough for a medical officer to hold the rank of subaltern, considering that the rank of cornet and ensign is now practically abolished.

b. There is now no reason for retaining the qualification, "junior of the rank", in the case of surgeons-major of twenty years' standing.

c. The deputy surgeon-general should rank as a colonel at once instead of waiting five years.

d. The rank of brigadier-general having no substantive existence, the surgeon-general ought to rank as major-general on promotion. At present the inferior rank deprives him of allowances, and his widow of a proportion of her pension.

e. The director-general, as the head of a large and important department, ought to rank as lieutenant-general.

The ranks would then be as follows:

Surgeon under two years' service, lieutenant.

Surgeon over two years' service, captain.

Surgeon-major under twenty years', major, according to date of commission.

Surgeon-major over twenty years', lieutenant-colonel, according to date of commission.

Deputy surgeon-general, colonel, according to date of commission.

Surgeon-general, major-general, according to date of commission.

Director-general, lieutenant-general, according to date of commission.

Passing from the question of relative rank, we come to paragraph 6, which states that forage shall be granted to the officers of the Army Medical Department for such number of horses as are necessarily kept by them for duty. On that subject a strong and universal opinion has been held, that the omission from this paragraph of the usual forage allowance, as one of the advantages to which officers above the rank of surgeon are entitled, is highly objectionable. Medical officers are by this ruling liable at any moment to be deprived of an allowance which is essential to a proper maintenance of their position, and which has been an appanage of the ranks in questions ever since the department has existed. It may be answered that a similar rule is to be applied to combatant officers: but the duties of combatant officers are so much more clearly defined than those of medical officers, that no difficulty will arise with them; while a medical officer does duty under circumstances so variable, that he is liable to considerable loss by the operation of a rule which depends not upon his rank and position, but upon the various circumstances of his duties; and, virtually, the privilege would often be inoperative. We submit that all medical officers ought to be ready and able to mount a horse as well as to manage it. In the new Saxon Army Medical School, modelled after Netley, instruction in horse-riding is a capital point in the teaching; and medical officers are taught not only to be thorough masters of a horse and encouraged to ride, but are instructed in all that relates to its care in stable.

MR. CARDWELL: The officers would hardly like the latter, would they?

MR. HART: Every officer who has a horse in the German army, combatant or non-combatant, gets that instruction. Efficiency in riding

is essential to the usefulness of an army surgeon, and he ought to be encouraged by every means to keep a horse. Horse allowance has been considered an appanage of rank among combatant officers. A field-marshal is allowed twenty-four horses, not because he wants that number, but because it is in accordance with his rank. The application of the present rule will amount, in a large number of cases, to the mulcting of those who have had a diminution of their pay to the extent of 1s. 6d. or 2s. per day, as no other allowance has been made. In support of the Warrant, it has been pointed out officially that it is not necessary an officer should be the possessor of a horse, but that there should be one always available. This is, however, not always possible. Where it is possible to have a horse, it is not always available for a medical officer to have a horse suitable for a charger. Under many circumstances, a medical officer would have to buy and sell a horse at a great loss, under the pressure of the Control Department; but whether he is obliged at the moment to keep a horse or not, he ought to be allowed a horse allowance, according to his rank. I will now refer to paragraph 13, which states that in cases of distinguished service a surgeon, if qualified, may be promoted to the rank of surgeon-major without reference to seniority; and in such cases the recommendation detailing the services for which the officer is proposed for promotion shall be published in the general order of the army, and in the *Gazette* in which such promotions shall appear. What we have to urge in respect of this paragraph is, that a strong feeling prevails that all that is necessary to meet its requirements is to give medical officers, whom it is proposed to reward for distinguished service, brevet rank; so that while receiving just reward they shall not do so at the expence of their less fortunate brethren. That brings us to the question which is touched on in paragraph 8—*The Removal of Medical Officers from Regiments*. Now, sir, it is unfortunate, considering the general objects of the Warrant, that it does not arrange for the removal of officers from their regiments, when necessary, without entailing a hardship on the individual. To that point we address ourselves. It is considered that compensation should be made to officers required by this Warrant to move from regiments and subject to financial loss on removal, just as compensation was given to combatant officers for over-regulation payments on the abolition of purchase. In many cases considerable sums have been paid for succession to regimental appointments by medical officers—sometimes many hundreds of pounds—and this would in the ordinary course have been repaid to them by their successors. These arrangements have been as perfectly well known to the military authorities as were over-regulation payments in the combatant ranks. They will at present be fined to that extent. We would suggest that a committee should be appointed to consider what reasonable compensation should be given to medical officers suffering from the new Warrant in respect of removal or retirement. Further losses will be incurred in respect to uniform, equipment, and exchange expenses; and these, too, deserve consideration by such a committee. It is stated that medical officers will be relieved from contributions to bands; but it is not stated whether they will be required to subscribe to messes, or whether they will be allowed to remain as honorary members, paying only when they dine. I will now refer to paragraph 20. It states that medical officers shall have a right to retire on half-pay after twenty years' service. That medical officers of the rank of surgeon-major or surgeon shall be placed on the retired list at the age of 55, and all surgeons-general and deputy surgeon-generals at the age of 65 years, unless in any special case it would be for the good of our service that the officers should continue in retirement. With regard to this paragraph, we have to express our opinion that the arrangements are inadequate to secure a healthy run of promotion in the higher departmental ranks, and the changes suggested are as follows. All surgeons-general who have completed thirty-two years' full-pay service, and five years in that rank, to be placed on the retired list, excepting in peculiar cases, when the exigencies of the service require that they should continue longer in active employment. All deputy surgeons-general who have completed thirty-two years' full-pay service, and seven in that rank, to be placed on the retired list, excepting as in paragraph A, which provides that any of the retired officers under *a* and *b* are to be eligible to the selection of appointments to director-general. A better retiring allowance of surgeons-major twenty-years' service on full-pay.

We have had the matter investigated, and the result of the investigation is, that 17s. 6d. per day is a proportionate amount for retirement at the end of fifteen years, according to the expectations of life, and on a scale which corresponds with the terms of retirement after twenty-five years' service. Taking 17s. 6d. at twenty years would be a very fair allowance, as compared with twenty-five years' service. I beg to hand in a statement of these calculations.

[This statement is as follows.

A better rate of retirement for surgeons-major at twenty years'

service; 17s. 6d. a day is suggested for the following reasons: It is the proportionate amount according to the expectation of life that corresponds to the retirement which can be claimed at twenty-five years' service without a medical board. At twenty-five years' the daily amount which can be claimed is about 18s. 10½d. *per diem*, or £340 *per annum*. At the ordinary expectation of life, age taken at forty-six years, this is worth £4,986 at 3½ per cent. This last sum, at twenty years' service, the age taken at forty-one years, would yield £313, or about 17s. 1½d. *per diem*. At twenty-five years' service an officer might continue to serve nine years more in his rank, and would then retire on 20s. *per diem*. At twenty years' service he might serve for fourteen years until this retirement is reached. The following results are submitted:

Present value of 17s. 6d. a day, retirement at 20 years' service	£4986
Pay of a surgeon at 10s. a day in his place.....	825
Total	£5811

Value of surgeon-major's pay after 20 years' at 24s. a day for 5 years	£1981
Value of pension of 18s. 10½d. a day at 25 years' service	4986*

* This being 5 years' in re-
version its value would
only be about £4000
Add as above..... 1981

Deduct as above...	£6967
	5811

Total	£5981
Deduct as above.....	5811

Gain to the state	£1156
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Gain	£170
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If the officer remains till attains the age of 55, we have, value of five years' pay at 24s. a day	£1981
Ditto of nine years' at 27s. a day	3653
Value of pension of 20s. a day at the age of 55	4434
	£10068

Rever-
sionary
value.
£1981

(5 years forborne) 2256

(14 years forborne) 2946

Value of the above in reversion	7183
Value of 17s. 6d. a day at 20 years' service	4986

Gain to the state	£2197
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This would be about equalled by the pay of the junior officer necessary to supply the duty, but the state would be no loser.]

Now, there are one or two other matters outside the Warrant which I should like to touch upon. A half-pay medical officer cannot count more than six months temporary half-pay towards service, while combatant officers count the whole period of temporary half-pay towards it; and that is felt to be a great disparity, and not based upon apparent equity. We have also to ask you to reconsider the pay and retirement of the administrative ranks. It is thought that a higher rate of payment should be given to administrative ranks (surgeons-general and deputy surgeons), and a limited tenure of office, say five years for a surgeon-general, and seven or ten for a deputy. A deputy surgeon-general to be allowed the retiring pay of the superior rank if compelled to go before promotion to that rank. Administrative officers retired on half-pay, as above, to be eligible for the post of director-general. In 1804 (nearly seventy years ago) the administrative ranks were as well paid as now.

I will refer very briefly to some other matters outside the Warrant, because you will at once appreciate the meaning of our suggestions. In the first place, it is thought that the salary of Director-General of the Army Medical Department should be £2000 a year. It is now one-quarter less than it was sixty years ago, when the department was smaller, and there was a separate head for the Ordnance Medical Department. It is also felt that in hospitals supreme command ought to rest with the principal medical officer, and that army hospital corps ought to be commanded and officered by army medical officers. As regards the special circular issued respecting hospital duties, 6th March, 1873, I might say there are great complaints that there is a large increase of responsibility thrown on medical officers, and that they are made liable for pecuniary losses in the material of the hospital, and by the defalcations of others, being liable to be mulcted in pay and

subject to great inconvenience, without any means of making up the loss ; and I am told there have been two cases in point—one, the case of the Herbert Hospital at Woolwich some years ago, and that recently at Netley, where there were considerable losses, which are now being subject to inquiry. It is also pointed out to us, that the Committee of 1857 especially suggested that when the Army Medical Department was organised, medical officers should be liberated, whenever possible, "from all duties not strictly professional—a change indispensably necessary for the efficiency of the medical officers, in order to enable them to devote more time to the higher duties of their profession, and the better to perform the sanitary duties with which we have now charged them" (Sidney Herbert to General Peel, Secretary at War, 9th July, 1858). Now, sir, this concludes the observations on the various paragraphs which I have to make to you. We are satisfied that you will give them due consideration, because you will feel that the army medical officers have strong claims to your consideration. A special ground of consideration is, that medical officers engaged in the study of medicine have to enter the service at a later age than combatant officers, losing at least four years' service towards pay, promotion, and pension, and that their pay and allowance are then given in full of all demands, they having no share in the number of lucrative staff offices open to other branches of the army. We are influenced in addressing you now by the desire to restore to the Army Medical Department the satisfaction and contentment it has enjoyed until recently, to enable us to recommend young men of adequate qualifications from the schools to enter the service ; and I am satisfied that, having done so, I may rely that you will give your best consideration as to how far the present arrangement can be modified to meet the feelings of the army medical officers.

Mr. CARDWELL : I am sure you have brought forward this subject with remarkable clearness and ability, and in a manner which entitles you to all possible consideration. I can only say that every point you have advanced shall be most carefully considered by me. As I understand you, the general objects of the Warrant you are inclined to approve ; and therefore it is only on points which may be considered points of detail, though in some respects important points, that I may be expected to reply. In the first place, you speak of the contentment that prevailed before the Warrant, which you consider will diminish that content, and although you think it might have gone a little further, you are satisfied with it as to having gone a considerable way. Then the point with regard to the 2s. 6d. per day having been left out of the Warrant in respect of a few officers who in a few weeks would reach promotion. That point, you think, should be considered ; but you scarcely can attach very great weight or importance to that, I think.

Mr. HART : What we complain of is, that no definite statement in that respect appears in the Warrant, and such statement, we think, there ought to be.

Mr. CARDWELL : You wish to have it established as in the Indian staff ; but I am afraid I cannot hold out much hope that such a condition shall be inserted in the Warrant. Last year, in the case of the Engineers, we abstained from putting anything of that sort into the Warrant. But you insisted more strongly, I think, on the question of forage than on any other.

Mr. HART : That was one of the points.

Mr. CARDWELL : Could you explain to me in detail what your view is on the question of forage, which you call an appanage of rank.

Mr. HART : We consider that a medical officer should be entitled to a certain allowance for forage, according to his rank, whether he keeps a horse or not at the time.

Mr. CARDWELL : So that you consider that he should not only be enabled to keep one or more horses, but have an actual addition to his pay whether he kept a horse or not.

Mr. HART : It has hitherto been given him in addition to his pay, and as an inducement for him to keep a horse, which he otherwise would not be able to do.

Mr. CARDWELL : Take a surgeon of Artillery ; he would be entitled, according to his relative rank, to have four horses. It surely cannot be considered necessary for a surgeon to have his four horses.

Mr. HART : What we ask is that their privileges shall not be withdrawn with regard to forage ; that those who have had it before shall still be allowed to have it.

Dr. FARQUHARSON : I think all we ask for is that surgeons may be allowed to keep a horse if they choose, under all circumstances, their privileges in this respect being restored to their former position before the issue of this Warrant.

Mr. CARDWELL : I think there should be some definite understanding on the point. You consider whatever number of horses rank would entitle him to he should have forage for ; and that he should receive it as part of his pay, quite irrespective of his being obliged to keep a horse.

Sir HENRY STORKS : You are aware that formerly every surgeon of the staff had forage for a horse, which he drew on account of pay, but he was bound to certify that he did keep a horse. The question was raised at Malta some time ago, whether a chaplain was bound to keep a horse or not. It was then decided that a chaplain was not obliged to be mounted, but that he should be obliged to certify that he had always a horse ready for public duty. That was considered a very great boon, and I think a surgeon should have the same thing ; but we have never in the army considered horse allowance as part of a man's rank, but only for professional duties. I do not think it was ever considered necessary for the surgeon of a regiment to have four horses.

Mr. HART : He would be called upon, under the present Warrant, to keep one horse always ready in one place, and on removing, would have to sell it, thus causing great loss and inconvenience. We ask now for forage for relative rank, as granted in the Royal Warrant of October 1st, 1858, and afterwards confirmed by Lord De Grey and Ripon (by special minute), when Secretary of State for War ; failing that, a scale according to rank of consolidated allowances as given to officers of the Royal Engineers (to be in lieu of all allowances for lodging, fire and candle, and travelling within five miles of the place where they are stationed), as laid down at Article 184 and 185, Royal Warrant, pay and promotion ; December 27th, 1870.

Mr. CARDWELL : Well, then, the next question you put forward is that which relates to removal of surgeons from regiments. Now I quite agree that there should be an endeavour to give effect as much as possible to that reasonable proposition of yours, that changes should be made so as to cause the minimum of inconvenience to individuals ; but I cannot hold out any encouragement to you to hope that Parliament is likely to vote a sum for compensation for the abolition of the system of payment for exchanges which has been alluded to. There are, however, a great number of detailed subjects which have been mentioned, some of them within the Warrant, and some without. Perhaps it would be better that they should be written down, and that I should return you a careful written reply, rather than that I should attempt to go through them *seriatim* now.

Mr. HART : As to compensation for the removal of medical officers from their regiments, many of whom have incurred under the new Warrant a loss of £600, £700, or £800, do you not hold out any hope that there will be some special consideration given to the question of compensating them ?

Mr. CARDWELL : I do not think you will be able to bring it within any of the principles where compensation has been given for the abolition of purchase in the army.

Mr. HART : And as to their appointment to dépôt-centres as a sort of compensation ?

Mr. CARDWELL : Every consideration will be given to new appointments in order to do justice to everyone ; but I do not think we can include in that a recognition of payments which had no legal basis or official authority. Besides, I do not think Parliament could be asked to grant money for such a purpose.

The right honourable gentleman having again promised to give every consideration to the subject and to forward a reply, the deputation thanked him for the very courteous and attentive reception they had received, and withdrew.

THE ANNUAL MEETING, 1873.

WE have the pleasure of directing attention to the programme of the ensuing annual meeting which appears in the present number. It speaks for itself in most respects ; and, with regard to some supplementary details, we shall reserve what we have to add till next week, when some particulars can be given as to the nature of arrangements for discussions, foreign visitors, etc. The subscription-fund towards fitting up the place of reception, providing a public luncheon for all comers on the three days of meeting, supplementary public entertainments, arranging and superintending the museum, and other necessary matters, amounts already to nearly seven hundred pounds, of which about five hundred are paid. The full amount promised, and probably more, will be required to make all the arrangements contemplated, and to render this meeting worthy of its object as a great metropolitan reception of an Association which has now grown to such dimension as to include a full representation of the profession throughout the three kingdoms, and to have afforded the profession in all parts of the kingdom the means of uniting its forces in all matters of public concern, and of becoming an acknowledged and important power in the state. We have some ground to hope that, in its social, scientific, and political characters, the forthcoming meeting is not likely to be eclipsed by any which has preceded it. At least, no efforts are being spared towards that end.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTY-FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

The business of the Annual Meeting will be transacted in six Sections, viz.:—

SECTION A. MEDICINE.—*President*: Dr. Sibson, F.R.S., London. *Vice-Presidents*: Dr. Habershon, London; Dr. Eason Wilkinson, Manchester. *Secretaries*: Dr. John Murray, 42, Harley Street, London, W.; Dr. Silver, 2, Stafford Street, Bond Street, W.

SECTION B. SURGERY.—*President*: John Hilton, Esq., F.R.S., London. *Vice-Presidents*: W. S. Savory, Esq., F.R.S., London; Dr. George Buchanan, Glasgow. *Secretaries*: Henry Arnott, Esq., 6, Nottingham Place, London, W.; Dr. Alexander Ogston, Aberdeen.

SECTION C. OBSTETRIC MEDICINE.—*President*: Dr. Braxton Hicks, F.R.S., London. *Vice-Presidents*: Dr. G. H. Kidd, Dublin; Dr. Leishman, Glasgow. *Secretaries*: Dr. J. H. Aveling, 1, Upper Wimpole Street, London, W.; Dr. A. B. Steele, Liverpool.

SECTION D. PUBLIC MEDICINE.—*President*: Dr. Lyon Playfair, C.B., M.P., F.R.S., London. *Vice-Presidents*: G. W. Hastings, Esq.; T. J. Dyke, Esq., Merthyr Tydfil. *Secretaries*: Dr. Corfield, 10, Bolton Row, Mayfair, W.; Dr. Baylis, Birkenhead.

SECTION E. PSYCHOLOGY.—*President*: Dr. Harrington Tuke, London. *Vice-Presidents*: Dr. Radcliffe, London; Dr. Thurnam, Devizes. *Secretaries*: Dr. Blandford, 71, Grosvenor Street, London, W.; Dr. S. W. D. Williams, Hayward's Heath, Sussex.

SECTION F. PHYSIOLOGY.—*President*: Professor Humphry, M.D., F.R.S., Cambridge. *Vice-Presidents*: Dr. Rutherford, London; Dr. Ransom, F.R.S., Nottingham. *Secretary*: Dr. McKendrick, Edinburgh.

TUESDAY, August 5th.

10 A.M.—SERVICE AT ST. PAUL'S CATHEDRAL.

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.

WEDNESDAY, August 6th.

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN E. ERICHSEN, Esq., Senior Surgeon and Holme Professor of Clinical Surgery in University College Hospital, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College, London.

1 to 2.30 P.M.—PUBLIC LUNCHEON.

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.

SATURDAY, August 9th.

EXCURSIONS.—By permission, the following among other Excursions will be arranged:—

Excursions to Cliefden, near Maidenhead, the seat of the Marquis of Westminster; and to Windsor Castle.

Excursion to Brighton, and visit to Brighton Aquarium.

Visit to Woolwich Arsenal and the Factories.

Arrangements will be made, of which further details will be published,

for facilitating visits during the week to the Print and MSS. Rooms of the British Museum, the Mint, the General Post Office, the Private Collections at Grosvenor House, Stafford House, etc., and to some leading Factories.

*** Communications as to the Meeting may be addressed to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, Lincoln's Inn, W.C.

The Honorary Local Secretaries are—

Dr. A. P. STEWART, 75, Grosvenor Street, W.

Dr. A. HENRY, 16, Brunswick Square, W.C.

Dr. S. WILKS, 77, Grosvenor Street, W.

GEORGE W. CALLENDER, Esq., F.R.S., 47, Queen Anne Street, W.

ERNEST HART, Esq., 59, Queen Anne Street, W.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will take place in the rooms of King's College, during the first week of August 1873.

The Committee appointed to take charge of the arrangements for this museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

It is intended that the surgical instruments, etc., shall be *bonà fide* novelties, or improvements on those in common use. The Committee will be greatly obliged to exhibitors if they will send in their contributions as early as practicable.

Pathological Department.—The pathological part of the Museum will be arranged in the following departments—*a.* Diseases of brain, injuries to head, etc.; *b.* Diseases of heart and blood-vessels; *c.* Diseases of lungs; *d.* Diseases of abdominal and pelvic viscera; *e.* Malignant diseases; *f.* Diseases of eye and ear; *g.* Diseases of skin; *h.* Syphilis; *j.* Fractures and dislocations; *k.* Congenital deformities; *l.* Diseases of the lower animals; *m.* Miscellaneous.

Exhibition of Patients.—It is intended to arrange for the exhibition of living subjects of disease at special hours. Those intending to bring forward such, must give notice at least a fortnight before the meeting, and state the time at which it will be most convenient to them to attend. A written description of the case must also be sent. Notice of the hours fixed for each demonstration of this kind will be printed in the catalogue.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibitions of complete series of instruments, as electro-therapeutic apparatus, and instruments for physical diagnosis. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc. A department will be provided for the exchange or sale of duplicate photographs, casts, etc.

Catalogue.—It is intended to print a catalogue, which will be as complete as circumstances may permit. The Committee earnestly request those who intend to exhibit to bear in mind that it is impossible that descriptions, etc., can be included in the catalogue *unless sent in early*. They should be received at least a fortnight before the meeting, that is, not later than July 16th.

Communications, objects intended for exhibition, etc., may for the present be addressed to the private care of any of the members of the Museum Committee, or to Mr. FRANCIS FOWKE, at the office of the BRITISH MEDICAL JOURNAL. During the week preceding the meeting, all articles should be sent direct to the Library, King's College, and addressed to the care of the Curator of the Museum of the British Medical Association.

The following is a list of the Museum Committee; to any member of which communications, etc., may be addressed—Mr. Jonathan Hutchinson, *Chairman*, 4, Finsbury Circus, E.C.; Dr. George Buchanan, 193, Bath Street, Glasgow; Dr. Cayley, 58, Welbeck Street, W.; Mr. Richard Davy, 33, Welbeck Street, W.; Dr. Dickinson, 11, Chesterfield Street, Mayfair, W.; Dr. C. Hilton Fagge, 11, St. Thomas Street, E.C.; Dr. Gordon, 1, Howard Street, Belfast; Dr. Green, 74, Wimpole Street, W.; Mr. Furneaux Jordan, 22, Colmore Row, Birmingham; Dr. Charles Kelly, 94, Wimpole Street, Cavendish Square, W.; Dr. Moxon, 6, Finsbury Circus, E.C.; Dr. John William Moore, Dublin; Dr. Payne, 6, Savile Row, W.; Dr. A. Silver, 2, Stafford Street, Old Bond Street, W.; Dr. Heywood Smith, 2, Portugal Street, Grosvenor Square, W.; Mr. George Southam, 10, Lever Street, Manchester; Dr. Grainger Stewart, 19, Charlotte Square, Edinburgh; Dr. H. G. Sutton, 9, Finsbury Square, E.C.; Mr. C. G. Wheelhouse, Hilary Place, Leeds; Dr. Wilks, 77, Grosvenor Street,

W.; Dr. C. Theodore Williams, 78, Park Street, Grosvenor Square, W. The *Honorary Secretaries* are Mr. Waren Tay, 10, Finsbury Pavement, E.C., and Mr. Francis Fowke, 37, Great Queen Street, W.C.

MIDLAND BRANCH.

A MEETING of the above Branch will be held in the Board Room of the General Hospital, Nottingham, on Saturday evening, June 21st, at Seven o'clock, when a paper will be read by Sir Henry Thompson, F.R.C.S., Surgeon to University College Hospital, etc., on Urethral Stricture.

JOSEPH WHITE, *Honorary Local Secretary*.

Nottingham, June 17th, 1873.

The annual meeting of the above Branch will be held in the Board Room of the Leicester Infirmary, on Thursday, July 10th, at 2 P.M.; H. LANKESTER, Esq., President-elect.

Dinner at the Bell Hotel at 5 P.M. Tickets, 7s. 6d. each.

Members wishing to read papers, or to be present at the dinner, are requested to give immediate notice to the undersigned.

THOMAS BLUNT, M.D., *Honorary Secretary*.

St. Martin's, Leicester, June 17th, 1873.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting of this Branch will be held in the New Town Hall, Warrington, on Tuesday, June 24th, at One o'clock; CHARLES WHITE, Esq., President-elect.

Communications promised:—Dr. Noble: Particulars of Treatment in a Case of Pneumothorax. Dr. Lyster: Case of Intermenstrual Pain. J. Mathias, Esq.: Complications of the Puerperal Condition liable to be mistaken for Peritonitis. Dr. Oxley: Strangulated Umbilical Hernia; Operation; Recovery. Dr. Steele: Injection of Perchloride of Iron in *Post Partum* Hæmorrhage. Dr. Ransome: Instruments for Chest-Measurement. J. H. Gornall, Esq.: Tetanus successfully treated with Chloral Hydrate. Dr. Wallace: One Hundred Cases of Forceps Delivery.

Dinner will be provided in the "Mess House", at Five precisely. Tickets, 7s. 6d., exclusive of wine.

By the kind permission of Colonel Blackburne, the Band of the Fourth Lancashire Militia will perform a selection of music.

Members intending to dine, are reminded that accommodation can be promised to those only whose names shall have been sent to the undersigned not later than this day's (Saturday) post.

A. B. STEELE, *Honorary Secretary*.

54, Rodney Street, Liverpool, June 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Great Western Hotel, Birmingham, on Tuesday, June 24th, at 3 P.M.

An address will be delivered by the President, FURNEAUX JORDAN, Esq., F.R.C.S.

The annual dinner will be held at 5 P.M., for the convenience of country members.

Dinner tickets, including waiters and dessert, 7s. 6d. each.

Members intending to be present at the dinner, are requested to communicate with the Honorary Secretaries on or before June 20th, in order that suitable arrangements may be made.

T. H. BARTLETT, F.R.C.S. } *Honorary Secretaries*.
BALHAZAR W. FOSTER, M.D. }

Birmingham, May 20th, 1873.

CUMBERLAND AND WESTMORLAND BRANCH.

THE annual meeting of this Branch will be held at the Bush Hotel, Carlisle, on Wednesday, June 25th, at 1 P.M. *President*, T. S. CLOUSTON, M.D.; *President-elect*, R. TIFFEN, M.D.

Gentlemen intending to read papers, or bring forward cases, are requested to give immediate notice to the Secretary.

HENRY BARNES, M.D., *Honorary Secretary*.

Carlisle, June 3rd, 1873.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE annual meeting of this Branch will be held at Carmarthen, on Friday, June 27th, under the presidency of G. J. HEARDER, M.D.

Nominations for membership, whether of the Association or Branch, and titles of papers proposed to be read, to be forwarded without delay to one of the undersigned.

ANDREW DAVIES, Swansea, } *Honorary Secretaries*.
ALFRED SHEEN, M.D., Cardiff, }

SOUTH EASTERN BRANCH.

THE twenty-ninth annual meeting of this Branch will be held at three o'clock on Wednesday, July 2nd, at the Assembly Rooms, Ashford; EDWARD GARRAWAY, Esq., of Faversham, President-elect.

Dinner will be provided at five o'clock, at the Saracen's Head Hotel; tickets, 7s. 6d. each.

Previously to the business meeting, a trip to Eastwell Park will be arranged, for which carriages will leave the railway station at one o'clock.

The Works of the South-Eastern Railway Company, the Parish Church and its ancient Tombs, the Cemetery, the Cottage Hospital, and the Open-air Swimming Bath, may also prove interesting.

Members are privileged to introduce friends to the day's proceedings.

G. F. HODGSON, *Honorary Secretary*.

Brighton, June 17th, 1873.

NORTHERN BRANCH.

THE annual meeting of the above Branch will be held in the Library of the Newcastle-upon-Tyne Infirmary, on Thursday, July 3rd, at 2 P.M.; G. Y. HEATH, M.D., President, in the Chair.

Dinner at the Turk's Head Hotel, at 5 P.M. precisely. Tickets, 12s. 6d. each.

G. H. PHILIPSON, M.D., *Honorary Secretary*.

Newcastle-upon-Tyne, June 16th, 1873.

SOUTH WESTERN BRANCH.

THE annual meeting of the above Branch will be held at Callington, on July 3rd, at 12 noon; J. KEMPTHORNE, F.R.C.S., President-elect.

The dinner will take place at Golding's Hotel, at 6 P.M. precisely. Tickets, 7s. 6d. each, exclusive of wine.

An excursion will be made to King Dungarth's grave and Trevethy Cromlech, thence to the Hurlers (Druidical remains) and the Cheeswring.

Members wishing to read papers or to join the dinner, are requested to communicate, on or before June 25th, to the Honorary Secretaries.

The South Devon, Cornwall, and West Cornwall Railway Companies, will grant members return tickets to or from any of their stations to Liskeard or Plymouth, available from July 2nd to 4th inclusive, at single fares, on production of ticket of membership.

JOHN WOODMAN, F.R.C.S. } *Acting Honorary*
LOUIS TOSWILL, M.B. } *Secretaries*.

2, Chichester Place, Southernhay, Exeter, June 9th, 1873.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Belvoir Hotel, Rhyl, on Tuesday, July 8th, at 1 P.M.; R. DAVIES, Esq., of Llanfair-talhairn, President.

The dinner will be at 4 P.M. Tickets, including waiters and dessert, 7s. 6d. each.

Members who have cases to report or papers to read, and those who intend dining, will please to communicate, as soon as possible, with the undersigned.

D. KENT JONES, *Honorary Secretary*.

Beaumaris, June 9th, 1873.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held at the Bristol Library and Institution, on Thursday, July 10th, at 3.30 P.M.; EDWARD LONG FOX, M.D., President, in the Chair.

The business of the meeting will be to receive the Report of the Council; to elect the officers of the Branch, and nine representatives to the General Council for the ensuing year; to transact the necessary business and to discuss such subjects connected with the interest of the Branch and of the profession as may be brought before it.

Members who have not paid their subscriptions, are requested to do so to the Local Secretaries, at or before the annual meeting, in order that the accounts may be made up before the anniversary meeting of the Association.

The dinner will be held at the Royal Hotel, College Green, Bristol, at 6.30 P.M. Tickets, including ice and dessert, 7s. 6d. each.

The Bristol Secretary particularly requests that those members who intend to be present at the dinner will send in their names before Monday, July 7, in order that the necessary arrangements may be completed.

E. C. BOARD, Bristol. } *Honorary Secretaries*.
R. S. FOWLER, Bath. }

Bristol, June 16th, 1873.

METROPOLITAN COUNTIES BRANCH.

THE twenty-first annual meeting of this Branch will be held on Tuesday, July 15th.

Further particulars will be announced in next week's JOURNAL.

A. P. STEWART, M.D.

ALEXANDER HENRY, M.D.

} *Honorary Secretaries.*

London, June 18th, 1873.

EAST YORK AND NORTH LINCOLN BRANCH.

THE annual meeting of this Branch was held at the Hull Infirmary on May 28th, 1873; J. MORLEY Esq., (of Barton-on-Humber), President, in the Chair.

New Members.—The following were elected to the Branch. A. Atkinson, Esq., Hull; W. W. Bolton, Esq., Beverley; W. W. Cooper, Esq., Sneinton, Nottingham; T. St. C. Healey, Esq., Hull; W. K. Henson, Esq., Hull; J. Hollingworth, Esq., Hull; W. Holder, Esq., Hull; W. Kelsey, Esq., Hull; J. Stothard, Esq., Hull; H. Thompson, Esq., Hull.

Officers.—The following were elected. *President-elect*: G. F. Elliott, M.D. *Honorary Secretary and Treasurer*: R. H. B. Nicholson, Esq. *Committee*: Sir H. Cooper, M.D.; R. M. Craven, Esq.; J. Dix, Esq.; H. Gibson, Esq.; J. F. Holden, Esq.; K. King, M.D.; W. J. Lunn, M.D.

Half-Yearly Meeting.—It was decided to hold the half-yearly meeting at Cleethorpes in September.

Representatives in the General Council.—The President, President-elect, and W. H. Eddie, Esq., of Barton-on-Humber, were elected.

Representative on Parliamentary Committee.—Sir H. Cooper, M.D., was elected.

Papers, etc.—The following papers and cases were given. 1. Introductory Remarks, by J. Morley, Esq. 2. Amputation at the Hip-joint, by Dr. K. King. 3. Six Cases of Stone, by R. M. Craven, Esq. 4. Two Cases of Stone, by J. Dix, Esq. 5. Case of Lithotripsy, by R. H. B. Nicholson, Esq.

A Dinner was held at the Vittoria Hotel, which was well attended.

CORRESPONDENCE.

MEDICAL ADVERTISING AND MEDICAL FEES.

SIR,—I have received from the College of Physicians an intimation that it is no longer to be considered proper that any medical work from my pen should be advertised in the public press; excepting, of course, the medical press. Now, sir, in the first place, this concerns the publisher more than it concerns me; for my past books are all sold outright to a medical publisher, and, in respect to those which I am now preparing, he has assumed the risk of publishing them, the right of controlling the business treatment of them, their form, shape, advertising, etc., and pays me half the profits, if any. Now, sir, it seems to me that the College of Physicians must treat first with the publishers, and then with me. If Messrs. Churchill and Messrs. Smith, Elder, and Co., are willing to forego the usual announcements of new books, they may yield assent to the College dictum; but I doubt whether they will assent to the right of the College to dictate to them in what way they shall best conduct their business. On the other hand, if I see Dr. Bristowe's forthcoming *Manual of Medicine*, or Dr. Brunton's *Manual of Therapeutics*, announced by Messrs. Smith, Elder, and Co.; or if I see Churchill's Manuals staring me in the face in the *Times*, I shall feel myself very much aggrieved that my privileges are less than those which belong to the publisher himself; and, in fact, the College order will amount to a prohibition of retaining any interest in one's own books.

I cannot help thinking that this rule savours of the exclusiveness of seniority. I think I saw it suggested in one of your contemporaries, that the Councillors were not averse to kicking down the ladder by which they climbed. The next President of the College of Surgeons is Curling—*On the Testis* I was about to add, for I always connect Mr. Curling's name mentally with *The Testis*; and I should like to know how much of that gentleman's income has been derived from that sort of mental identification in other people's minds, owing to the "excessive advertising", as it would now be called, of his old College essay on the *Testis and Spermatic Cord*. I do not grudge him a penny of his income, or an iota of his well-earned reputation; for there is no more agreeable, kindly, and right-minded man among my acquaintance. But why am I to suffer ignominy for pursuing a course which has led him to fame and fortune? Why am I prohibited from making known in a genteel way to buyers of books that I have devoted attention to

in-growing toe-nail and proudness of the flesh, and am prepared to be considered as a medical authority on the subject, just as he has made the results of his study of the testicle and the rectum?

I look upon this whole affair, sir, as a conspiracy of the old men to starve the young ones. It will, if carried out, retard my advance in practice for ten years, and will keep me starving. I get next to no patients from general practitioners, although I have two hospital appointments, which I have held for nearly ten years. They sneer at me as young (I am thirty-six), and if anybody is to be called in, they prefer Sir William Jenner or Sir William Gull, who charge only the same fee as I am compelled to do by etiquette, and whose presence satisfies better the relatives of the patient, and the self-respect of the family attendant. I have chiefly to rely upon my acquaintances and connexions, and when they see my books advertised they remember me, and consult me and recommend me to their friends. Thus the Colleges propose, as far as I see, to cut me off from an important source of publicity, of which nearly all their senior members have largely availed themselves, without any compensation. If this resolution be carried out, I submit as a set-off, that it should be recommended that "Metropolitan Fellows of the College, of more than ten years standing, shall be required never to receive a less fee than two guineas from any patient." This would be equivalent to taking silk at the bar. Members of the bar who aspire to "lead," are compelled to forego their earlier privileges—they must always lead; and this is considered a necessary protection to junior members who are content to wear stuff. I submit that we ought also to be protected from the ruinous competition of the leading members of our profession, who having reached a "leading" practice, still compete with us at equal fees, and now prohibit us from those means of making known the results of our literary enterprise, which they have themselves enjoyed.

I am, etc.,

JUVENIS SENIOR.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

WINCHCOMBE.—Mr. T. Newman and Mr. Wm. Cox have been appointed Medical Officers of Health to their respective districts in the Winchcombe Union, at £40 each *per annum*.

WEST FIRLE.—Dr. Joseph Charles Sanger has been elected Medical Officer of Health to the West Firle Union. Salary, £50.

GALASHIELS.—Mr. J. Jeffrey Hardesty has been appointed Medical Officer of Health for the burgh of Galashiels, Selkirkshire.

SALFORD.—Dr. J. F. W. Tatham of Manchester, formerly Resident Medical Officer to the Salford Union Workhouse, has been recommended by the General Health Committee to the Town Council of Salford for election as Medical Officer of Health to the Borough, with a salary of £400 *per annum*.

BRIDGWATER.—The Bridgwater Rural and Urban Sanitary Authorities have agreed to appoint a Medical Officer of Health, jointly, at £150 *per annum*, allowing private practice.

NEWCASTLE-UPON-TYNE.—A Committee of the Newcastle-upon-Tyne Urban Sanitary Authority have recommended the appointment of a Medical Officer of Health at £350 *per annum*, which, after discussion, has been adopted.

THE Alton Rural Sanitary Authority have postponed the appointment of a Medical Officer of Health for six months.

POOR-LAW DISPENSARIES.

SIR,—The Poor-law Amendment Act of Lord Brougham abolished the power of overseers to pay medical charges for paupers in parishes where they did not belong, when sick; and, in creating unions and boards of guardians, gave these power to contract for medical attendance and the supply of medicines by advertising annually for tenders. The first mitigation of this unprofessional mode of dealing with the medical profession appeared in a provisional order of the Poor-law Board, sanctioning payments for fractures, dislocations, certain operations, and midwifery fees in certain cases. Next came, speaking from memory—thanks in a great measure to the then Provincial Medical and Surgical Association—the abolition of the system of tender, and the rendering of the tenure of the office of union medical officer permanent during good behaviour. The Government have now advanced

another step—a most important and just one, one pregnant with good to the public, the poor, and the medical profession, by the establishment of dispensaries in the metropolis, and, by their willingness to sanction their creation in unions generally, when obviously not impracticable. It is to this point, the desirability of establishing Poor-law dispensaries, that I desire to draw the attention of all, not merely the members of the profession of medicine.

To get a glance at the shortsightedness of the present system, contemplate the medical officer of a district who does his own dispensing, and who has no pupil. Think of the time he has to spend in dispensing for his private patients, and then for the poor; the stock of preparations with which he has to be prepared, and which he must prepare himself; think of the cost of the drugs; think again of the time thus spent, which might have been occupied to the benefit of the sick pauper in a more careful consideration of his case, with the result, probably, of shortening the duration of his illness, preventing relapse, and enabling him to resume work sooner, and of thus reducing the cost of maintenance by the guardians, and, in some cases, the demand upon the funds of the sick club. These are some of the consequences of contracting for the use (?) of a man's brains, and for preparation and supply of medicines in addition. It can thus be easily seen how the legislature, in humanely providing that no man shall starve, fails in restoring him to health in the shortest possible time. It appears to me that what the Poor-law requires for the sick poor is, that the result of brain-work should be carried out by a class of officers qualified accurately to prepare those medicines which a medical officer ought to feel a pride in prescribing. The legislature has advanced thus far in the metropolis; in the provinces it awaits the "troubling of the waters".

Should Poor-law dispensaries become general, will not the relief from the duty of dispensing personally, or from payment of a dispenser, as well as from the cost of drugs (which often cost more in the value of the time taken to compound them), lead many to come forward to undertake the duties of Poor-law medical officers who now spurn them? Will not the position of Poor-law medical officers be raised in public estimation? Will not the sick poor be benefited more? Will not the public, through the legislature, more surely accomplish their object—viz., the best medical treatment of the helplessly sick?

To the late Government we are indebted for reforms which exist in the metropolis, whilst the present has ably carried to completion what their predecessors commenced. The orders and directions issued to the guardians of the metropolitan unions, and signed by the Hon. Mr. Stansfeld, president, the Hon. H. A. Bruce, and the Hon. Robert Lowe, show their determination that these dispensaries shall be efficiently conducted, as seen in the order that, after a certain date (June 18th, 1871) the dispenser shall be a licentiate of the Apothecaries' Company, or have been duly registered under the Pharmacy Act (1868).

By this order, it appears to me that the principle of contracting with the profession for the supply of medicines is condemned, on the highest authority, as untenable; and it only remains that we, as a body, press the adoption of the new "order" on the boards of guardians. One hardly likes to speak of oneself, but suffer me to do so, as an illustration of the present system. In the workhouse of the Reading Union, there were during the year ending Lady Day 1871, 745 cases; in the year ending Lady Day 1872, 740; in the year just ending, 881. Imagine one spending two hours of the morning, on alternate days, and visiting special cases and passing those that have been since admitted, on the intermediate days; and imagine, then, such an one having in the afternoon to dispense all he has prescribed in the morning; and that by all this labour of brain he is not living, but must get his living from others, and I think you will see with me the justice of establishing Poor-law dispensaries.

The following proposition is, I fancy, politically indisputable. The destitute shall not starve; the sick poor shall be treated in a way to secure their earliest restoration to health; therefore, the country shall be rated for the supply of food, for medical and surgical aid, and for the supply of medicines, not leaving an individual to supply such as he can afford.

There remains one condition to be ceded by the legislature—that is, *the power to claim superannuation*. At present, guardians have the power to grant such after twenty years' service, and after the age of sixty, subject to the confirmation of the Local Government Board, the medical officer having first resigned; but the medical officer can only ask. This state of the law is very hard; and I would that the justice of altering it were felt by Parliament. It appears to me that this subject should not be lost sight of at the coming election. This is not merely a professional question; the public will reap a benefit, in the way which I have pointed out, under the establishment of dispensaries.

I am, etc.,

T. S. WALFORD.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 12th, 1873.

Harrison, Robert Hooper, Regent's Road, Burdett Road
Harle, Ezra, St. Bartholomew's Hospital
Palin, Henry Venables, West Felton, Salop
Rouse, Thomas Matyear, H.M. Prison, Millbank

The following gentleman also on the same day passed his primary professional examination.

Lambert, John, Leeds Infirmary

MEDICAL VACANCIES.

The following vacancies are announced:—

- ALDERBURY UNION, Wilts—Medical Officer for District No. 2: £91 per ann.
BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.
BRIGHTON AND HOVE DISPENSARY—Two District Medical Officers *pro tem.*: £70 per annum.
BUCKINGHAMSHIRE—Public Analyst. Applications to Acton Tindal, Esq., Aylesbury.
CHARING CROSS HOSPITAL—Assistant-Physician.
CHORLTON RURAL SANITARY DISTRICT—Medical Officer of Health: £150 for one year. Applications to W. N. Edgill, Esq.
CLAYTON HOSPITAL and WAKEFIELD GENERAL DISPENSARY—House-Surgeon: £100 per annum, residence, attendance, coals, and gas.
COLERAINE UNION, co. Londonderry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Articlave Dispensary District: £90 per annum, and fees. Applications to Hugh Heylett, Esq., Liffock, Castlerock, Coleraine.
DERBYSHIRE GENERAL INFIRMARY—Assistant House-Surgeon. Applications to Samuel Whitaker, Esq., 4, Victoria Street, Derby.
DRIFFIELD UNION, Yorkshire—Medical Officer for the Wetwang District: £21 per annum, and fees.
HARRIS—Parochial Medical Officer. Application to John Cunningham, Esq., Rodel, Harris, by Stornoway.
H.M.'s INDIAN MEDICAL SERVICE—Eleven Surgeons.
HOSPITAL FOR WOMEN, Soho Square—Assistant-Physician.
KEIGHLEY Rural, and Bingley, Haworth, Oakworth, and Oxenhope Urban, Sanitary Districts, combined—Medical Officer of Health: £200 for one year. Applications to George Spencer, Esq., Keighley.
LEEDS GENERAL INFIRMARY—House-Physician: £100 per annum, board, furnished apartments, and washing.
LEIGH Rural, and Pennington and West Leigh Urban Sanitary Districts—Medical Officer of Health: £400 per annum for three years. Applications to George Dickinson, Esq., Leigh.
LIVERPOOL EYE and EAR INFIRMARY—House-Surgeon: £80 per annum, residence and maintenance.
LIVERPOOL INFIRMARY FOR CHILDREN—House-Surgeon: £80 per annum, board and lodging.
MARTLEY UNION—Medical Officer for the Martley District (£60 per annum), and the Workhouse (£30 per annum).
MERIDEN, Rugby, Solihull, and Warwick Rural, and Lillington, Milverton, Rugby, and Warwick Urban Sanitary Districts, combined: £800 per annum. Applications to H. Consett Passman, Esq., Leamington.
ROTHERHAM HOSPITAL and DISPENSARY—Resident House-Surgeon: £120 per annum, board, and furnished apartments.
ST. GEORGE DISPENSARY, Mount Street—Resident Medical Officer: £170 per annum, and residence.
SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Physician.
SPILSBY UNION—Medical Officer for the Alford District: £43 per annum.
STAINES RURAL SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications to R. H. Horne, Esq.
SURGEONS' HALL, Edinburgh—Lecturer on Physiology.
SURREY DISPENSARY, Great Dover Street—House-Surgeon: £120 per ann., furnished apartments, and coal. Applications to R. G. Minshall Jones, Esq., 190, Tooley Street.
SUSSEX—Public Analyst. Applications to W. J. K. Langridge, Lewes.
TIPTON URBAN SANITARY DISTRICT—Medical Officer of Health: £80 for twelve months. Applications to G. M. Waring, Esq.
TODMORDEN Rural, and Todmorden, Hebden Bridge, and Cornholme Urban Sanitary Districts—Medical Officer of Health: £400 per annum for three years.
TORMOHAM AND ST. MARY-CHURCH URBAN SANITARY DISTRICTS—Medical Officer of Health: £400 per annum for three years.
TRAINING HOSPITAL, Tottenham—Physician.
WANDSWORTH and CLAPHAM UNION—Dispenser: £120 per annum. Applications to John Sanders, Esq., New Wandsworth.
WESTMINSTER HOSPITAL—House-Physician.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL—House Governor and Secretary: £150 per annum, to commence, board and residence.
WREXHAM INFIRMARY and DISPENSARY—House-Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- COURTENAY, E. Maziere, A.B., M.A., Assistant Medical Officer, Derby County Asylum, appointed Medical Superintendent of the District Asylum, Limerick.
FENN, E., Esq., appointed Admiralty Surgeon and Agent, Surgeon to the Admiralty Pier Club and to the Foresters, at Dover, *vice* Dr. J. B. Gill, resigned.
*WILLIAMS, John, M.D., appointed Medical Officer to the Swinton Industrial Schools, near Manchester, *vice* C. J. Farr, Esq., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

PEARSON.—On June 16th, at Stockton-on-Tees, Durham, the wife of *T. R. Pearson, M.D., C.M., of a son.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopaedic, 2 P.M.
WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Quekett Microscopical Club (University College, Gower Street), 8 P.M.
 Dr. Robert Braithwaite, F.L.S. (second paper), "On the Histology of the Plant Structures."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. ALLEN (Dewsbury).—Under 6 and 7 William IV, c. 86 (1836).

MR. BARNES (Rotherham Hospital).—Certainly, in all hospitals of recent construction, the mortuary is isolated from the hospital building, and as certainly it always ought to be. The position described is in every way objectionable and dangerous.

MR. G. COLES.—The qualifications for the Militia are the same as for the army generally.

MR. ROUCH (Bristol).—Duly received, and shall have early attention.

THE CANCER HOSPITAL.

SIR,—In your justly severe but moderate castigation of the report of the Cancer Hospital, you abstained from mentioning the names of the surgeons. Now, Sir, these are the gentlemen responsible, and I think you should, in courageous fairness, mention them by name and challenge them to support their statements.

I am, etc., A HOSPITAL SURGEON.

*** The surgeons are Mr. Alexander Marsden and Mr. John Foster.

DYTE v. ST. PANCRA'S GUARDIANS' APPEAL FUND.

SIR,—Will you kindly allow me space for the appended list, and also to explain to the subscribers to the above Fund that the total subscriptions amounted to £152 8s. 6d., whilst the total of Mr. Dyte's expenses (the law costs on both sides being £234 17s. 4d.) were £288 2s. 6d. He is thus left with a loss of £135 14s., but desires me, whilst conveying his heartiest thanks to the kind friends who assisted him, to say that he does not intend to appeal further to their generosity.

I am, etc., W. BATHURST WOODMAN.

6, Christopher Street, Finsbury Square, E.C., June 19, 1873.

Additional subscriptions (included in total):—Bush, Dr., 10s.; Chaldecott, Dr., 10s.; Drew, Dr., 10s.; Fuller, W., Esq., 21s.; Head, Dr., 20s.; Hawthorne, Dr. F., 10s. 6d.; Howell, Dr., 21s.; Harley, Dr., 10s. 6d.; Hewitt, Dr., 21s.; Hughes, Dr. T. J., 10s. 6d.; Horton, H., Esq., 10s. 6d.; Jackson, J., Esq., 20s.; Macnamara, G. H., Esq., 10s.; Manisty, Dr., 10s.; Manning, F., Esq., 10s.; Meadows-croft, —, Esq., 12s.; Milward, J., Esq., 10s. 6d.; Nason, R., Esq., 21s.; Noble, J., Esq., 21s.; Porter, W., Esq., 10s.; Popplewell, G. W., Esq., 10s.; Robinson, T., Esq., 10s. 6d.; Steer, Dr., 10s. 6d.; Tcevan, W. F., Esq., 21s.; Ward, Dr. Stephen, 21s.; Wilson, Dr., 21s.; Welch, F., Esq., 10s. 6d.; Woodman, Dr., 21s. Smaller sums, £2 8s. 6d.

ARMY MEDICAL SERVICE.—Our correspondent near London will see that the points to which he refers were very fully brought under Mr. Cardwell's notice, and were indeed repeatedly pressed upon him. The subject shall, however, not be lost sight of.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

UNPROFESSIONAL ADVERTISING.

SIR,—As an old Fellow of the College of Physicians, I felt well satisfied last week that the College (following the example of the College of Surgeons) resolved to discountenance the practice of advertising medical works in the daily journals for the edification or disgust of the public. Coming away, however, from the meeting, I remembered that lately, in travelling by a metropolitan train, I was not a little disgusted to find placarded at the railway stations the titles of communications on subjects most unseemly for female eyes and disgusting to lay readers. I was not a little surprised at the unseemly notoriety thus given to medical work of the sort, because the placard was issued by the *Lancet*; and, in a recent number of that paper (May 17th), which I turned up on going home, I found an article (one of many), headed "Medical Advertisements", denouncing the practice of advertising medical works in the public journals, and earnestly hoping that Fellows of the College of Physicians would not be allowed to continue the practice unchecked, lest "smaller fry should descend to even less reputable methods of gaining notoriety." Now, placarding medical papers on the "Rectum" and "Tumour of the Womb" in capitals on advertising boards at railway stations is certainly even a less reputable method of gaining notoriety than "advertising them in a string" in the *Times*, where no one need read them; and I venture to appeal to the *Lancet*, now that the College of Physicians has prohibited the more reputable method of gaining notoriety, that it should include itself in its own category, and desist from the less reputable methods of catching the public which it shares with "the small fry". I make this request the more boldly and urgently, because a Fellow of the College, who was rather noisily and "impetuously" active at the meeting of the College at which this resolution was passed, openly identifies himself with certain leading articles in the *Lancet*.

I am, etc., A SENSITIVE AND RETIRING OLD FELLOW.

P.S.—I have never written a book, so that I am what is called impartial in the matter.

SCOTCHMEN will be amused and at the same time gratified to be told, as something new, that oatmeal is a highly suitable food for children. In the *Bulletin Général de Thérapeutique*, MM. Dujardin-Beaumetz and Hardy have actually discovered the fact. Mixed with cows' milk in a proportion increasing *pari passu* with the age of the child, the above-named gentlemen and MM. Marie and Gillette found oatmeal highly suitable as a food for infants and young children.

HAUD TALI AUXILIO.

We can only refer Mr. Wiblin of Southampton to the BRITISH MEDICAL JOURNAL of last week, for the reasons why we consider such a letter as he asks us to publish wrong in itself, and mischievous and unjustifiable in its tendencies. The gentleman named in the letter has the advantage of being his father's son, and of connexion with the Royal Free Hospital. He is sufficiently well known not to need to resort to such expedients.

SIR,—In your issue of last Saturday, I see figured an instrument for slitting up the punctum and canaliculus. Mr. Greenslade deserves every credit as being the first person to have caused this new little instrument to be constructed. The idea of it is, however, not altogether original, as upwards of twelve months ago I forwarded to Mr. Young, the instrument-maker of Edinburgh, drawings of an almost identical instrument. The shape of the blade was triangular, in form more nearly approaching that of a short flap extraction knife; and I think this shape would be found more useful, on account of the freer opening it would make into the sac.

I am, etc., CHRISTOPHER S. JEAFFRESON.

9, Hood Street, Newcastle-upon-Tyne, June 16, 1873.

** We had in use for some years a spring canaliculus cannula-knife by Luer of Paris, which is identical in principle, and differs but little in shape from that of Mr. Greenslade figured last week. It was, however, apt to rust and get out of order, unless very great care were taken in dismounting and cleaning its parts after use, and we came to prefer using a separate knife and director, as being not less handy and less complicated.

THE BRITISH PROVIDENT SOCIETY.

SIR,—I was very much gratified to see by an advertisement in the JOURNAL, that a Life Office is about to inaugurate the new feature of compensation during sickness to members of the medical profession. How great a boon this may be to hardworking men with moderate incomes, no one can estimate but those so circumstanced. I have had the misfortune to be confined to the house for some weeks, on several occasions, solely through hard work and out-door exposure. At these times, I have, of course, found my small income at a standstill, although my expenses were increased by reason of my illness. This knowledge would almost have driven me to despair, but for the little consolation afforded by having time during the convalescing period of a rummage through my slender ledger for any stray accounts that were either unmade or unpaid.

I earnestly hope the "British Provident" will very soon be able to put their scheme into operation at reasonable rates. When that is accomplished, I doubt not, many of us will be glad to provide, as far as possible, against the inevitable losses attending illness.

I am, etc.,

June 14th, 1873.

HOPEFUL.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

THE BIRMINGHAM PICTURE-GROUP.

MR. LAWSON TAIT, as Secretary of "The Publishing Committee", writes to us on this subject:—

Your criticism on the portrait group of last year's meeting is just enough, at least as to the effect that the picture is inartistically arranged, and that there is an undue prominence of local worthies; but I think your remarks in this direction would have been withheld in charity if you had known the history of the picture, and the extreme amount of trouble and expense it has given to Mr. Thrupp.

First of all, it was intended to have a number of portraits not greater than seventy; but it was found that so many wished to be in whom it was difficult to exclude, that considerably over a hundred portraits were included. The arrangement of the portraits was the great difficulty with which the artist and I had to contend; and a great many plans were tried ineffectually, as making sectional groups, groups by seniority, etc. We had at last to arrange them by size of head, for certain rules of proportion and distance must be observed, and there, at least, the artist has most completely succeeded, as you have pointed out. The reason of the difficulty was that only a small proportion of the members who attended the meeting sat for special portraits, and a large number who did were induced to do so only by repeated personal application. The great majority of the pictures are copies of *carte* photographs sent to me at varying intervals after the meeting, and, of course, these *cartes* were of all possible kinds and varieties, and, to give distinctness, all had to be reduced. If you had seen the material, you would forgive the faults of the picture you deprecate. The picture has cost Mr. Thrupp over £70, so that it will require a sale of at least a hundred copies merely to cover expenses.

* * We hope that many hundred copies may be sold; but we fail, from Mr. Lawson Tait's explanations, to understand how it was necessary, from the circumstances stated, that he himself, for instance, should occupy a very prominent place in the foreground, while eminent men such as Chadwick of Leeds, Waters of Chester, Barnes, Lockhart Clarke, and others are reduced to physical insignificance in distant corners. If the sale should not equal the expectation of the publishers, it will be partly due to the injudicious advice on which they have acted in grouping the figures. We did not complain of the prominence of Birmingham worthies; for at a Birmingham meeting that is very proper, and, to some extent, it would be proper at any meeting.

UNQUALIFIED QUACKS.

SIR,—I beg to enclose you a hand-bill that was given me when passing Kahn's Museum the other day, the insertion of which in your JOURNAL may be of advantage to those who take an interest in the suppression of quackery. Although these people have recently been brought under legal notice, and prosecuted accordingly, it seems that still they can practise as medical men, although not qualified to do so. The question is, What is the next step to take?

I am, etc.,

AN ASSOCIATE.

SIR,—In the BRITISH MEDICAL JOURNAL for May 31st, we see an advertisement, "Torrington Union, Medical Officers Wanted." They are required to fill death vacancies in this union occasioned by the decease of Mr. Hole at Great Torrington, and Mr. Dingley at Winkleigh. With the Winkleigh district we can have no interest, as it is nearly twelve miles distant from us. It consists of only one parish (the parish of Winkleigh), 9,118 acres in extent, and a population of 1,402. The salary offered is £17 10s. a year, and the pauper list is a long one. These facts plainly demonstrate the value of the appointment. With the Torrington district we have an interest. We are the only medical practitioners residing in this small town; one of us has a brother in the profession, and the other two sons; and, as a matter of course, we should have been willing to take the district and divide it between us. The district was offered us, but on terms so inadequate for the duties required, that we have been obliged to decline them—viz., a salary of £70 a year, including all the medical fees prescribed by the orders of the Poor-law Board, with the exception of those for midwifery at ten shillings a case.

During the late Mr. Hole's illness of many months' duration, the duties have been discharged by us, and are being done so now, for the benefit of his widow and daughters. Mr. Hole had been the medical officer for the district since 1836, and no increase has been made in the salary, notwithstanding the change in the value of money, the price of horseflesh, drugs, and last, though not least, the increase of pauperism. Twenty-five thousand acres to be ridden over for £70 a year, horses at £35 a-piece, and oats at 3s. 6d. a bushel, leave nothing for attending the afflicted poor. The whole salary offered would not pay the stable expenses, leaving our time, our professional reputation, and cost of drugs entirely out of the question. The population of the district is 7,569. The number of actual paupers receiving union aid is over 500—this number, at the present moment, represents the permanent list. The relieving officer and ourselves calculate, besides the permanent list, that at least 1,500 persons in the district receive casual medical assistance. The late Mr. Hole assured us, on his death-bed, that his pay per case for thirty-six years averaged about eightpence halfpenny a case.

One of us is the medical officer of the union-house, situated nearly a mile from the town-hall, and containing, on an average, 120 inmates; the salary is one shilling, one penny, and the fraction of a farthing a day. The number of inmates have all but doubled since he was appointed; and although he has applied for an increase of salary, no answer has been vouchsafed him. He has offered to discharge the duties gratuitously, if the guardians will find the medicines and dispense them.

We offered to take the district on the same terms as we ourselves and other medical officers hold smaller districts, but our proposition was not entertained a moment by a majority of the Board. To the Medical Committee, however, we tender our cordial thanks, for, to their honour, they were unanimous in the opinion that a much larger salary should be paid the medical officers.

Such, sir, are facts we hope you will not fail to press on the notice of our profession; and we sincerely trust no member of our profession, after our simple, truthful, and straightforward statement, will so degrade it as to apply for the appointment at the salary offered.

In the medical papers of last Saturday, the Stockton Union advertised for a medical officer. The guardians offer £50 a year, and all medical fees as prescribed by the orders of the Poor-law Board, for a district containing 10,648 acres, with a population of 3,574. Compare this with the advertisement of the Torrington Union.

We are, etc.,

CHARLES RD. JONES,

RICHARD AUGUSTUS ROUSE.

Great Torrington, June 3rd, 1873.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE COST OF KEEPING UP POSITIONS.

I FEAR neither Mr. Partridge nor Baron Liebig died wealthy. Mr. Partridge, although enjoying very high official positions, had not for many years possessed a lucrative practice. Recently he was President of the Royal Medical and Chirurgical Society, the senior medical society of this country, and, in accordance with the annual practice, issued cards for a full-dress dinner to the Council. A week after their issue, however, the dinner was "unavoidably postponed"; and it was never given. This caused some little gossip at the time; but I believe Mr. Partridge leaves now only a few hundred pounds. It is sad to see how many eminent men have, or they think they have, to spend nearly the whole of their income in "keeping up their position", and how often their later years are ill provided for. —*Philadelphia Medical Times* ("London Letter"), May 17th, 1873.

"THE FIRST OPERATION IN ENGLAND UNDER AN ANÆSTHETIC."

SIR,—Under the above heading, a letter of mine appears in your JOURNAL of the 22nd of February last, wherein I fall into one mistake in correcting another.

It is in the posthumous work of the late Dr. Snow *On Chloroform and Anæsthetics*, p. 18, that the mistake first occurs which I wish to correct. Dr. Richardson has to-day kindly pointed out to me that, as editor only of that work, he is not responsible for the accuracy of the statement, which he left as it stood in the manuscript. I therefore hasten to apologise thus publicly for mentioning his name in connection with the error.

I am, etc.,

WILLIAM SQUIRE, M.R.C.S.

6, Orchard Street, Portman Square, W., June 14th, 1873.

CORONER'S INQUESTS.

SIR,—I very much fear that your surmise, as from whom "the order" came, of instructions to police in cases of sudden death, etc., is incorrect. I believe the order came from the Coroner for the Liberty of Bury St. Edmunds, which extends to a great part of West Suffolk. The Coroner is paid by salary; and, I know, objects very much to holding inquests, especially when they occur at a distance of twenty or twenty-five miles from Bury. I think when I tell you that I had once the assertion made to me by this said Coroner, that medical men always advised an inquest for the purpose of getting the fee, that he is not unlikely to issue such an order as you publish in this week's BRITISH MEDICAL JOURNAL. I have always, when asked by either overseer or clergyman as to the advisability or otherwise of an inquest, after the above assertion of the Coroner, withheld my opinion.

I am, etc.,

A MEDICAL MAN IN SUFFOLK.

June 14th, 1873.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, June 14th; The Manchester Guardian, June 18th; The Aberdeen Daily Free Press, June 14th; The Bath Express, June 14th; The Birmingham Daily Post, June 18th; The Hull Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The Kendal Mercury; The Roscommon Journal; The Herts and Essex Observer; The Sussex Daily News; The City Press; The Birmingham Daily Mail; etc.

COMMUNICATIONS, LETTERS, &c., have been received from:—

Dr. Lyon Playfair, M.P., London; Mr. Charley, M.P., London; Mr. White Cooper, London; Dr. Sibson, London; Sir William Jenner, London; Dr. T. K. Chambers, London; Sir William Fergusson, London; Dr. Burrows, London; Dr. G. M. Humphry, Cambridge; Dr. Spender, Bath; Dr. T. Blunt, Leicester; Dr. Rumsey, Cheltenham; Dr. Waters, Liverpool; Mr. Bassett, Birmingham; A Correspondent; Dr. Maclean, Applecross; Mr. J. Westmorland, Manchester; Our Paris Correspondent; Dr. H. Barnes, Carlisle; Dr. A. Davies, Swansea; Dr. B. W. Foster, Birmingham; Mr. Richard Davy, London; Dr. Clouston, Edinburgh; Dr. J. M. Bryan, Northampton; Dr. Nesbitt, Edinburgh; Dr. Pavy, London; Dr. Graily Hewitt, London; Dr. A. B. Steele, Liverpool; Dr. George Johnson, London; Mr. Lawson Tait, Birmingham; Mr. Joseph White, Nottingham; Dr. William Yeats, Stafford; Mr. J. W. Langmore, London; Mr. Lloyd, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. North, York; Mr. McPherson, Brighton; An Associate; Mrs. Savery, Hastings; Dr. J. Lowe, King's Lynn; Surgeon-Major Manifold, Dublin; Dr. J. W. Allan, Fort William; Mr. Jeaffreson, Newcastle-upon-Tyne; Dr. W. Squire, London; Mr. Cox, Winchcombe; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. White, Sittingbourne; Mr. S. A. Lane, London; A Member; Mr. Hardesty, Galashiels; Mr. Rouch, Bristol; Dr. H. L. Snow, Shrewsbury; Mr. G. A. Davies, Newport; Dr. H. Gueneau de Mussy, Paris; Our Dublin Correspondent; Mr. W. H. Ramsay, London; Dr. Wiblin, Southampton; Dr. Mordey Douglas, Sunderland; Mr. Preston, Bath; Mr. Broca, Paris; Mr. R. Harrison, Liverpool; Mr. Erichsen, London; Mr. G. Cole, London; Mr. Allen, Dewsbury; Dr. Dreschfeld, Manchester; Dr. Holland, London; Dr. Rolleston, Oxford; Dr. Stewart, London; Mr. Teevan, London; Mr. Bride, Lancaster; Dr. Moffit, London; Mr. Charters White, London; Mr. Eyton Jones, Wrexham; Dr. J. Bell, Edinburgh; Dr. Procter, York; Dr. A. Pearse, Botesdale; Mr. W. Sedgwick, London; Mr. G. F. Hodgson, Brighton; etc.

BOOKS, ETC., RECEIVED.

Examination of Medicinal Chemicals. By Frederick Hoffmann, Ph.D. New York: 1873.

Causes and Treatment of Deafness. By J. Keene. London: 1873.

A Digest of the Statutes relating to Urban Sanitary Authorities. London: 1873.

Ueber den Einfluss der Lageveränderungen der Gebärmutter auf die Sterilität. Von Dr. Hermann Beigel. Wien: 1873.

AN ADDRESS ON THE WORKING OF THE PUBLIC HEALTH ACTS.

Delivered at the Half-Yearly Meeting of the Gloucestershire Branch of the British Medical Association.

By HENRY W. RUMSEY, M.D.,
President of the Branch.

A GREAT public measure, which is obviously a step to very important changes in the social and official relations of the medical profession, is now being put in force throughout the country; and I think we should do wisely to consider it fairly and fully, not only with reference to professional interests, but chiefly as to its bearings on the progress of science and the well being of our countrymen.

The Local Government Act of 1871, and part of the Public Health Act of 1872, have consolidated, as you are aware, under one central authority many functions heretofore distributed among several Government Departments—a fragmentary distribution which greatly perplexed local bodies and their officers, and continually hampered and impaired the efficiency of the departments themselves.

All matters connected with the medical relief and sanitary visitation of the poorer classes, formerly under the Poor Law Board, are now directed by its successor, the Local Government Board, which also relieves the Home Office from certain duties concerning the formation and control of local boards, by means of engineering inspectors.

The Privy Council is in like manner superseded in its direction of medical and scientific inquiries, and in its superintendence of public vaccination. This seems to be practically a change for the worse.

The Registrar General's Department, and all administrative duties connected with the record of vital statistics, are also transferred to the new Board.

Further, the Local Government Board is now empowered to take the place of the Home Office, as far as this had to do with the administration of the Highway Acts, and with the roads and bridges of the kingdom, also to supersede the Board of Trade under the Alkali Act and certain Gas and Water-supply Acts.

Now that this principle has been sufficiently established in constituting a *central* authority, it was quite reasonable for us to ask why it was not carried out in constructing and empowering *local* authorities, and in particular, as regards medical duties, why the care of the sick poor, public vaccination, and other preventive arrangements, together with the appointment of registrars, etc., should be left under one local body, the guardians; while the sanitary inspection of towns, villages, and lodging-houses, with reports on nuisances and causes of disease, should be committed to the officers of another local body in the same place. The question was answered in a most unsatisfactory manner, by an evasion or non-admission of the facts, and by a refusal to enact that unification of local sanitary authority which both the Royal Sanitary Commission and the authors of the Public Health Act professed to commend.

Two sanitary authorities still really exist in every URBAN district, the Board of Guardians, directing medical and statistical action, and the Town Council or Local Board, directing preventive action. This duplication becomes the more inconvenient when, as in almost all provincial districts, the areas of the two authorities are different. Perhaps this duplication may be less felt in London, where the jurisdiction of the guardians is generally coterminous with that of the District Board.

In every RURAL district also, there are, as a rule, two authorities concerned with matters of public health; for the guardians have no control over the highways, and we all know how much the roads, with their ditches and drains, have to do with sanitary conditions. These matters remain under either the old parish officers or separate Highway Boards. In both cases the roads are assumed to be kept in order by surveyors, who are quite independent of the rural sanitary authorities, but who, if they were duly qualified, ought to act as engineering sanitary officers.

There is another anomaly about the new rural authorities. Every Board of Guardians, in a *mixed* district, consists of two distinct authorities. One is the whole board, having the whole area of the union under

its control, for destitution, sickness and vaccination, etc.; the other is a part of the board, acting for a part of the union, for other purposes of health-management. These two authorities cannot, of course, act at the same time, so there must be *two* meetings. At one of these, the proceedings of the sickness authority may be irreconcilable with the proceedings of the health authority at the other meeting; while the road authority "in another place" is taking an independent, and perhaps an obstructive course. Yet people, who, without knowing the facts, speak and write of these matters in London, proclaim that an uniform system of local authority for sanitary purposes has been established throughout England.

Our chief concern, of course, is the efficient performance of *medical duty*, and our complaint is, that such efficiency is impossible where, as now, arrangements for the restoration of health, and for the preservation of health, are under two separate authorities in areas of different extent. From the first, we asked for the uniform and general establishment of a territorial UNIT of sanitary jurisdiction, under a single authority, and we showed how this might be effected, without any disturbance of existing local governments.

We agreed with the Royal Sanitary Commission, and with most sanitary reformers, that, comparing the various existing divisions of the country, the *statistical area*, or *registration district* (generally the Poor Law Union), was the least objectionable unit for sanitary management. At all events, the great facts of life, death and disease, are recorded in these areas, which are also the districts for the relief of sickness, and for public vaccination. Had the country to be treated as a *carte blanche*, and to be mapped out afresh by ingenious schemers, probably a better kind of area might be devised. But no practical man has asked for so complete a revolution of local divisions and customs.

It is also admitted that, in many cases, the union would have to be improved in form, or even divided, for which changes the Central Board already possesses full powers. In fact, these areas have already been altered, and, especially in their employment as districts for registration, changes are continually being made. The correction of their boundaries, so as to conform with corrected county and parish boundaries, is also an acknowledged necessity. This important reform, as I shall notice hereafter, is about to be seriously undertaken.

Now had the Royal Sanitary Commission and the Government adopted this principle fairly and fully, as the basis of their legislation, and had they deferred the appointment of officers until the question of areas and authorities had been settled, the chief medical difficulties now pressing on our attention would have been avoided. The various administrative bodies in every such unit, *i.e.*, the Board of Guardians and every Town Council and Local Board within the union, might have been required to elect a Joint Committee, or Council, for the direction of all their medico-sanitary affairs. Each included authority might select a small proportion of its members, known to be more fit for the special duty than the rest of the Board, and ready to act upon such Sanitary Committee, under which single authority, medical officers of both kinds might be beneficially authorised to advise or to execute sanitary regulations, and every administrative act in which we, as medical men, take part, would be under one and the same primary authority. This was represented over and over again to the Government, as it had been to the Sanitary Commission; but, I am sorry to say, *without avail*. The reply was sometimes that the various bodies in the union might co-operate, if they pleased, or that, if they would not act together spontaneously, they might be brought to do so by central pressure. We knew the utter hollowness of this pretence. The smaller boards having generally been formed for the very purpose of escaping from a wider jurisdiction, they would hardly suffer a Government Inspector, without statutory power, to drive them into reunion, or even co-operation. Human nature and Board nature are much the same now as before the Sanitary Commission sat, or Mr. Stansfeld came into office. And what are the facts? Can anyone tell me a case in which the attempt to enforce the required unification of authority within union areas has succeeded? A magistrate of this county, who is also an eminent Chamber Counsel, and well up in the laws of local administration, has assured me, that such joint action will not, as a rule, be effected, unless by compulsory enactment, and that the 40th Section of the Sanitary Act, 1866, does not apply to permanent joint action between a Board of Guardians and a town authority in the same union.

Some very absurd, if not mischievous results, have followed the absence of any power to compel two or more boards, having sanitary functions in the same place, to act together, especially in the control of epidemics. For example, the attempt of the two authorities in Cheltenham to co-operate in providing small-pox hospital accommodation, has ended in a ridiculous muddle. I need not detain you by a full description of the negotiations; suffice it to say, that the Town Board intended to erect a temporary hospital on a site belonging to the Guardians,

which hospital was to be used and maintained by both authorities, on certain terms and conditions. Each party, however, insisted on modifications of those terms, which the other, of course, refused to grant, and so, after weeks of useless altercation in the face of an alarming epidemic, the negotiations were broken off; and but for the liberality of the trustees of the De Lancey Hospital, who offered a site on their land, the Town authorities might have been left without a place in which to isolate their small-pox cases.

This temporary hospital, however, has been put up outside of the area subject to the Town Board; and it is therefore doubtful whether that board can compel their sick to enter it. But though within the union, it is also within the district of a new local board, just formed in the village of Leckhampton, mainly for the purpose of discharging by sewers the *excreta* and fluid refuse of Leckhampton into the already over-laden common sewers of Cheltenham. But the worthy villagers, who felt no scruple in dispatching their filth for the benefit of Cheltenham, and incurring the *real* risk of receiving back the sewer-gases of this great town into their upland homes, were forcibly impressed with the sentimental peril of importing into the temporary hospital at Leckhampton fever or small-pox cases, and of disinfecting therein the clothes and bedding of the sick people of Cheltenham. So an indignation meeting has been held, at which a loud protest against the proposed invasion has been unanimously passed. What may be the result of this storm in a tub I do not care to imagine; but the public might have been spared the iteration of much nonsense, the inhabitants and the petty authorities might have saved both time and money, and the necessary preventive measure might have been carried out properly and quietly, had there existed a Health Council or Committee *for the whole union* in which representatives of the three contained local boards, as well as of the guardians, would have been forced to settle the matter at once in the least objectionable manner.

The case of Cheltenham, although typical, is by no means singular. In fact, these conflicts between several small authorities having separate jurisdiction within the same union, are unavoidable under the present law. They were predicted by the Joint Committee of the British Medical and Social Science Associations, and might have been prevented everywhere by the enactment then proposed.

That some such measure will have to be resorted to, becomes the more obvious, when we look forward to the promised reform in MEDICAL POOR RELIEF, and the introduction of the dispensary system, so long successful in Ireland. The establishment of State-supported dispensaries throughout the land must be accompanied by a registration of sickness attended at the public cost; and these measures belong as clearly to *preventive* medicine as to *curative*; nor can either be separated from local sanitary administration. It is also quite improbable that this medical provision will be wholly removed from the guardians. It follows, therefore, that in every union there must be for all medical measures, as I have shown for other objects, some sort of combined action of the two authorities. Medical officers, whether dispensary district surgeons or deputy medical officers of health, or both, must have to do with only one local authority in one place, the area of administration being extensive enough to admit of enlightened and economical management.

But it is not only unification of local sanitary management which we demand. We also ask for improvement in the constitution and character of the local authority. A Board of Guardians or a Town Council has many other duties besides providing for the health and sickness of the people. General business stands first for attention. The relief of simple destitution by the one authority, ordinary matters of municipal regulation by the other, and financial arrangements by both, naturally occupy the first place in their consideration, as the work originally assigned to them. It is unreasonable to expect them to make the care of the public health their first object. Yet, if each of these local authorities were required to select from its members those who were known to be able and willing to attend to affairs of health, they might be fairly expected to make a good choice. Doubtless the sanitary laws would be better administered by a joint committee so constituted, than by the present fully occupied authorities.

The country scarcely requires more Law, unless in the way of revision and consolidation. There are legal provisions against almost every kind of nuisance, every cause of disease and suffering. But they are not enforced—not obeyed. What we really require is better administration—more earnest, more competent administrators—to carry existing regulations into effect; and it is obvious that a body of men, specially selected for sanitary action by the several existing authorities in each registration district, or in each city or borough containing more than one registration district, would be more reliable and efficient than those authorities acting singly, as regards both a due provision for the sick poor and a vigorous enforcement of sanitary regulations.

This, I hope, will be the resolute demand of all who are interested in the improvement of the public health. It is too reasonable a proposal to be long resisted. The fanaticism with which many of our legislators cling to this fiction of "urban" and "rural" authorities is really marvellous. See, for instance, the good Lord Shaftesbury, who has just introduced a very important measure respecting river pollution. The object and technical details of this Bill are unexceptionable. No doubt the provisions will be opposed by the polluting parties, as being too stringent; yet there is elasticity enough in them, for the prohibitory clauses may be modified in each case at the discretion of the central authority. But who are to be the LOCAL "pollution authorities"? Strange and absurd as it may seem, the urban and rural authorities under the Public Health Act, beside certain boards under the Fisheries' Act! The fishery authorities, of course, are naturally hostile to the local boards, who have done their best to defile the rivers and water-courses, and to poison the fish. These urban and rural authorities are, in fact, the great polluters, and can hardly be converted into repentant pollution preventers, except on the principle of setting a thief to catch a thief; but even then you must pay him well for the job. Nor can the two kinds of board be expected to act harmoniously in places where both have jurisdiction within the same area.

River pollution can be properly dealt with only by Conservancy Boards acting over extensive areas or river-basins, and selected by the authorities of the counties concerned. An influential manufacturing river-pollutor or a town council representing narrow and obstructive interests, would have less chance against such a board than against a timid central department.

II. I am thus led, in the second place, to remark on the necessity of a good COUNTY AUTHORITY for certain larger sanitary objects, including river conservancy. Not that the present administrative authority of the county is a bad one, or that we are likely to get a better. But Englishmen will not be governed by any local body which is not to some extent popularly chosen. The main difficulty attending the establishment of representative county boards has been the want of conformity (to which I have alluded) between the boundaries of unions or parishes on the one hand, and of counties or cities on the other. We owe the mischievous anomaly which created this difficulty mainly to the original Poor Law Commissioners.

The financial objections, recently urged by the Poor Law Inspectors, to an amendment of that administrative error may deserve consideration, but are certainly not insuperable. A sufficient extension of the areas of taxation and management would remove the more important of these objections, and would greatly facilitate the arrangement of pecuniary claims, especially those arising out of previous union expenditure on workhouses, which might then be used in common by the paupers of a county; and this would admit of proper classification of inmates—a most desirable reform. Firmness on part of the Legislature and the Central Board aided by good financiers, might speedily settle these questions, with justice to all parties. The adjustment of areas being accomplished, a well defined county authority might be at once established. It is therefore satisfactory to know that Mr. Stansfeld obtained leave on April 7th, for a "Select Committee of the House of Commons to inquire and report whether the existing areas and boundaries of parishes, unions, and counties might be so altered and adjusted as to prevent the inconvenience in matters of local administration and taxation which now arises from the limited extent or subdivision of certain parishes, or the over-lapping of parishes in two or more administrative areas, or from parishes and unions being situated in more than one county, with power to recommend whether any, and, if so, what, measures should be taken to give effect to their report."

The obvious advantage of this inquiry, and the beneficial changes to which it may lead, makes one regret that a measure of this kind, which was recommended to the Government in 1871 and 1872 by our Joint Associations-Committee, was then refused.

The correction of areas certainly ought to have preceded the last Public Health Act. At all events, it was both absurd and inconvenient to compel the general appointment of Officers of Health until the areas of their action had been settled.

Mr. Stansfeld *now* acknowledges that the want of County Boards is the "missing link" which we had always represented it to be, but which he *then* persistently rejected. Whatever may be the precise method recommended by his Select Committee, I have no doubt that the question will not be properly settled without some sort of Boundary Commission to act with the Magistracy of each county in preparing a scheme for the adjustment of areas and boundaries.

I express the opinions of most country gentlemen, when I say that the limits of the county should in no case be seriously altered. Slight additions and subtractions, here and there, may be made, without de-

stroying the identity of the ancient Shires of England. (I have shewn in my paper on "Population Statistics for (County) Sanitary Organisation," how this might be done for Gloucestershire). The county authorities might then represent, and in certain matters control, the several district authorities.

The vital statistics of the kingdom would be immensely simplified. Instead of a census in two voluminous parts, we should have only one enumeration of the people, in one set of divisions, of a simple and intelligible kind; and such improvements might be fairly expected in local government as England has not before witnessed. In such an organisation, cities and boroughs, containing a quarter of a million of inhabitants, should be regarded and dealt with as separate counties.

It is a curious fact, that most of the objections to county government proceed from London and its immediate neighbourhood. Is it possible that the Magistracy of Middlesex does not secure the confidence and esteem of the educated classes to the same extent as that of most provincial counties? However this may be, I find that our metropolitan *confrères* generally prefer the action of paid officials immediately under the central government. They cannot see why the same central inspection which suits their purpose should not also suffice for the provinces, which they are apt to regard as tracts of uncivilised territory, suburban (in a sense) to the great metropolis, and chiefly of importance as providing the means of subsistence and aggrandizement for its inhabitants. It is useless to argue with those who do not appreciate the enormous value to our national life of something like independent political action in the provincial districts, and who support the growing tendency to centralise everything.

You will see how closely the question of county administration bears on the appointment of the officers. At first, as we all know, the Poor Law Medical Officers were fixed upon by the Royal Sanitary Commission, and were specially indicated in the Public Health Act as the proper *sole* Health-Officers for the rural districts; every sanitary authority being required to appoint its own officer, who, on that arrangement, must be a practitioner in ninety-nine cases out of a hundred. These appointments were unfortunately made compulsory by the Act, and the urban authorities have for the most part shown no disposition to waive their now legalised right of making separate appointments.

But in the progress of public discussion, and after many important county meetings on the subject, Mr. Stansfeld found that he had made a mistake in following the advice of the Royal Sanitary Commission on this point. His inspectors were accordingly directed to encourage the grouping of districts, so as to form extensive areas for special officers debarred from private practice. This process of grouping has been adopted in many parts of the country, without securing the official aid of the district surgeons.

The variety displayed in these attempts at arrangement is really charming. Some of the smaller urban districts have joined the adjacent or surrounding rural districts in forming the large groups before mentioned. But most of the urban authorities have stood aloof from these combinations, appointing in each place some resident practitioner as health officer, and thus forming *insulae* of separate sanitary action, which the Local Government Board perhaps considers the best method of promoting prompt and efficient co-operation in the event of a destructive epidemic spreading rapidly over a wide extent of country.

Very few, if any, urban districts have employed the Poor Law Medical Staff in sanitary work. But many rural authorities have determined to appoint their own medical officers as their sole health-officers, while others have selected one or more practitioners, whether on their staff or not, to act in a preventive capacity, for the whole union. A large majority, probably not less than two-thirds, of the medical attendants on the poor, are thus "shunted," and left to maintain their old position as they can, or to resist, as they generally will, any unnecessary demands for help or information on part of the new health-officers, who in towns are generally their rivals in practice. Yet, undoubtedly, the union officers are everywhere the proper persons to act as preventives in the first instance, that is, to report the facts and causes of sickness among the poor whom they are constantly visiting.

No less various are the arrangements for inspectors of nuisances, these being, in some cases, made independent of the medical officers; in others, placed below them as informants, and in some districts constituted a sort of superintendents, with several medical officers of health under each.

The extraordinary diversity of principle and irregularity of plan which have shaped the recent appointments of health-officers, lead me to congratulate you that these appointments are limited in duration to five years, some being for a much shorter period. We owe this safety-valve to the opposition.

Those with whom I acted in opposing the appointment of the Poor-law Medical Officers as the *SOLE* health-officers in their respective dis-

tricts, and in suggesting a better arrangement, are naturally astonished at the wretched travesty of our proposals, shown in recent appointments over impracticable areas, without authorities above, or assistants below, the new officer.

Hear what one of the most highly-qualified of these officers says, in a recent letter to me.

"You will be surprised to hear that I find myself very considerably at sea. The district is large, and there is very little local help to be had. The union medical officers have no status in the present sanitary arrangements, so one has no right to apply to them. The inspectors are in almost all cases new men, and in some instances otherwise hardly fit for their places. The size of the district makes it *quite impossible* to work it without local assistants who are really efficient."

Now when we proposed extensive health-officer appointments, we never contemplated anything of this sort. A well-ordered group of adjacent districts, made by a good intermediate authority, for a chief officer of health, to be aided by the union surgeons, the factory surgeons, and any already appointed health-officers in small urban districts, as regularly constituted deputies, bears no resemblance to the wild and shifty schemes of combination sanctioned by the Local Government Board. Like the mother of "Ginx's Baby", after it had become awfully misshapen under Poor Law treatment, we decline any parental recognition of, or responsibility for, the Government bantling.

Take for instance the district of Dr. Bond in this neighbourhood. It extends irregularly from Chepstow to Cirencester, including six small urban districts and eight unions, but excluding the larger towns of the county—Gloucester, Tewkesbury, Stroud, and Cheltenham, with the local board districts in their respective neighbourhoods, and that of Chepstow, as well as the whole of the county north of Gloucester.

You will see by this map the singular form of Dr. Bond's circuit, divided into two unequal portions by the Severn. Let us suppose him on a tour. After inspecting parts of Monmouthshire and the Dean Forest, he has no approach to the south-western part of his district, but by crossing the wide river at a ferry, unless he goes round by the bridge at Gloucester. Whether starting from Newnham or Gloucester, he must traverse wide districts over which he has no jurisdiction, before he can arrive either at his peninsula of Cirencester, or at his continental group of districts on the left bank of the lower Severn. He will thus have abundant opportunity for cool reflection, whether on the river or in travelling some twenty miles through the beautiful Stroud valley. If this were the object, it was an ingenious idea to interpose the unions of Wheatenhurst and Stroud between the western and south-eastern parts of his district. The isthmus of Tetbury may have been preserved to him for communicating on his own ground between Cirencester and his other unions. Having no duties in the City of Gloucester he may make that interesting spot a quiet resting place, where we may hope he will enjoy himself after his arduous travels and inspections.

Speaking topographically, one is at a loss to understand why the Forest of Dean, between the Wye and the Severn, should be arbitrarily divided, a part to be medically visited on *one* principle, and a part on the *other*. Probably there is no tract in the kingdom which would be more suitably left undivided for sanitary purposes. Its population, history, laws and customs, geology, fauna and flora, and its climate, are in many respects peculiar, and as a whole it remains distinct from the rest of the county.

With the addition of Newent, Tewkesbury, and Gloucester (districts and towns), it would have made a compact and manageable circuit for separate sanitary visitation if aided by local deputies. The rest of the county might form two or three inspecting districts of ample extent; and a considerable town would then be the centre or rather the *capital* of each; *e. g.*, Gloucester, with its own union, and the county on the right bank of the Severn; Cheltenham, with the whole north-east part of the county; Stroud, with the south-eastern; leaving the district immediately connected with the Lower Avon to Clifton as its chief town. So much for this county.

The large groups of districts now forming under single officers are often erroneously designated as county appointments. They are nothing of the kind. Thus, I see that the journals mention Mr. Alfred Haviland as the officer for Northamptonshire, Dr. Child for Oxfordshire, etc. There are really no such appointments; nor have the counties proper, with their own authorities, anything to do with those officers. The latter (marked A in Map II) includes neither its chief city, Oxford, nor the union of Headington. A straight line drawn through Oxford passes on each side of the city into the district of an officer acting for parts of Berkshire! In the former (marked B in Map II) Mr. Haviland cannot touch the unions of Brixworth and Kettering with their contained local board districts, while he over-rides the neighbouring counties of Leicester, Rutland, and Buckingham, in the Market Harborough, Uppingham, and Newport Pagnel districts.

Here, again, you see the *excluded* peninsula within the county bounded by the *included* peninsula outside the county; Brixworth and Kettering rejoicing in being able to defy the Local Government Board, and poor Mr. Haviland having to travel over a most extensive and impracticable circuit imperfectly supplied with railways. He is to receive for superintending this monster district only £200 per annum more than Dr. Saunders for a comparatively small district cut out of two counties, Middlesex and Hertford. Yet Dr. Saunders is by no means overpaid by a salary of £750, for his duties take him from the immediate suburbs of London to a distance of nearly forty miles from it.

Look again at these health-officers' circuits (Map I and II) extending into two of the great registration divisions of England. Counties we know; boroughs we know; unions and registration districts, and even registration counties, we begin to understand; but what are these? Are we have a new order of divisions in England for medico-sanitary purposes? The Registrar-General says that we have by far too many conflicting divisions already. These new districts, you will agree with me, could hardly be more confusedly arranged or absurdly shaped had one of the despised *medical* inspectors under Mr. Simon contrived them. Yet these are the only gentlemen connected with the Local Government Board who can bring any special experience to bear on the question. They "know practically what is the work of a health-officer, how often he should visit localities, what investigations he should make, by whom he should be supplied with facts and materials, what should be the purview and particulars of his reports, what time he should devote to a given population," etc.

The results of Mr. Stansfeld's *coup d'essai*, it has been well said (*Practitioner*, May 1873, page 321), "are such as might have been foreseen, where a number of gentlemen were set at large to educe sanitary practice out of their own consciousness."

But, indeed, it is not fair to blame the legal and military gentlemen who have immortalised their fame as sanitary organisers. The fault was not so much theirs as of the Act itself. Grievous defects and errors are inseparable from attempts to procure spontaneously that co-operative action which is not obligatory by law on the districts proposed to be combined. Without a compulsory enactment and a good intermediate authority to carry it into effect, the wisest and most skilful inspectors cannot be reasonably expected to force upon reluctant districts a proper combination, as regards area and population, for a chief health officer. A measure framed on the assumption that several constituted authorities—jealous of their independence, tenacious of power, and ignorant of the matters to be administered—would generally yield to persuasion, was unstatesman-like, and has deserved its fate.

The present system is organically rotten. It has no element of stability or order, and offers the smallest prospect of efficiency. It remains to be seen whether the able and distinguished gentlemen who have condescended to accept office for a short time under it can redeem it from utter obloquy.

If Mr. Stansfeld's Select Committee and its probable successors—a Boundary Commission and a County Government—should succeed in reducing the present chaos into order, after years of annoyance, needless trouble, and great outlay, the country may ultimately recover from the disorganisation and local anarchy which have been caused by the Sanitary Commission and the Local Government Board. And in that case Mr. Stansfeld's "repentance" may not have come too late. (*BRITISH MEDICAL JOURNAL*, May 17th, 1873, p. 363.) Although, for the present, he limits it to one of his errors, I am not without hope of his thorough conversion to sound principles.

As matters are, it looks as if the Government had promoted this embroilment as a great national experiment to be tried at the cost and inconvenience of the several localities, in order to obtain data for a future orderly reconstruction of the system. But the provincial districts may not like to be made the victims of political empiricism, or the subjects of the sentence *Fiat experimentum in corpore vili*.

It only remains for me to call your attention to the fact that the principles I have endeavoured to impress upon you to-day, are in close conformity with the resolutions passed by this Branch more than a year ago (*Ibid.*, March 16th, 1872), and may be thus summarised.

A proper organisation of districts and authorities is essential to the efficiency of medical action.

No organisation can be reliable and effective which does not secure two desiderata, viz.: 1. The unification of sanitary authority within corrected statistical or registration areas, and the appointment therein of medical health-officers of the first instance; 2. In every county (or two small counties) and in every great town (say of 250,000 inhabitants) the constitution of a proper authority, representing and regulating an exact number of statistical districts, and empowered to appoint (one or more) chief officers of health, debarred from private practice, and acting over well contrived areas.

LECTURE

ON

RECOLLECTIONS OF BRITISH SURGEONS, AND
OF PAST OPHTHALMIC PRACTICE.*Delivered at St. Mary's Hospital, June 18th, 1873.*

BY W. WHITE COOPER, F.R.C.S.,

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GENTLEMEN,—When the proposition was made to me to deliver a lecture at St. Mary's Hospital, I felt at a loss as to the subject. Ophthalmic topics are kept so prominently before the profession by the journals, and students are so well instructed in modern practice by able teachers, that I could not enter that field with satisfaction; but it occurred to me, reflecting on the marvellous changes which have taken place in ophthalmic science during the last forty years, that some of my earlier recollections might not be altogether devoid of interest; and I have, therefore, ventured to throw together a few reminiscences of distinguished men, and shall briefly describe certain salient points of practice of which I have been witness, taking the subjects rather in chronological order than in direct connection.

Having entered the profession in 1832 as an articulated apprentice of Mr. Stanley, then assistant-surgeon to St. Bartholomew's Hospital, I pursued my studies there as student and dresser under Mr. Lawrence, Mr. Vincent, and Mr. Earle, until 1840. During that period the lancet was freely used, especially in the practice of Mr. Lawrence, whose dressers claimed, with reason, dexterity in phlebotomy, having had ample opportunities of perfecting themselves in the wards and out-patients' room. There were no special wards devoted to eye-cases, but cataracts were operated on and treated according to the rules laid down by Mr. Lawrence in his practical treatise: "I make it a rule to have the patient bled to fourteen or sixteen ounces on the evening of the operation, unless there be a reason to the contrary. If, however, there should be pain of the eye or head, a large venesection is absolutely necessary. This is a safe kind of precaution. I have never seen it injurious; but in some cases I have had occasion to regret that it was neglected. Bleeding on no account should be neglected."

The case of Sir William Blizard afforded a remarkable illustration of Mr. Lawrence's confidence in the propriety of bleeding. At the age of 92, Sir William underwent the removal of cataract from his right eye; and Dr. Cooke states in his memoir that "in the evening he was bled to eight ounces, Mr. Lawrence remarking that he must be treated, not according to his age, but to his state of health and constitution". The operation was successful (as well it might be), for I remember Sir William's tall wiry figure, and thought he was the very man to make a good recovery. My first visit to the Royal Society was through the kind introduction of Sir William; and I have a vivid recollection, from the strangeness of the incident, of stumbling over a sword, or hanger, as it was called, which lay at the bottom of his carriage. This he always carried with him, and it had stood him in good stead on more than one occasion in the days of highwaymen. It was in acute ophthalmia, however, that the lancet had full play. In Mr. Lawrence's treatise on Venereal Diseases of the Eye, there is a case of gonorrhœal ophthalmia, in which the patient, a prize-fighter, and probably more accustomed to lose blood than most persons, was bled to one hundred and fifty-two ounces in eight days, besides having forty-four leeches applied.

The question as to the advantage or disadvantage of abstraction of blood has led to great difference of opinion. Without entering into the controversy, I may state that my firm belief is, that in many cases the judicious abstraction of blood is eminently useful. It shortens the duration of the illness, relieves—often removes—pain, and assists the action of other remedies. I do not for a moment recommend the reckless depletion of forty years since; but I do think that cupping, or even bleeding from the arm, is often highly useful. Many times have I seen agonising pain in the eye and head, with throbbing temples, at once relieved by cupping; and I think it to be regretted that it has gone completely out of fashion.

Cupping afforded relief, not merely by the abstraction of blood, but by the mechanical drawing of the blood to the surface. The power to

regulate the quantity taken is an advantage, and you never have the erysipelatous irritation which often follows leech-bites. Dry cupping, also, is useful, especially in persons with very irritable skins, who cannot bear counterirritants.

The modern treatment of patients after operations on the eye, and also the treatment of purulent ophthalmia, is entirely different from that of forty years ago. Rarely, indeed, is it that blood is taken under the conditions described by Mr. Lawrence. If pain come on, as it often does, in the evening after extraction of cataract, a full dose of sedative is the appropriate remedy. A favourite combination of mine is the syrup of hydrate of chloral, with the solution of bimeconate of morphia: this allays spasm, relieves neuralgia, and promotes sleep. I had several conversations with the celebrated Baron Langenbeck immediately after the termination of the Franco-German war, and he told me that, according to his experience, nothing equalled chloral in checking spasm after operations, and he had used it largely, especially in amputations, during the war. The combination with the bimeconate of morphia renders the influence more certain and more lasting.

Great abstraction of blood in purulent ophthalmia is much to be deprecated: mere bleeding never cures that disease. Constant washing out the eye with alum-lotion, the judicious use of a solution of nitrate of silver and of tannin, plenty of fresh air, and quinine as a medicine, preceded by proper aperients, is the treatment which I find most efficacious. Nevertheless, do what you will, there are some cases of gonorrhœal ophthalmia in which treatment is absolutely powerless. The eye (generally that first attacked) seems doomed from the commencement; but the second eye may generally be saved, though possibly somewhat damaged, but its salvation depends on the powers of the patient being supported. If they be exhausted by excessive depletion, the chances of recovery are greatly diminished.

Among the incidents of a summer tour in my student days, was that of assisting to reduce the dislocated shoulder of Sir Benjamin Brodie. I was at a hotel at Newport, Isle of Wight, when a carriage drove hurriedly to the door, and a gentleman was assisted out, who had evidently met with an accident. I at once recognised Sir Benjamin Brodie. He had been thrown from a pony, and had dislocated his right shoulder. Mr. Bloxam, the leading surgeon of Newport, a practitioner of much repute, whose dress was that of the old school, soon arrived; and, with the aid of a couple of waiters, the dislocation, which was into the axilla, was reduced. As Sir Benjamin sat writhing with pain, he remarked that hitherto he had thought lightly of such an accident, but should in future view it very differently. On the evening after the accident, Sir Benjamin complained of a swelling and redness of the foot, which he referred to some injury received in his fall; Mr. Bloxam, however, pronounced it gout, which Sir Benjamin would not admit for a time; but, the following morning, he said, "I think, Cooper, it may be gout; probably the gouty elements were in my system, and the shock of the accident determined the attack; I have seen such cases." In after-life, I have found this hint useful. If called upon to operate on a gouty subject, I prefer to do so immediately after a fit of the gout, whereby the system is cleared. I have repeatedly seen instances in which people have had gout in the foot or knee after operations in the eye, though they did not consider that such an attack was impending, but, as in the case of Sir Benjamin, the morbid elements were there, and the shock of the operation determined the attack. I was one of the last visitors at Broome Park before Sir Benjamin Brodie died; he complained much of pain in the shoulder, and reminded me of the injury it had sustained: thus commenced the malignant tumour which killed him. On the occasion referred to, I had the privilege of passing three days with Sir Benjamin. His great pleasure was in conversation; and, his sight being so imperfect as to render it necessary to have chalk scattered on the paths in his grounds to render them visible, he was glad to take an arm and walk two or three hours each day. I had known him from my first entry into the profession, and have a vivid recollection of his short decisive manner, with a tinge of impatience if the patient were prosy. This manner underwent a complete change towards the close of his life; domestic sorrow and loss of sight were grievous calamities; his manner and voice became subdued and gentle; and, in place of cutting short a conversation, he encouraged it, pouring forth the stores of his vast experience, and relating characteristic anecdotes of many of the distinguished men with whom he had been acquainted during his long career.

I always felt interested in ophthalmic surgery, and became a student at the Royal Ophthalmic Hospital, Moorfields, in 1840. The surgeons were Messrs. Tyrrell, Scott, and Mackmurdo. Mr. Dalrymple was the senior assistant-surgeon, with him Mr. Dixon. The operations were comparatively simple; hard cataracts were extracted almost exclusively by the upper section, though depression was occasionally

performed; soft cataracts were broken up in the manner introduced by John Cunningham Saunders, the founder of the charity. Excision of the eye was only performed in such desperate cases as malignant disease. It was before the era of anæsthetics; and restive children were rolled up in jack-towels, so that they could not move hand or foot, and the eyes were held open by main force. On the practice of Messrs. Scott and Mackmurdo, I need not dwell; but Frederick Tyrrell must not be passed over. A dexterous, neat, and elegant operator was Mr. Tyrrell when I knew him; yet, strange to say, so unlucky was he when first attached to the Ophthalmic Hospital, that the authorities formally forbade his operating until, by practising on the dead subject, he had acquired the requisite dexterity. Cool and self-possessed, nothing could disturb his equanimity. I have seen the point of an extraction-knife break off in the anterior chamber; no one would have been aware from Mr. Tyrrell's manner that aught untoward had occurred; he calmly called for a blunt-pointed cornea knife, enlarged the section, removed the fragment of steel, extracted the cataract, and the case did perfectly well. His treatment of ophthalmic disease generally, was marked by sound good sense and discrimination; and he fully appreciated the distinction between cases requiring depletion and those needing tonics and support—a distinction not so fully or generally recognised as at a later period.

John Dalrymple is remembered by his fine illustrations of ocular disease. He adopted for extraction a sickle-shaped knife, cutting on the convex edge, invented by Mr. Scott. I often saw him use it, but it did not appear to possess the slightest advantage over the ordinary knives; and with the exception of the inventor, Mr. Scott, and Mr. Dalrymple, no one used it.

Towards the close of his career, I frequently met Mr. Travers in consultation. He was a thorough gentleman in manner and feeling; his contributions to ophthalmic science were sound and practical; and, though he had lost the sight of one eye, it did not prevent his being a skilful operator. In the preface to his synopsis of *Diseases of the Eye*, Mr. Travers thought it necessary to make a sort of apology for turning his attention to the subject, and adds: "In this country, I believe no one before myself, who designed to practise general surgery, ventured to give more than a cursory attention to the diseases of the eye; a fear of being disqualified in public opinion by a reputation acquired in these for the treatment of other diseases, was a motive, however groundless, sufficient to deter surgeons from the cultivation of a large and legitimate field of observation and practice."

Henry Alexander, Surgeon-Oculist-in-Ordinary to four sovereigns, had for many years an immense reputation, and as an operator, justly so. I never saw him operate, as he was not fond of the presence of strangers, but am informed that he dispensed with the aid of an assistant when performing extraction, perfectly commanding the eye with his fingers. He was accustomed to make the patient count one, two, three, etc., during the operation. He used Wenzel's knife, made the upper section, and dexterously removed the cataract by digital pressure.

Mr. Alexander had the advantage, very early in life, of succeeding to the practice of Mr. Jonathan Wathen, on the latter becoming Sir Wathen Waller. He had previously been his assistant, and when, many years later, Sir Wathen Waller became blind from cataract, Mr. Alexander had the satisfaction of restoring his sight by a successful operation. I have mentioned Mr. Alexander's dexterity in steadying the eye; it is curious that neither forceps, nor other instrument, was used at Moorfields for that purpose when I was there, though many eyes suffered through the imperfection of the section caused by the globe gliding from the fingers and rolling in. Sichel's assistant chalked the tips of his fingers as he would a billiard cue, to give them a firmer hold, but I do not remember having seen this done in England.

The connecting link between the great German oculist Beer, and the present generation, has but recently passed away. I refer to Beer's pupil and son-in-law, Frederick Jäger, born 1784, died December 1871. Jäger visited England at the time of the Great Exhibition, in 1851, and was three weeks my guest. He took great pleasure in showing his mode of operating, which was that of Beer. He had the patient seated on a low chair, with the back of the chair on one side, knees close together, hands on them. The assistant stood behind, supporting, with one hand, the back of the neck, whilst the head rested against the chest; with the two fingers of the other hand he raised the lid. The operator sat on a music-stool, in front, grasping the patient's knees between his own knees. Jäger always made the upper section, and attached the greatest importance to the knife being carried steadily on by movement of the thumb and fingers, the thumb being quite straight. He was very careful to make a series of cuts, similar to those denominated "cross-hatching," in dividing

the capsule, and then pressed out the lens in the ordinary way. In 1851, we in England had materially modified our views regarding depletion after operations, but Jäger maintained thoroughly the anti-phlogistic theory. "Always bleed," "always purge," "always, always," he repeated, after performing extraction on an old man and an old woman, at the North London Eye Infirmary, and was quite excited when I told him that I should do nothing of the sort, the cases did perfectly well under simple treatment. The worthy Jäger, surprised, said, "Ah, well, such practice may do in England, but not in Vienna; there inflammations are more violent." Frederick Jäger was a most high-minded, estimable man, and it was much to be regretted that the closing years of his life were clouded by adversity and straitened means.

When in Paris, in 1854, Jean Sichel, then at the height of his reputation, performed extraction. He sat in front of the patient, who was supported as recommended by Jäger. The fingers of his assistant were chalked, as I have already mentioned. The upper section was made with a remarkably narrow long knife, very slowly, first in one eye then in the other. He paused for several minutes before attempting to extract the lenses, which he did very neatly; after again waiting, he made the patient stand up, with her back to the light, and open the eyes, when he asked her what she could see. She was then told to close the eyes, and was walked out of the room before bandages were applied. Sichel remarked that he always made patients try to see, as it was "balm to their souls."

To the memory of Albert von Gräfe a passing tribute is due. I saw him frequently when he was in London in 1857, and was struck with his bright intelligence and eager thirst for knowledge. His subsequent career was truly brilliant; a rare example of talent, conscientious observation, and indefatigable industry. He widely extended our knowledge of ophthalmic science, and dying only too soon, left a reputation as noble as it was deserved.

During the last few years many modifications of the operation of extraction have been introduced, some undoubtedly of great merit; yet the results of the flap operation, as performed by Tyrrell and Alexander, would even now be considered highly satisfactory. It has been my experience, and I am sure it is the experience of others, to have groups of successful and groups of unsuccessful cases, without knowing why, inasmuch as some of which I thought badly turned out well, and some operations which pleased me, had unfortunate results.

There are two points which tend greatly to success; to make a section sufficiently large to permit the easy escape of the lens, and to clear the pupil of every fragment of cortical substance. This should be done with the utmost care and gentleness, and will go far towards checking subacute inflammation, and securing good vision.

The old operation of couching—depression—or reclination of cataract is now nearly obsolete; yet there are some cases to which it is appropriate. In very old persons, where the vital powers are low; in diabetic patients in whom there is difficulty in obtaining union of wounds, the lens may be depressed, and if neatly done, good results may be anticipated. The secret of success is not to hurry the steps of the operation, but having placed the lens in the desired position, to keep it there buried in the vitreous humour for some seconds—then to withdraw the needle slowly and cautiously. Thus the cataract is fixed in its bed. Another point to be insisted on is absolute quiet and freedom from any shaking or jarring after the operation, as that would tend to displace the cataract, and cause it to rise and obstruct the pupil. The patient should on no account walk to his bed.

An old gentleman, a martyr to the gout and crippled by it, was operated on by depression; the lens was satisfactorily placed, but unfortunately the patient walked to bed with the heavy tread of a cripple; the cataract rose and the operation failed. The following year I determined upon extraction for the other eye, but waited until a smart fit of gout had passed off; no irritation presented itself, and the patient made an excellent recovery with good sight.

The ophthalmoscope has given the surgeons of the present day an immense advantage over their predecessors, and the operations which have been invented of late years have given a great stimulus to mechanical ingenuity. This is strikingly illustrated when we compare the delicate and beautiful modern instruments now on view in the Surgical Departments of the International Exhibition, with the heavy and clumsy antiquated instruments also there exhibited; among these I may draw attention to two examples of perverted ingenuity. These are contrivances by which an unskilled surgeon is supposed to be enabled to perform extraction; they consist of a blade somewhat like a fleam in shape, and acted on by a spring, as in a cupping frame—it is depicted in Deval's *Traité de Chirurgie Oculaire*. Such a sudden and violent shock as would be imparted to the eye by this instrument, would effectually defeat the object of the operation—

an operation which above all others requires the utmost gentleness and delicacy in its performance. I can scarcely imagine that the instrument was ever used, but specimens are to be seen in the collection lent by the Royal College of Surgeons of England, and in Mr. Blaise's interesting case of ancient instruments.

Whilst greatly admiring the exquisite specimens of workmanship displayed by the instrument-makers, it is well to bear in mind that the real test of surgical skill is to be able to attain the object with simple means, and not to place too much reliance on complicated instruments or appliances. The celebrated Baron Larrey was remarkable for fertility of invention under the most trying circumstances, as in the Russian campaign, and his example may well be followed. It is recorded that after the battle of Borodino, no less than two hundred amputations were performed by Larrey himself, or under his immediate direction: yet there were neither splints nor bandages, couches or blankets for the wounded, and their chief diet was soup made of horse-flesh, cabbage-stalks, and a few potatoes; yet the genius of Larrey triumphed over these difficulties, and the loss by death was much less than might have been anticipated. Larrey invented an eye-poultice, which he used with great success in the ophthalmia which pervaded the French army during the campaign in Egypt. Three thousand men were attacked by it in its most severe form, adding greatly to the labours of Larrey and the surgeons acting under him. The poultice was composed of powdered alum and camphor, mixed with white of egg, and was applied, wrapped in rag, to the eye.

On this very 18th of June, 1815, Larrey had a most narrow escape from death. After the battle of Waterloo was over, and the Prussians in hot pursuit of the French, Larrey was overtaken by a squadron of lancers, unhorsed, and, whilst on the ground, received two sabre cuts, which rendered him insensible, and he was left for dead. After a time he recovered and struggled onwards, but was seized by another detachment of Prussians, who led him before a superior officer, by whom he was condemned to be shot. A quarter of an hour only before the sentence was to be carried into execution, he was seen and recognised by a Prussian surgeon, who had formerly attended his lectures. The surgeon at once communicated with Field-Marshal Blücher, who, remembering that on a former occasion Larrey had saved the life of his son when wounded and a prisoner in the hands of the French, ordered him to be set at liberty, and sent him under escort to Brussels, where his wounds were dressed, and he himself treated with the consideration which he richly deserved.

I do not propose, gentlemen, to trespass longer on your time, and ask indulgence if these remarks have fallen short of your expectations. Personal recollections—recollections which die with the individual and are lost, have to me a charm, and I hope that these to which you have so kindly listened may not be altogether devoid of interest, even to my contemporaries. I would say to those entering our noble profession, accustom yourselves to methodical and accurate observation, every case is a study of itself, and individual peculiarities are endless. I have lately seen a gentleman suffering from catarrhal ophthalmia, with an amount of neuralgic pain in the head nearly producing delirium. Not long since, I saw a lady suffering from neuralgia, for which belladonna had been repeatedly prescribed, with the effect of invariably producing violent tremors and nervous disturbance, without relieving the pain. One great element in success is to cultivate a habit of close observation: this, with deep reflection and sound common sense, is more useful than brilliant genius in the ordinary path of life; such were the characteristics of Astley Cooper and Abernethy, of Travers and of Brodie, and the road to honour and distinction is as freely open to you as it was to them.

THERAPEUTIC MEMORANDA.

THE ADMINISTRATION OF PERCHLORIDE OF IRON.

DELICATE patients very frequently object to the astringent metallic taste long remaining in the mouth after the administration of tincture of perchloride of iron, the flavour of which is but very imperfectly disguised by the syrup or spiritus chloroformi with which it is usually ordered. It may not, perhaps, be too insignificant a matter for mention, that the substitution of a small quantity of glycerine (about half-ounce to an eight-ounce mixture) will altogether obviate this inconvenience.

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LECTURES

ON THE

PATHOLOGY, DIAGNOSIS, AND TREATMENT OF BRIGHT'S DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,

Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

LECTURE VII.—THE TREATMENT OF ACUTE AND CHRONIC BRIGHT'S DISEASE.—(Concluded.)

THE treatment of *chronic* Bright's disease must obviously vary according to the form and stage of the malady and the nature of the secondary complications. In each case, it is practically important to ascertain, if possible, the probable cause of the renal disease. Your inquiries should be directed to determine whether the chronic malady is a sequel of an acute attack, or whether it commenced as an insidious chronic disease. Then you should make inquiry as to the exciting cause, which in most cases may be arrived at with a high degree of probability. Is there a history of gout, or of habits likely to induce a gouty diathesis? Excessive eating and drinking, chronic dyspepsia, frequent exposure to cold and wet, cachexia the result of syphilis or of other constitutional disease, scrofula or other possibly hereditary taint, and chronic lead-poisoning, are amongst the probable determining causes which should be made the subject of inquiry; and then the treatment should be directed to remove, if possible, or, so far as may be, to counteract, the morbid influence.

Whatever may be the form or the stage of chronic Bright's disease, the skin must be protected from cold by warm woollen clothing, care must be taken to avoid over-fatigue, and the diet should be carefully regulated both as to quantity and quality. As a rule, in all cases of chronic renal disease, alcoholic stimulants in any form should be given sparingly, or abstained from entirely, unless, for some special reason, they appear to be indicated. You will find that, when there is extensive degeneration of the kidney, alcoholic liquors usually produce far more decided, durable, and often deleterious effects, than result from equal quantities of the same liquors when the kidneys have their normal structure and functional activity.

In one class of cases—cases of large white kidney, with a scanty secretion of highly albuminous urine—dropsy is usually a prominent symptom, and requires special treatment. The tendency to dropsy is no doubt increased by the dry and inactive state of the skin, which often resists the relaxing effect of external warmth, so that a hot-air bath, or even the hottest room of a Turkish bath, fails to excite diaphoresis. Patients who do not perspire under the influence of the hot-air bath, usually complain of painful throbbing in the head, difficult breathing, and other distressing symptoms. On this account, I prefer in most cases the wet sheet and blanket bath, which, as a diaphoretic, is both more agreeable and more efficacious than the hot-air bath.

Diuretics are notoriously uncertain in their operation. In order to assist the action of diuretics, diluents should be freely given; and I have often obtained most satisfactory results by keeping the patient entirely on milk, either skimmed or unskimmed, in accordance with the rules which I have before laid down, with the addition of a mixture containing acetate of potash and infusion of digitalis, a drachm of each for a dose, to be repeated three times a day. By these means, a copious secretion of urine is induced, and the dropsy is speedily and completely removed. A strong infusion of fresh broom-tops, taken in sufficient quantity every morning to act as a purgative, often proves a very efficient diuretic. The succus scoparii of the *Pharmacopœia* may be substituted for the fresh infusion. The imperial drink (cream of tartar and lemon), in doses of from two to four pints in the twenty-four hours, is also a pleasant and efficacious diuretic. The late Sir James Simpson was the first to use the vapour of oil of juniper as a diuretic. Thirty or forty drops of the oil may be floated on boiling water in an ordinary jug or in a suitable inhaler; and the mixed vapours of the volatile oil and water may be thus inhaled twice a day. In some cases, the diuretic action is very prompt and decided. Another plan, originally proposed by Dr. Christison, is to apply digitalis freely to the skin. Dr. Christison's plan consists in making a strong infusion by adding an ounce of the dried digitalis-leaves to a pint of boiling water. A large piece of spongio-piline, steeped in the infusion, is kept constantly applied to the abdomen. An alternative plan is to pour an ounce of tincture of digitalis on the surface of a large hot linseed-

poultice, which is then applied over the loins and back; the poultice, with the tincture of digitalis, being renewed two or three times a day. This plan sometimes succeeds when other methods have failed to remove the dropsy.

The free action of a hydragogue purgative, such as elaterium, compound gamboge pill, compound jalap powder, or the powder composed of scammony-resin, cream of tartar, and ginger, which I have before mentioned, is often followed by a more copious secretion of urine. The probable explanation of the indirect diuretic action of a hydragogue purgative is this. The purgative excites a copious watery secretion from the blood into the bowel; this is followed by the absorption of a portion of the dropsical fluid which had been effused into the areolar tissue, and perhaps into one or more serous cavities. The partial absorption of the dropsical effusion removes or lessens the pressure on the vessels, more especially on the veins; and so the circulation becomes more free, at the same time that the absorbed liquid exerts a diuretic influence on the kidneys similar to that which we have seen to occur during convalescence from acute renal dropsy, and not unlike that which often results from the introduction of abundant diluents through the stomach.

When other means fail to remove the dropsy, when the anasarca distension of the legs is increasing and causing pain and incipient erythematous inflammation, or when the breathing is becoming impeded by the accumulation of water within the abdomen or the chest, or by an œdematous condition of the lungs, prompt, decided, and sometimes permanent relief, may be afforded by allowing the water to escape through an incision in the skin, about half an inch long, just above either the outer or the inner ankle of each leg. The incision must be deep enough to enter the areolar tissue beneath the skin. You are aware that, for incising dropsical legs, I am in the habit of using a small instrument made for me by Messrs. Weiss. It may be described as a cupping scarifier with a single blade, which, on touching a small knob, is thrust out by a strong spring, and thus makes a clean cut through the skin with such rapidity that it causes little or no pain. We had lately a good opportunity of testing the comparative painlessness of an incision made by this instrument. A dropsical patient had his legs acupunctured by the house-physician, and cried out with the pain caused by the needle-punctures. A few days afterwards, the punctures having ceased to discharge, while the dropsical swelling was but little reduced, we made an incision into each leg with the spring lancet. He declared that he scarcely felt the cuts; and the incisions discharged so freely, that the dropsy was for a time completely removed. I have seen many cases in which life has been prolonged for a considerable period, and some in which a complete and permanent cure has followed incision of the legs, after other means had failed to afford relief. To refer to one case only out of a number: towards the end of July 1861, I first saw a clerk to the New River Company, aged 22. Since the end of March, he had suffered from general dropsy, the result of exposure to cold. The urine became nearly solid with heat and acid, and it contained numerous oily casts. Purgatives and diuretics failed to lessen the dropsy; and at the beginning of September the swelling of the legs was so great, that the skin cracked, and water oozed through the fissures. I then advised that the legs should be incised. A copious discharge of water occurred, and the urine became more copious. From that time, he steadily improved, the dropsy passed away, and gradually the urine ceased to be albuminous; but it was not until the end of April 1862, more than a year from the commencement of his illness, that all trace of albumen had disappeared. The chief medicinal treatment after the incision of the legs consisted in giving the tincture of perchloride of iron three times a day, and a dose of strong broom-tea every morning. Since his recovery, he has insured his life, he has married, and has several children. I heard of him quite recently as remaining well. I have thought this case worthy of especial mention, as an example of complete recovery after dropsy to an extreme degree, and albuminuria with numerous oily casts, had continued for the greater part of a year; the first favourable change in the patient's condition following directly upon a copious discharge of water through incisions in the legs.

After the dropsical legs have been punctured, the folded sheet and mackintosh, placed beneath to receive the serous discharge, should be frequently renewed, and kept clean. The liquid quickly decomposes and becomes ammoniacal, and in this state it may irritate and inflame the skin. Cleanliness is, therefore, essential for safety as well as for comfort. Any inflammatory redness about the wound may usually be removed quickly by the application of a lead lotion. It is true that severe inflammation and sloughing have sometimes followed incisions or punctures in anasarca legs; but this may, and often does, occur from over-distension of the skin, or from the mere pressure of the heavy dropsical limbs upon the bed. The result of my experience is,

that inflammation of anasarca legs has been as often subdued as provoked by acupuncture or incision; that inflammation is much less likely to follow incisions in cases of renal than cardiac dropsy, when the circulation is much impeded by valvular disease; and that an incision made with the spring scarifier is as safe as acupuncture, and much less painful.

The copious secretion of urine which usually follows a discharge of dropsical fluid through incisions in the skin admits of nearly the same explanation as that which I have already given you of the like phenomenon after the action of a hydragogue purgative. The escape of the dropsical effusion through one or more incisions in the skin, removes pressure from the veins, and permits the blood to move more freely through the vessels. This greater freedom of the circulation is attended by a quickened absorption, and some of the absorbed dropsical liquid, more or less charged with urea, enters the circulation, and exerts a diuretic influence on the kidney. In the treatment of a copious dropsical effusion the main object, and the chief difficulty, is to overcome the *vis inertiae* of the stagnant liquid. If once we can set the liquid in motion, whether by a primary diuretic action upon the kidneys, by first exciting a free discharge of liquid through the bowels, or by giving exit to a portion of the liquid through incisions in the skin—in which ever way the current is started—the outward movement of liquid often continues until the whole of the dropsical effusion has been swept away, and in each case a free secretion of urine constitutes a part of the eliminative process.

The anæmia of chronic Bright's disease is to be counteracted by a carefully regulated diet, and by the persevering use of one or other of the preparations of iron. When with anæmia there is a scanty secretion of urine, and a tendency to dropsy, a very useful combination is twenty minims of the tincture of perchloride of iron, with a drachm of spirit of nitrous æther, and a drachm of infusion of digitalis, or from ten to twenty minims of the tincture of digitalis in an ounce of water, given three times a day, soon after food. If the mixture be found to constipate, from half a drachm to a drachm of sulphate of magnesia may be added to each dose, or the bowels may be acted upon by an occasional dose of the compound colocynth pill. Mercury in any form often acts powerfully and injuriously in cases of Bright's disease. The chief use of mercurials in these cases is to assist the operation of saline or vegetable purgatives.

Syphilitic symptoms, when present, are best treated by gradually increasing doses of iodide of potassium, with bark, or quinine. The calomel vapour bath has been found a useful remedy in some syphilitic cases.

When chronic renal disease is associated with a strumous diathesis, cod-liver oil may often be given with advantage.

Dyspnœa is one of the most frequent and distressing symptoms associated with advanced Bright's disease. It has various causes, and requires various remedies. When it results from œdema of the lungs, or dropsical hydrothorax, it is best treated by the remedies for dropsy. In some cases, anæmia appears to be the chief cause of dyspnœa. The red blood-corpuscles are the oxygen-carriers. When the blood—whether in cases of chlorosis or of Bright's disease—contains an excess of water with a corresponding deficiency of red corpuscles, the defective oxidation of the tissues and the demand for air are manifested by hurried and laborious breathing. The remedy for this form of dyspnœa is to be sought for in the elimination of water, a carefully regulated nutritious diet, and iron as a restorative tonic.

When dyspnœa results from pulmonary congestion and bronchial catarrh, it is best treated by warm baths, fomentations, or poultices to the chest, and mild counter-irritants.

Paroxysmal dyspnœa, in many cases of advanced Bright's disease, appears to result from the influence of deteriorated and poisoned blood upon the nerves and the nervous centres. The heart's action is rapid and feeble, the breathing is distressed and hurried, while the respiratory murmur is loud, puerile, and unattended by wheezing or crepitating sounds. This form of dyspnœa is usually more common and more distressing at night. It is not improbable that, in some cases, cardiac weakness, with palpitation and dyspnœa, may result from excessive contraction of the minute branches of the coronary arteries, excited by the stimulant action of morbid blood, and causing anæmia and malnutrition of the muscular walls of the heart. These symptoms are most effectually warded off by a carefully regulated diet, by promoting the action of the skin and bowels, and so far as possible of the kidneys, the object being to free the blood from accumulated impurities. Temporary relief is often afforded by ether, or by brandy. In some cases, a small dose of chloral hydrate, not more than ten grains, repeated at intervals of six or eight hours, is very beneficial. The chloral has this advantage over every preparation of opium, that it has no astringent action on the bowels, and that it rather increases than checks the secretion of the kidneys. It therefore never excites the distressing sickness

which often results from the astringent influence of opiates in the advanced stages of renal degeneration. The muscular twitchings, and the painful cramps, which are common results of uræmia, and not unfrequent precursors of convulsions, may sometimes be kept off, or much mitigated, by twenty-grain doses of bromide of potassium, given twice or three times in the twenty-four hours. A combination of chloral hydrate with bromide of potassium appears sometimes to have a powerful influence in warding off uræmic convulsions.

Although the use of opium in all forms and stages of Bright's disease requires extreme care, on account of its tendency to check all the secretions except that of the skin, yet you will occasionally meet with cases in which the distressing nervous symptoms resulting from uræmia are relieved by opiates more effectually than by any other means. There are cases in which the carefully-observed result of a cautiously conducted experiment is sometimes a better guide than theory.

The sufferers from Bright's disease are always dyspeptics, and the gastric symptoms are often very obstinate and distressing. When, in consequence of renal degeneration, the blood is contaminated by retained urinary excreta, there is often a vicarious excretion of these impurities by the mucous membrane of the stomach and bowels. The gastric secretions are mingled with the ammoniacal products of decomposing urea; digestion is consequently impaired; there are flatulent distension of the stomach and bowels, nausea, vomiting, and diarrhoea. Relief is to be sought by a carefully regulated diet, and by giving with the food from ten to twenty drops of dilute hydrochloric acid with a vegetable bitter. The liquor strychniæ in doses of five minims, or the tincture of nux vomica in ten-minim doses, with a mineral acid, is sometimes especially efficacious. Pepsine may sometimes be given with advantage.

In some cases of advanced renal degeneration, the vomiting is so incessant, that the patient has to be sustained by nutritive enemata, while iced water only, or iced milk in small quantity, is taken by the stomach. In some instances that have come under my observation, the straining and exhausting efforts of vomiting have been checked only by frequent whiffs of chloroform vapour.

When the stomach is very irritable, chloral can rarely be retained, it acts at once as an emetic; but injected into the rectum, its soothing influence is very similar to that of chloroform vapour, while it has the advantage of producing a more durable impression on the nervous system, and therefore requires to be less frequently repeated.

When the retina is the seat of hæmorrhage, or of albuminuric retinitis, the eyes should be allowed to rest, and they should be carefully shaded from excess of light. Recovery of sight, more or less complete, may occur, but it is doubtful whether treatment has much influence upon the symptoms. My colleague Mr. Soelberg Wells, with whom I have seen several cases of this affection, strongly recommends moderate local bleeding by the artificial leech. When, on account of the anæmic condition of the patient, the abstraction of blood is undesirable, he has seen marked improvement follow the application of the dry cup to the temple, at intervals of five or six days. (*A Treatise on the Diseases of the Eye*. By J. Soelberg Wells. Second edition, p. 361.)

CASE OF STRANGULATED OBTURATOR HERNIA.

By CHARLES MAYO, F.R.C.S.,

Consulting Surgeon to the Royal Hants County Hospital, Winchester.

JEMIMA H., aged 59, of rather spare habit and middling stature, acting as assistant matron at an institution for the reception of unfortunate or fallen women, called the Refuge, in this city, had been subject to occasional attacks, during the last two years, of pains across the bowels, with sickness and more or less constipation, from which she was relieved by mild aperients, injections, etc. On January 20th, I was called to her on account of one of these attacks, late in the evening; and, as she had used an injection with some success, I gave her a mixture containing liquor ammoniæ acetatis, tincture of opium, and compound tincture of lavender, to be taken every three hours till the pain abated. Next day, the attack had passed off; but she spoke of considerable uneasiness which she felt in the left thigh. On February 27th, the pain and sickness returned with renewed aggravation. Enemata with common salt, coarse sugar, and croton-oil, were given, with the hope of inducing downward action; and effervescing saline mixture with hydrocyanic acid and liquor opii sedativus, to abate the sickness. The treatment proved unavailing, and she sank exhausted on March 2nd.

On March 3rd, my son, who assisted me in the above treatment, took the greatest share in a *post mortem* investigation. The liver, spleen, and pancreas, were natural. We next examined the pyloric

extremity of the stomach, as, from the pain and uneasiness which she had felt there, and the frequent vomiting, we suspected that some morbid condition would be discovered in that part. A ligature was placed on it, and another on the duodenum. The intervening portion was then removed and slit up, without showing more than ordinary vascularity or thickening. We then directed our attention to the small intestines, which were shrunk to about the size of the ring-finger, and quite empty. We then discovered, about two-thirds down, a loop three or four inches in length, when disentangled from the upper fourth of the left obturator foramen, where it was evidently strangulated, and required some force to withdraw it. The mid-portion of the loop was swollen and dark-coloured, and sufficiently distended with fecal fluid to account for its not returning to its natural position, as it was supposed to have done in former attacks.

I am told that obturator hernia is not uncommon; but I have been able to find but few records of its occurrence. Sir William Lawrence, in his excellent treatise on *Hernia*, speaks of reports from two or three foreign authors, but has doubts of their authenticity as cases of obturator hernia. The clearest case of this malady that I can find is that reported by Mr. Hilton, Surgeon to Guy's Hospital, at p. 323 of vol. xxxi of the *Medico-Chirurgical Transactions*, where the symptoms were very analogous to those above described in our case; and, as there were no external indications, their cause could not be revealed but by *post mortem* examination. As in Mr. Hilton's case, so in mine, there was room on the right side for the escape of a similar portion of intestine by the obturator foramen, which would allow the passage of the first joint of the forefinger easily; and, indeed, the right side had been referred to as the seat of pain in some of her previous attacks. My nephew, Dr. Druitt, in his *Vade Mecum or Manual of Modern Surgery*, refers to a case by Mr. Obré, reported in Ranking's *Abstract*, vol. xiv, in which, a slight swelling being observed in the right thigh, Mr. Obré cut down upon it three inches below Poupart's ligament, and discovered a sac under the pectineus muscle, which he opened, and small intestine rose up. He then divided the stricture, and returned the gut through the obturator opening; and the case did well.

I have been anxious to forward this case to the BRITISH MEDICAL JOURNAL, as being one of its oldest subscribers; and to say that, however frequent such cases may have been, yet I have never met with one during more than fifty years that I have been in practice and attached to the County Hospital in this city. I shall be pleased to hear what any of my cotemporaries may be able to report on such cases. I do not remember to have seen such palpable openings above the obturator muscles, leaving room for a protrusion of peritoneum to form a sac for such hernia, as the vessels and nerves appeared to fill the notch in the bone, and the peritoneum passed smoothly over them.

Professor Miller, in a second edition of his *Practice of Surgery* (Edinburgh, 1852), gives a meagre account of this hernia; while Samuel Cooper, in his *Dictionary* (1809) and his *First Lines* (1820), gives excellent descriptions, and quotes from Sir Astley Cooper several varieties and the difficulties of discovering the seat of obstruction during life.

I might have mentioned that our patient was often employed in laundry work, or, at any rate, superintending; and that she attributed the painful attacks above mentioned to her reaching up to hang up clothes to dry on a line. This might have induced a downward action of the diaphragm, so as to more or less force down the bowels at certain intervals.

CASE OF TRAUMATIC TETANUS TREATED WITH BROMIDE OF POTASSIUM: RECOVERY.

By CHARLES ROBERT THOMPSON, Esq., Westerham.

ON January 24th, 1873, J. H., aged 35, a robust, healthy man, by trade a baker and grocer, was thrown from a cart, which capsized by collision with another, pitching on his right hand. He was slightly cut and bruised about the face.

I found complete dislocation of the hand backwards, without any fracture as far as I could determine by close examination, with a small jagged wound of the skin over the end of the ulna. I did not make out that this wound extended into the joint. The loss of blood was trifling; and there was no loss of nervous sensibility.

After carefully cleansing the wound, the hand was brought into position by straight extension, the forearm being bent, and counterextension applied at the elbow; a straight splint was applied from the elbow to the ends of the fingers, at the back of the arm; and oiled lint was placed on the wound.

He remained in bed a few days, being much shaken and bruised;

the wrist was painful and swollen, with some very offensive discharge from the wound, on account of which it was poulticed. On the tenth day, I found the parts above the wrist inflamed and boggy, and made an incision which gave exit to sloughy cellular tissue. Excepting that his nights were bad from pain in the wrist, his general condition was favourable; he took food well, walked out when the weather allowed, and seemed convalescing.

February 13th (twentieth day from injury). I found him sitting up, looking ill, and complaining that he had no sleep for two nights on account of pain in his back, between the shoulders, and in the neck and jaws. He had shivered very much the night before; and had sweated profusely. He was quite unable to open his jaw. Whilst I was examining the injured wrist, he groaned with pain in his back, indicating a point just below and between the scapulæ. The skin was sweating. Pulse 86, very soft. The bowels had been regular throughout; the urine was said to be scanty and turbid. He could swallow liquids but slowly and with difficulty. The parts above the wrist were still inflamed and painful; and a boggy place which did not seem relieved by the former incision was now freely opened, and the poultice continued. I ordered him to go to bed directly; to take a dose of castor-oil in brandy; to have his back well and frequently rubbed with a stimulating liniment; to be fed every two hours, alternately with beef-tea and milk or gruel containing brandy; and for medicine, bromide of potassium thirty grains, and spirit of chloroform twenty drops, in one ounce of water, to be taken every four hours.

February 14th. The paroxysms of pain in the back had been less severe. The nurse said that he seemed composed, and slept after each dose of the medicine, and had taken nourishment as ordered. The bowels acted freely with the oil. The tip of the tongue could be just made visible between the teeth, but not protruded. There was a free discharge of shreddy pus and cellular sloughs from the wounds.

February 21st. The condition through the week had been good. There was steady diminution of pain in the back, so that he got good sleep. He complained still of severe pain in the back, if anyone came into the room and talked to him; and more especially when the injured wrist was touched or dressed. He could now, with great care and deliberation, protrude about half an inch of tongue between his teeth; it was covered with thick creamy yellow fur. His breath smelt strongly of the peculiar odour of the bromide, something like a foul sponge; this was perceptible through the room, showing how he was saturated with the salt. His strength was well maintained; he took nourishment well, increasing the brandy a little, or substituting port wine occasionally. The wounds on the arm were healthy; the sloughs were cleared out, so that water-dressing was applied instead of the poultice. He continued the medicine; and had the neck and face rubbed with belladonna liniment.

February 25th. More pain in the hand had made him restless. A small abscess had formed on the dorsum of the hand, which I opened. There was slight improvement in the dorsal pains and in the locked jaw. He seemed more feeble. The dose of bromide of potassium was reduced to twenty grains every six hours, with two grains of quinine.

From this date, improvement went on steadily. The wounds about the wrist healed. The power of opening the jaw very slowly but very positively increased, so that by March 16th he was able to protrude his tongue fully, though very slowly and with much effort. Pain would still come in the back if he sat up too long, or if anything excited him. At the end of March, he was quite convalescent, though weak, and was able to walk out daily, though with backache if he over-exerted himself. He could now masticate solid food, but complained of pain in the muscles of the jaw if he tried them too long. The hand and wrist were quite sound, but stiff from want of use and from the mischief about the flexor tendons; they improved daily by passive motion and rubbing. The only medicine now given was quinine, two grains twice daily.

REMARKS.—Just before this case occurred, I had read in the JOURNAL (February 8th, p. 148) M. Voisin's recommendation of bromide of potassium in tetanus, mentioning three cases of well marked traumatic tetanus in which cure was effected by the bromide in large doses and subcutaneous injection of morphia. I determined at once to use a drug which seems to commend itself so thoroughly by the extraordinary control which it possesses over the convulsions of epilepsy; and the result has been most satisfactory. Whether the case would have run on to acute tetanus, as it seemed to promise to do, but for the remedy, it is not possible to say; but the relief obtained immediately from the bromide was most decided and unmistakable. The whole amount given between February 13th and March 25th was six and a half ounces: the first ten days, three drachms daily; then two drachms till March 15th; after that, one drachm. The only effect it seemed to

have was to produce ease and sleep. There was no nausea or irritation of the bowels; the healing process in the wounds went on rapidly; and, with the exception of a crop of acne on the forehead which appeared towards the end of March, no eruption has at present resulted.

CASE OF FOREIGN BODY IMPACTED FOR TWENTY-TWO YEARS IN THE VAGINA.

By ARTHUR PEARSE, M.D., Botesdale.

ON December 15th, 1872, S. T., a married woman, aged 36, requested my attendance for a severe attack of menorrhagia, from which she had suffered for ten days. It was accompanied with much hypogastric and lumbar pain, and had produced great prostration and blanching of the skin. The menstrual period had gone a week beyond the time when the attack began. Turpentine was used externally and internally.

On December 17th, the symptoms continued. On examination *per vaginam*, the index finger came into contact with a foreign body, impacted firmly, about an inch from the external labia. It was closely encircled by rigid and thickened folds of the vaginal mucous membrane, so that the tip of the finger could not be passed beyond the lower edge of the obstruction. The patient reluctantly told me that, at the age of fourteen, she, by the advice of another girl, whom she described as corrupt, introduced a cotton-reel into the vagina, where it became fixed and remained, she being unable to extricate it herself, and unwilling to mention the occurrence to any one. For the first few years of its impaction, she suffered much pain and inconvenience; but for the next twelve or fifteen years it was of but little trouble to her; however, within the last few years attacks of hæmorrhage and slight peritonitis recurred at intervals of a few months, chiefly at the menstrual periods, which were usually regular. She had on several occasions been under medical care at Glasgow and Perth for attacks of peritonitis and menorrhagia. The bowels were generally regular. She had always suffered more or less from leucorrhœa. Micturition had been frequent, especially at the menstrual periods, when there was incontinence, with pain. Up to this time she was able to attend to her domestic duties. Gallic acid was now (December 17th) given to check the hæmorrhage.

On December 19th, peritonitis had supervened. The hæmorrhage was less. Opium pill was given, and liniment of turpentine and opium was applied externally.

On the 22nd, the peritonitis was subsiding; there was much perspiration and prostration; her appetite was returning; quinine mixture was given.

On the 25th, the patient having gone to a cottage-hospital in the neighbourhood, the foreign body was removed. With the assistance of the other medical officers of the hospital, the patient was brought under the influence of ether. On placing her in the lithotomy position and dilating the thickened folds of mucous membrane, the reel could be seen, with its long axis corresponding to that of the vagina—communication with the parts above being only maintained through the central perforation of the reel. By means of a pair of lithotomy forceps I grasped the reel, and with some difficulty extracted it intact. It was much blackened, and the central canal, through which the menstrual discharges had passed for twenty-two years, was perfectly clear. There was an urethro-vaginal fistula, half an inch in length, situated near the orifice of the urethra. It had been caused, no doubt, by the pressure and friction of the lower rim of the reel, and would account for the incontinence of urine. Very little blood was lost at the operation, the knife not having been used. The patient was kept in bed, on milk-diet, and the vagina daily syringed with Condy's fluid.

On January 11th, 1873, she left the hospital much better, but weak. Since that time menstruation has been regular, prolonged, yet not excessive or painful. She does not suffer from incontinence of urine, except for a short time at the commencement of the monthly period. She feels tolerably strong, and is able to attend to her household duties.

REMARKS.—The above case presents some remarkable points of interest—viz., the size of the cotton-reel (one inch by one inch and three-quarters); the length of time of its impaction (twenty-two years, from the age of 14 to that of 36 years); the fact of its not before being discovered while under medical care years ago; also the patient's determination not to speak of the subject to any one. The most unintelligible part of her history is, that she has been twice married—first, thirteen years ago, and secondly, eighteen months since to a brother of her deceased husband (Scotchmen), both being in ignorance of the cause of her frequent ailments and her sterility.

PATHOLOGICAL MEMORANDA.

SARCOMA IN THE RAT.

FACTS like the following have at present, perhaps, but little bearing on the advance of pathological knowledge, though it may be interesting to place them together.

In February, 1869, I made an examination of a tame piebald rat. It had been kept for some time in a squirrel-cage, in which it was found, one morning, lying dead. Its abdomen was very swollen and hard; the thoracic organs were healthy; the cavity of the abdomen contained about an ounce and a half of sanious fluid. Attached to the peritoneum was a large firm mass which pushed the intestines to one side, but left them perfectly free. In the right kidney was a cyst, one-third of the size of this organ, containing a greenish-coloured fluid. Microscopic examination of the tumour showed the simple round cells of sarcoma.

In the March number of the *Archives de Physiologie*, Dr. H. Liouville describes the occurrence of general sarcoma of the serous tissues in a grey rat. The animal had been kept for three years among a number of others, for use in experiments. It had never been operated upon, and escaped, but returned after two years' absence. Soon after its return it began to pine away, and a week later died. The necropsy was made the same day. In addition to signs of pericarditis and peritonitis, there was great congestion of the brain; also "hæmorrhagic pleurisy," with false membranes on both sides. A tumour of the size of a cherry was connected with the peritoneum and perforated the diaphragm; smaller masses and granulations occupied the latter, the anterior mediastinum, the pleura and pericardium. Both suprarenal capsules were in a condition of grey degeneration and easily broken down.

This degeneration of the suprarenal bodies is not uncommon in the lower animals. I have seen them removed from a cat in a condition of hard calcification.

A. B. SHEPHERD, M.A., M.B., Assistant-Physician
to St. Mary's Hospital, etc.

CLINICAL MEMORANDA.

RARE DISLOCATION OF THE HUMERUS.

OBSERVING in the BRITISH MEDICAL JOURNAL for June 7th, an account of a case under the above heading, recorded by Mr. Storks, of the Salford and Pendleton Hospital, it occurred to me that the following case might be of sufficient interest for notice.

The patient, an elderly woman, applied to me for admission into our infirmary on account of pain and stiffness of the shoulder-joint. She stated that two or three months previously she had a fall over a piece of orange-peel, upon her elbow. Thinking she had only bruised her shoulder, she took no notice of it until coming under my care. Upon examining the shoulder, no great loss of rotundity or flattening of the deltoid was apparent, although the muscle appeared somewhat narrowed. The elbow-joint was directed somewhat outward, but neither forward nor backward; and the arm was capable of motion to a somewhat considerable degree. The patient seems to have been able to dress herself with slight assistance. The globular head of the humerus could not be detected, save imperfectly, in the axilla. I told her that she had put her shoulder out, which rather created surprise. Having a second opinion, it was suggested that it might be atrophy of the deltoid muscle, partly on account of the arm being capable of being moved to her side, also outwards, backwards, and forwards, and some elevation at the elbow-joint being admissible. The coracoid process of the scapula was by no means prominent; nor could the glenoid cavity be clearly distinguished. It being still believed that the injury was a dislocation, other opinions were had; and a more careful examination was made justifying this conclusion. Reduction was scarcely attempted; and the patient recovered with a new false joint of no small service to her. It would appear that the head of the humerus rests just under the ridge of the glenoid cavity at the under surface of the neck of the scapula, forming a bed for itself in the long head of the triceps muscle; the teres minor muscle, no doubt, contributing towards keeping it *in situ*. The arm appears to be of the same length as the sound one.

Such cases are undoubtedly interesting from the possibility of their being mistaken in the diagnosis, or even altogether overlooked. They teach the importance of careful investigation and the danger of hastily coming to conclusions.

EDWARD J. ADAMS, M.R.C.S. Eng.,
Medical Officer to St. Matthew's Infirmary, Waterloo Road.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

ALL SAINTS' INSTITUTION, GOWER STREET.

CASES OF OVARIAN DISEASE.

(Under the care of Dr. GRAILY HEWITT.)

THE following comprises brief particulars of cases of ovariectomy, exploratory operations, etc., from January, 1872, to May, 1873. The institution is under the management of, and in connection with, the All Saints' Home, Margaret Street, and under the medical charge of the Obstetric Physician to University College Hospital. There are five beds, each patient having a separate room.

The cases are arranged in chronological order.

CASE I. *Large Fibroid Tumours of Uterus: Exploratory Operation.*

—The subject of this case was a hospital patient aged 46. There was a rather firm tumour in the pelvis of the size of half a foetal head. The uterus was pushed upwards and forwards, so that the os was hardly to be reached. In the abdomen was a tumour, rounded, firmish, and continuous with the pelvic tumour. The diagnosis was obscure, but the history was more that of an ovarian than of an uterine tumour. An exploratory operation was deemed advisable. On making an abdominal incision of a limited extent, Dr. Graily Hewitt found the tumours to be of a fibroid nature. The patient recovered.

CASE II. *Ovarian Cystic Tumour: Ovariectomy: Formation of another Tumour: Second Operation: Removal of the other Ovary: Death.*

—The patient, aged 42, had been under the care of Mr. Harper, of Brixworth. The enlargement of the abdomen was of a few weeks' duration only. The patient was rapidly increasing in size. Ovariectomy was performed by Dr. Graily Hewitt. The tumour was soft; the parietes were easily lacerated; it was of the size of two foetal heads, was considerably adherent, and was composed of more than two cysts. The pedicle was lacerated in turning the tumour out of the abdomen; there was considerable hæmorrhage in consequence. The pedicle was transfixed, tied in three portions, and secured outside the abdomen by the "Buckle" clamp, a framework of steel, with small heads set round it, to which the ligatures were attached. For three weeks the patient slowly improved, but never really gained strength. A second tumour formed in the region of the other ovary, and appeared to be rapidly increasing in size. It was judged to be a tumour of the other ovary. Finally, seven weeks after the first operation, a second was performed. It was found that the new tumour was mainly composed of a cellutic effusion, on the surface of which was the other ovary a little enlarged. This ovary was removed, the pedicle tied and dropped. Death occurred a fortnight after the second operation, from bursting of an abscess into the bowel.

CASE III. *Ascites: Abdominal Tumour: Nature uncertain: Exploratory Operation and Tapping: Discovery of a Large Mesenteric Tumour and other Parietal Abdominal Tumours: Convalescence.*

—This was a case of unusual interest. The patient, aged 25, who had been under the care of Dr. Andrews, had had three children, the last fourteen months previously. Lactation had continued for thirteen months. The abdomen was enormously enlarged, and pregnancy was suspected. On examination, ascites was found to be present, together with a tumour. A tumour was also detected behind the uterus on vaginal examination. The diagnosis was, probably ovarian tumour *plus* ascites. Two days after admission, paracentesis was performed, and four quarts of fluid removed, with the double object of relieving the dyspnoea and furthering the diagnosis. The tumour appeared then to be of a flattened shape, and to proceed from the pelvis. Eleven days later the abdomen was opened, with the view of removing the tumour if possible. It was then found that there were three tumours. The main tumour was in the omentum, broad, flattened, and extending quite into the pelvis, six or seven inches broad, by seven deep, and three and a half inches thick. It felt like a mass of glands. A second tumour was found to be attached to the left side of the brim of the pelvis; and a third, of the size of a goose's egg, was growing behind the uterus. Of course, no attempt was made to remove these tumours, which seemed to be probably of malignant nature. The wound was closed. Adhesion of the greater part of the wound occurred in a few days, but after that time a copious discharge of semipurulent fluid occurred from the abdominal cavity for a period of four weeks. At the end of this time the wound was healed

with the exception of a small opening the size of a quill, which continued to give exit to a little fluid. During all this time the abdomen gradually lessened, the tumour remaining in *statu quo*. The patient's health greatly improved, and she left the institution five weeks after the operation. The nature of the tumour was a matter of discussion. [For many months great improvement followed, but the case terminated fatally one year afterwards.]

CASE IV. *Enormous Polycystic Ovarian Tumour: Ovariectomy: Recovery.*—This patient, aged 56, who had been under the care of Mr. Shaw of Battersea, had been the subject of abdominal enlargement a few months, and of dropsy of the legs previously. The circumference of the abdomen was forty-six inches and a half. A preliminary tapping was judged advisable, and thirteen pints of a coffee-coloured fluid were removed a week prior to ovariectomy. The incision required to be six inches long. The tumour was composed of one very large and several other large cysts, and a multitude of smaller ones. The pedicle was transfixed, tied in two divisions and a third encircling ligature, and secured outside by the "Buckle" clamp, changed subsequently for a framework of gutta-percha. The patient left the institution twenty-three days after the operation, perfectly recovered.

CASE V. *Polycystic Tumour of Ovary as large as an Adult Head: Ovariectomy: Recovery.*—This patient was a single lady, aged 35. The abdomen had been enlarged about eight months. Ether was used during the operation, chloroform being found to affect the patient prejudicially. The pedicle was small. It was transfixed, tied in two portions, and a third round all. It was tied again lower down in consequence of slight bleeding from laceration of the pedicle before the wound was closed. The pedicle was fixed externally to this "Buckle" clamp. The patient was discharged cured thirty days after operation.

CASE VI. *Exceedingly large Ovarian Cyst: Paracentesis: Ovariectomy: Extensive Adhesions: Death.*—This was a patient, aged 70, lately under the care of Mr. Shaw, of Battersea. The abdomen measured fifty-three inches; the distress was great, the health otherwise good. The patient was first tapped, and thirty-five pints of a dark fluid removed. The abdomen rapidly refilled, and ovariectomy was decided on and performed fifteen days after the tapping. The very large single cyst was extensively adherent to the right brim of the pelvis, but not so elsewhere. Considerable bleeding occurred from separation of adhesions; the actual cautery used in one place, and perchloride of iron elsewhere. The pedicle was short and, having been tied, was fixed to the inner edge of the abdominal wound, and there retained by a gutta-percha framework clamp. The patient did well for the next three days. On the evening of the fourth day she put herself in a passion about an article of dress, became rapidly worse, and died twelve hours afterwards. The pulse became rapid immediately after the operation, though it sank on the third day just prior to the outbreak of temper. The temperature was normal until a few hours before death, when it rose.

CASE VII. *Large Polycystic Tumour of Ovary: Ovariectomy: Recovery.*—This patient, aged 54, had been under the care of Dr. Andrews. Dr. Graily Hewitt had diagnosed ovarian tumour one year previously. The abdomen was very large and thick with fat, hence the diagnosis was a little obscure. Ovariectomy was decided on, if the diagnosis were confirmed on incision. The abdominal wall was found to be an inch and a half thick with fat. A large tumour of the ovary, consisting of one large cyst and a multitude of smaller within it, was removed. The pedicle was secured outside to a gutta-percha framework. The patient left the institution quite well twenty-two days after the operation.

CASE VIII. *Malignant Tumour of Uterus and Ovaries(?): Ascites.*—This patient was a single lady, aged 50, with extensive ascites, and who had been under the care of Dr. Duke, of Norwood. She was admitted for further diagnosis and treatment. Tapping was performed, and eight pints of a chocolate-coloured fluid were removed. The tumour nearly filled the pelvis from below. The diagnosis was, malignant tumour of the uterus and probably of the ovaries. A second tapping was afterwards performed, but nothing could be attempted in the way of operation, and death finally occurred from the extension of the disease.

CASE IX. *Cystic Tumour of Ovary, with Solid Tumour of Uterus(?) of Pedunculated Character: Tapping.*—The patient was single, aged 56. The abdomen had been enlarged for some time. Two years ago she had been told that there were two tumours in the abdomen. For the last year there had been considerable increase in the abdomen. Tapping was performed soon after her admission, and sixteen pints of a clear amber-coloured fluid were removed; whereupon it was found that at the lower part of the abdomen were three hard firm tumours, two lateral, one central. The median one was probably at the top of the uterus, the others—pedunculated fibroid tumours—attached thereto. In three weeks, the fluid had again formed largely. An exploratory operation was recommended, but the patient declined. Four months

later the patient was readmitted, and a second operation of paracentesis was performed, the exploratory operation being still thought advisable, but declined by the patient.

CASE X. Polycystic Tumour of Ovary: Ovariectomy: Death.—The patient, aged 29, was single, a cook. Her illness was of two years' duration. The abdomen was not very large. Her general health was not good; and operation was postponed for a few weeks in consequence. Finally, ovariectomy was performed. There were slight adhesions. The tumour was chiefly one large cyst. The pedicle was very broad and very short; it was tied in three divisions, and secured externally to the gutta-percha framework. Death took place twenty days after the operation, from peritonitis and diffused abscess in the subperitoneal space and omentum. There had been a free discharge from the wound for about a fortnight. In this case the shortness of the pedicle was the unfavourable element; probably the treatment of the pedicle by the actual cautery, or the ligature dropped, would have been the better procedure.

CASE XI. Very Large Unilocular Ovarian Cyst: Tapping.—The patient was a widow, aged 56, who had been under the care of Dr. R. T. Smith, of Haverstock Hill. The abdomen was of enormous dimensions, but the growth was of only a few months' origin. The patient had recently fractured her humerus, which complicated matters. By paracentesis twenty-eight pints of fluid of a chocolate colour were removed with great relief to the patient. There was no evidence of a solid tumour on palpation after the operation. For some weeks the patient remained under observation without any re-formation of fluid occurring.

CASE XII. Large Single Cyst of Ovary: Ovariectomy: Recovery.—The patient was single, aged 23. The precise date of the commencement of the disease was not known, but probably over two or three years. Ovariectomy was performed. There were no adhesions below, but three or four very firm bands above had to be separated. They were cut through by the actual cautery. The pedicle was long; it was treated by ligature and attachment externally to the gutta-percha frame. The cyst removed was unilocular. No bad symptoms followed, but the wound was some little time in uniting firmly. The patient was convalescent a month after the operation.

Of the above series, 7 were cases of ovariectomy, with 4 recoveries. Dr. Graily Hewitt states that his whole experience of the completed operation, including the above, is 17 cases, with 10 recoveries, or 58 per cent. Of these, 2 of the earlier ones were performed in hospital under comparatively unfavourable conditions. Excluding these two, the non-hospital cases, treated on the isolation plan, give a percentage of recoveries of 66. The plan of treatment of the wound when the pedicle was left outside, was careful drying and packing with cotton-wool, the solid perchloride of iron being applied to the pedicle itself shortly after the operation.

BELFORD HOSPITAL, FORT WILLIAM.

CASE OF LOCAL PARALYSIS TREATED BY ELECTRICITY.

[(Under the care of JAMES W. ALLAN, M.B., C.M.)]

JAS. H., crofter, an old man, was admitted to Belford Hospital on March 5th, 1873, suffering from loss of power in the fore-arms and hands. The affection was of about a year's standing. On admission, the grasp of both hands was very feeble, and there was a numbness in the points of the fingers which prevented tactile perception. There was no sensation on the back of the hands. The patient's skin was loose and flabby, and the radials were somewhat hardened and tortuous, but nothing unusual in a person of his age. There was no drop-wrist; no history of lead-poisoning. His general health was pretty good.

He was put on nux vomica, and afterwards the electric machine was called into play. Under the use of the latter agent he improved very much. After being in the house about three weeks, the grasp of both hands became quite strong again, but still the sense of touch was deficient, and the numbness at the points of the fingers remained. The patient said that when he rubbed the finger-tips together, he felt as if there were "wool" between them. But pinching of the back of the hands now came to be felt. The right hand improved before the left; the latter was first affected.

When the electricity was first employed, he seemed almost insensible to its influence; but from day to day he became more and more sensitive. The electric thrill was at first felt in the hands only, but it gradually extended up the fore-arms. The machine was used morning and evening.

On March 27th, he felt pinching of the finger-tips; and on April 8th, he was dismissed very much improved—the grasp of the hands being quite strong, but a little numbness of the finger-points still remaining.

REVIEWS AND NOTICES.

AN INTRODUCTION TO THE STUDY OF CLINICAL MEDICINE. By OCTAVIUS STURGES, M.D. Cantab., Assistant-Physician to the Westminster Hospital. London: Smith, Elder, and Co. 1873.

THERE is no more difficult problem in medical education than the teaching of the student in the clinical investigation of disease. Is he to be at the commencement of his career brought into contact with disease, while he is yet ignorant of the elements of his profession? Or is he to be informed that, until he has obtained a knowledge of anatomy and physiology and the preliminary branches of medicine, his time will be wasted, and progress in a systematic and scientific manner stayed? The two courses are in entire opposition. The old, or, as we should call it, the irrational, custom of apprenticing still enforced by the Society of Apothecaries, largely explains the prevalent idea in England that every opportunity should be seized, whatever his knowledge, to make the student conversant with disease; and that the most profitable way of effecting this is to put the would-be pupil at once in the wards, to observe how and what he can. The modern or the scientific and systematic course, on the other hand, is based on the not unnatural belief that, to enable the student to intelligently understand and investigate disease, and, moreover, to save a great deal of energy on the part of both pupil and teacher, the student must be first taught anatomy and physiology, so that he may be able to recognise health. When the student has received such preliminary training, how is he to be further guided to the clinical investigation of disease? Is he to be left to make himself "conversant with disease" in what irregular manner he can? or is he to be systematically taught how to apply his acquired knowledge to diagnosis and treatment? We are glad to say that, mainly through the teaching of Dr. Hughes Bennett, the systematic training in force in Edinburgh, and more or less in the other Scotch schools of medicine, has happily done much to lead to the introduction of the teaching of a systematic method of investigation into the London medical schools; and that the metropolitan student is not as heretofore allowed to roam about his hospital altogether unguided. This much indeed, we may remark in passing, may be said of medicine, but unfortunately not of the surgical teaching, in this country.

As a valuable contribution to such systematic clinical investigation as we have indicated, we welcome Dr. STURGES's guide to the investigation of disease, for the use of students. Understanding the imperfect preparation which formal lectures afford to the student for the investigation of disease, and their awkwardness and ignorance of procedure when put to the task of diagnosis, and moreover, fully alive to the disadvantages of allowing the student himself to construct a plan of examination in his own mind, which must always be defective, the author has devised a method of procedure in which, in convenient order, the chief points which claim attention in the clinical examination of a medical patient are noticed.

An admirable chapter on the sort of help needed by the student at the bedside, is given at the commencement. The plan of teaching adopted by the author is, in the first place, tabular in character, arranged on the principle of Dr. Hughes Bennett's admirable *Introduction to Clinical Medicine*. General rules are given with reference to the examination of patients, the family and personal history of the patient, the examinations of the functions, digestion, circulation, and respiration; while the special examination of the various organs of the body, and their secretions and evacuations, is afterwards taught. A chapter on diagnosis, and one on treatment, complete the work.

The introductory chapter is, to our mind, excellent, and common sense, although perhaps, for students, it is here and there a little obscure in expression. We can offer a like favourable opinion regarding the second chapter on general rules, referring to the examination of patients. The general examination of the family and personal history of the patient, and the examination of the functions, are treated in an equally satisfactory manner. We cannot help expressing, on passing, our gratification at the importance placed by the author on the scrutinising of the aspect of the patient. The value of the physiognomy of disease at all times, especially in the crowded out-patient rooms of the metropolis, is practically great. Out-patient physicians are compelled to avail themselves very largely of this mode of diagnosis, often, no doubt, unwillingly, as an excuse for "ingenious or audacious guessing". Teachers too often fail to afford the students around them the benefit of their experience in this direction, and are apt to confine themselves too much to

the more modern aids to diagnosis. The chapters on the special examination of the various systems are mostly drawn up with great care. The loose vocabulary of percussion and auscultation sounds is deservedly found fault with, and some pointed remarks of the author are aptly inserted, which will do much to open the eyes of the student whose mind may be obscured by the nomenclature of some recent works on chest-diseases. It appears to us, however, that Dr. Sturges would have done well to be occasionally a little more ample in his details. It is, no doubt, beyond the aim of his book to offer an exhaustive treatise on the examination of the urine; but as an example of what we mean, we think the following is hardly sufficient direction to the student for the examination of urine supposed to contain albumen; indeed, it becomes incorrect from its brevity. "Albumen is most surely tested by boiling the urine in a test-tube, and, while still hot, adding a single drop of nitric acid. If heat cause a precipitate, it is either albumen or phosphates. If it be albumen, a small quantity of nitric acid will not dissolve it; if it be phosphate, the minutest portion of this acid will cause its instant solution. Heat alone may not cause precipitation of albumen in alkaline urine; the acid, however, when added, will at once determine it." It is true that the minutest quantity of nitric acid will dissolve ordinary phosphates, but not phosphatic earths. These salts are generally held in solution by the free carbonic acid, and are precipitated in a flocculent form on the expulsion of the gas on boiling, forming a deposit singularly like that of albumen, and thus presenting a common source of fallacy; they are, however, soluble in hydrochloric and acetic acids, but not in nitric. Then, again, when the urine contains free hydrochloric or nitric acid in such quantity as to form a compound with albumen, boiling does not necessarily precipitate the albumen: moreover, Heller's concentrated nitric acid test, one of the very best for albumen, is altogether omitted.

The concluding chapter on treatment, although not the best, and in its facts sometimes open to question, fitly concludes a volume which we have had great pleasure in perusing, and from which we have derived much instruction. It is essentially systematic, while there is an absence of dogmatism and a fair representation of the difficulties of physical examination which recommend the work to the experienced teacher. The mischievous tendencies of hasty and imperfect examination are constantly impressed on the reader. The student is put on his guard against the numerous fallacies surrounding the ordinary methods of investigating disease, while he is at the same time taught to recognise and estimate the proper value of physical signs as they exist.

The tone of the whole book is most healthy; it is thoughtful and philosophical throughout, and ought to be carefully studied by every student of clinical medicine. We may add that the publisher has fulfilled his part of the task well, and has presented a neat and handy volume. The marginal references to the contents of the paragraphs form a convenient feature of the book.

ANÆSTHETICS.

ETHER AS AN ANÆSTHETIC.

MR. VINCENT JACKSON, Senior Surgeon to the Wolverhampton and Staffordshire Hospital, writes as follows:—In the JOURNAL for May 24th, the report on some operations at a metropolitan hospital concludes with the statement, that "though ether and bichloride of methylene have been tried experimentally, the registrar and chloroformist has returned to the use of chloroform," etc. I was sorry to read this announcement, for I have become practically convinced that no anæsthetic known to use can, for some purposes, take the place of ether. About nine months ago, when the administration of ether for operative purposes was revived at the Wolverhampton Hospital, a spectator, who had known the practice of the institution when ether was used, prior to its displacement by chloroform, shook his head, and foretold for it as short a career as after its primary introduction. This same spectator now says its action is admirable. Ether is not used by us regularly, but exceptionally, as when the operation is likely to be prolonged, or the patient is much depressed, or the heart's action feeble. It has lately been given for me for the performance of the following operations: Three ovariectomies, one gastrotomy, and an abdominal section for the relief of an internal hernia. Dr. Carter, the hospital administrator, has now abandoned inhalers. A folded towel, saturated with ether, is firmly maintained over the nose and mouth of the patient until complete insensibility is accomplished, and we now look for it under eight minutes. The two points which I consider make ether so exceptionally valuable to the operating surgeon are its markedly continued stimulating effect upon the action of the heart, and the rapidity with which the anæsthesia, or etherisation, passes away.

SELECTIONS FROM JOURNALS.

MEDICINE.

CHLOROFORM IN HEART-DISEASE.—Dr. J. H. Poole (*Archives of Ophthalmology and Otology*, vol. iii, part i.) discusses, *à propos* of a case of mitral regurgitation, with hypertrophy and over-action of the heart, in which he was called upon to operate, whether the presence of heart-disease, even when strongly marked, is necessarily a contra-indication to the administration of an anæsthetic. He believes that it is not. He has searched all the authorities at his disposal on this point, but does not find anything very definite on the subject. Without citing any of them, however, he says that most of those who take notice of it at all agree with the opinions he had expressed. If any anæsthetic be administered, which should it be, chloroform or ether? He answers, chloroform, for the following reasons. It is more quickly administered, and more manageable; it requires less to be given; it produces a less violent and protracted stage of excitement. He has seen chloroform administered for the dyspnoea of heart-disease, both by the stomach and by inhalation, with decided benefit, and without the least bad effect.

SURGERY.

OPERATING IN EXTREMIS.—Dr. Philo E. Jones (*The American Practitioner*, June, 1873), relates the case of a patient in an advanced stage of phthisis, suffering very acutely from cystitis and incessant micturition, which resisted narcotic treatment. Guided by an article of Dr. Parvin (*Ohio Clinic*, November 4th, 1871), and Dr. Emmett (*American Practitioner*, February, 1872), he decided to produce artificially a vesico-vaginal fistula, believing, that although the patient must soon die of consumption, relief would be afforded meantime. He accordingly operated on the 4th April, in the following manner: The patient being under the influence of chloroform, and lying upon the back, the knees drawn up, and a bivalve speculum in the vagina, a female catheter, somewhat abruptly curved, was introduced through the urethra. This was now held by an assistant, with its point firmly pressing in the median line against the base of the bladder, just beyond the vesical meatus. Dr. Jones then, with a scalpel, divided the parts directly on the joint of the catheter, until it could be passed through into the vagina. With the catheter remaining in the opening as a guide, the blunt blade of a pair of scissors was passed alongside into the bladder, and an incision, nearly an inch in length, was made directly backward, in the median line. The walls of the bladder were now found to be greatly thickened and contracted, and the finger passed into the cavity could very readily detect the ulcerated condition of the inner surface. The bladder was now to be washed out once or twice daily, with a large amount of warm water injected through the vesico-vaginal opening, the finger also to be introduced through the opening every day, to prevent its closure. The patient, Dr. Jones says, was now entirely free from pain, without the use of anodynes, in which condition she remained one week, when she died by asphyxia. With the results of this operation he is abundantly satisfied, it having relieved the poor woman of one week's suffering, which could not be obtained from the largest doses of morphine.

DISEASES OF CHILDREN.

DIARRHŒA IN TEETHING.—In a clinical lecture on the primary dentition of children, Dr. Francis Minot (*Boston Medical and Surgical Journal*, January 2nd, 1873), in speaking of the diarrhœa complicating teething during hot weather, recommends the common chalk mixture, with the addition of one-fourth part of tincture of kino, which increases its astringency, and also keeps it from turning sour in hot weather. If the diarrhœa be not stopped by this mixture, one drop of laudanum may be added to a dose, but not oftener than three times a day, in children under two years old. Diarrhœa is most apt to attack children who are brought up on the bottle, hence, if the case be urgent, and does not yield to treatment, a wet nurse should be procured, if possible. When this cannot be done, he would strongly recommend the method of preparing the milk with arrow-root and gelatine, found in the treatise on *Diseases of Children*, by Dr. Meigs and Pepper. Brandy is very useful to a teething child exhausted by diarrhœa, which should be given once in three or four hours, or oftener in urgent cases. The dose is ordinarily from five to twenty-five drops, given in milk; but if there be much prostration the physician need not fear to increase the amount.

SURGICAL INSTRUMENTS IN 1873.

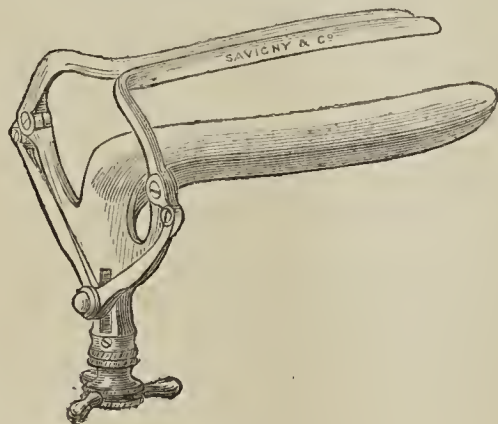
REPORT OF THE SURGICAL INSTRUMENTS IN THE INTERNATIONAL EXHIBITION AT SOUTH KENSINGTON.

I.

THE surgical instrument makers of Great Britain are greatly renowned for the excellence of their workmanship, the skill and care with which they carry out the views of surgeons and physicians, and the many improvements which they have made in the form and construction of surgical, obstetrical, and medical appliances. The last few years have marked a very distinct advance in many branches of the surgical and medical arts, and these are reflected in corresponding improvements in the apparatus at the disposal of professional men. The display at South Kensington, if not encyclopædic, is yet highly interesting and representative; and the cases of those makers who exhibit are replete with instruments of interest and, in many instances, of novelty. We propose to review the most noteworthy of the contents of each case, illustrating the descriptions of the most important by engravings. This report will, therefore, be an index of modern appliances to those who have not, as well as an illustrated guide for those who have, the opportunity of visiting the Exhibition. Moreover, as the most noteworthy of these instruments will be displayed in the Annual Museum at the forthcoming meeting of the British Medical Association, these notices will serve to direct attention to, and to explain the chief features in, the display of surgical instruments which will await the inspection of our members in August in the library of King's College.

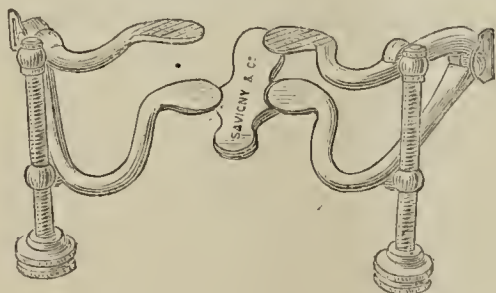
The case of Messrs. LOUIS BLAISE and Co. (late Savigny and Co.), of 67, St. James's Street, being that with which we commence our report, includes many instruments which have an historical interest, as well as others of more modern and practical significance. Among the more interesting of modern instruments exhibited by this firm, are the following.

1. Dr. Meadows's Vaginal Speculum, with three blades, the expansion of which is governed by a strong screw.



1

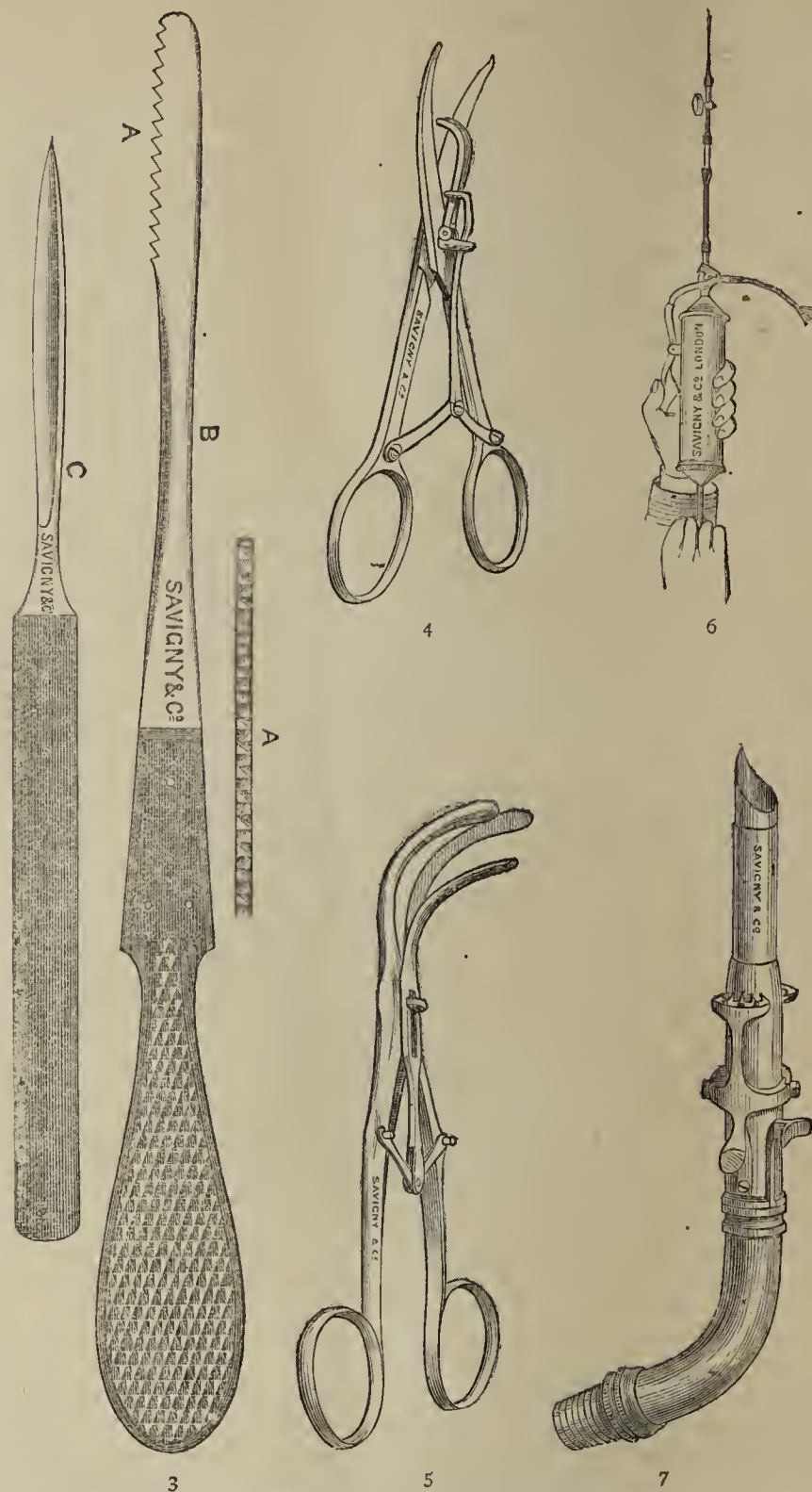
2. Gag for Cleft Palate, with Tongue Depressor combined. This instrument varies from Mr. Smith's gag, having perpendicular side-screw levers, instead of the ordinary cog-joint. This modification was suggested by Mr. T. P. Pick, and has been used with much success.



2

3. Knife and Saw, employed by Mr. W. Adams in his operation of subcutaneous division of the neck of the thigh-bone. B. subcutaneous

saw, and C tenotomy knife, drawn one-third less than those used; A represents the double cutting edge of the saw, full size.



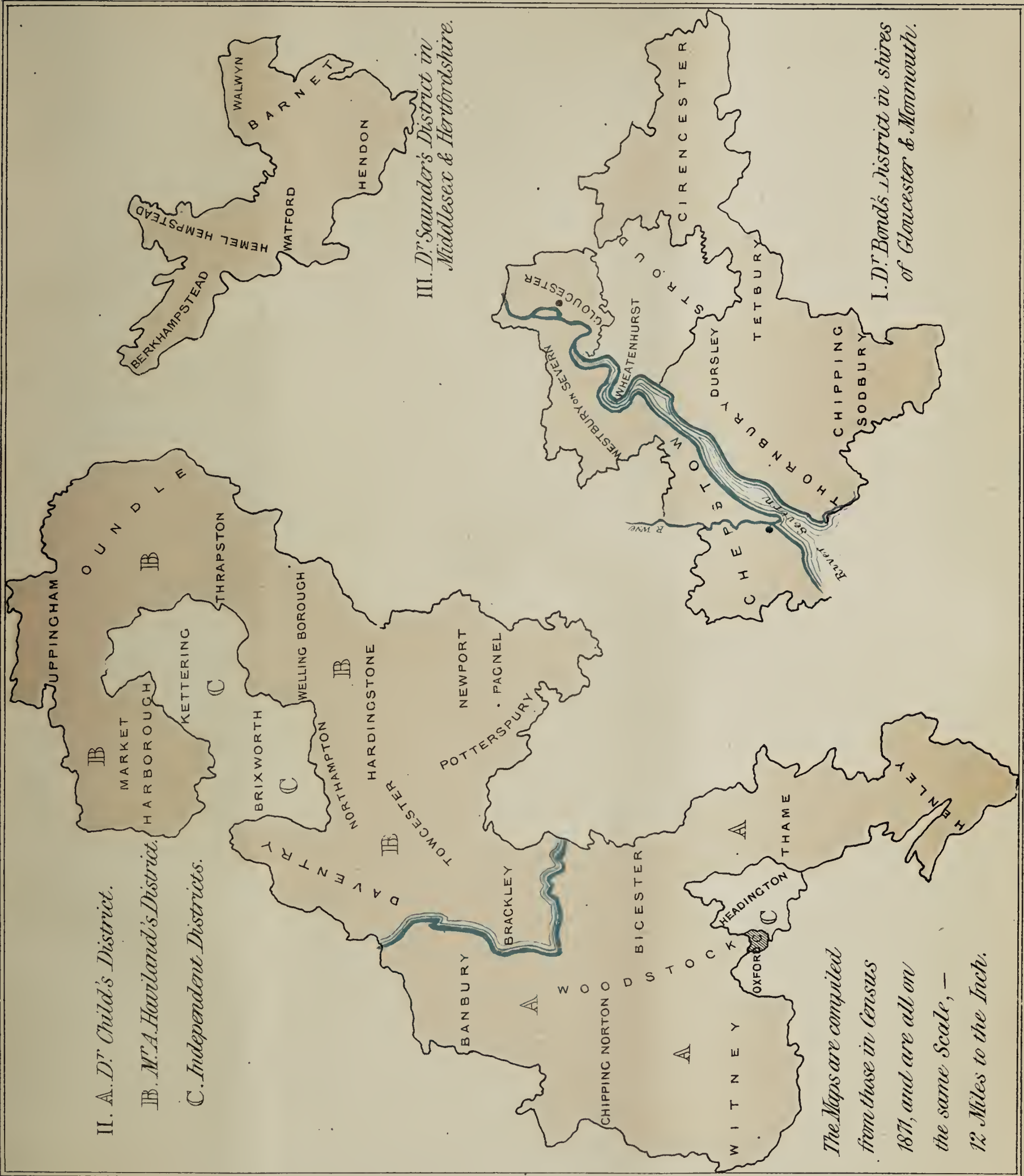
4. Skin-grafting Scissors, employed by Mr. Cripps. These scissors grasp a portion of skin, draw it between the blades, and excise it by a single motion of the finger and thumb. They are on the principle of the tonsillotome.

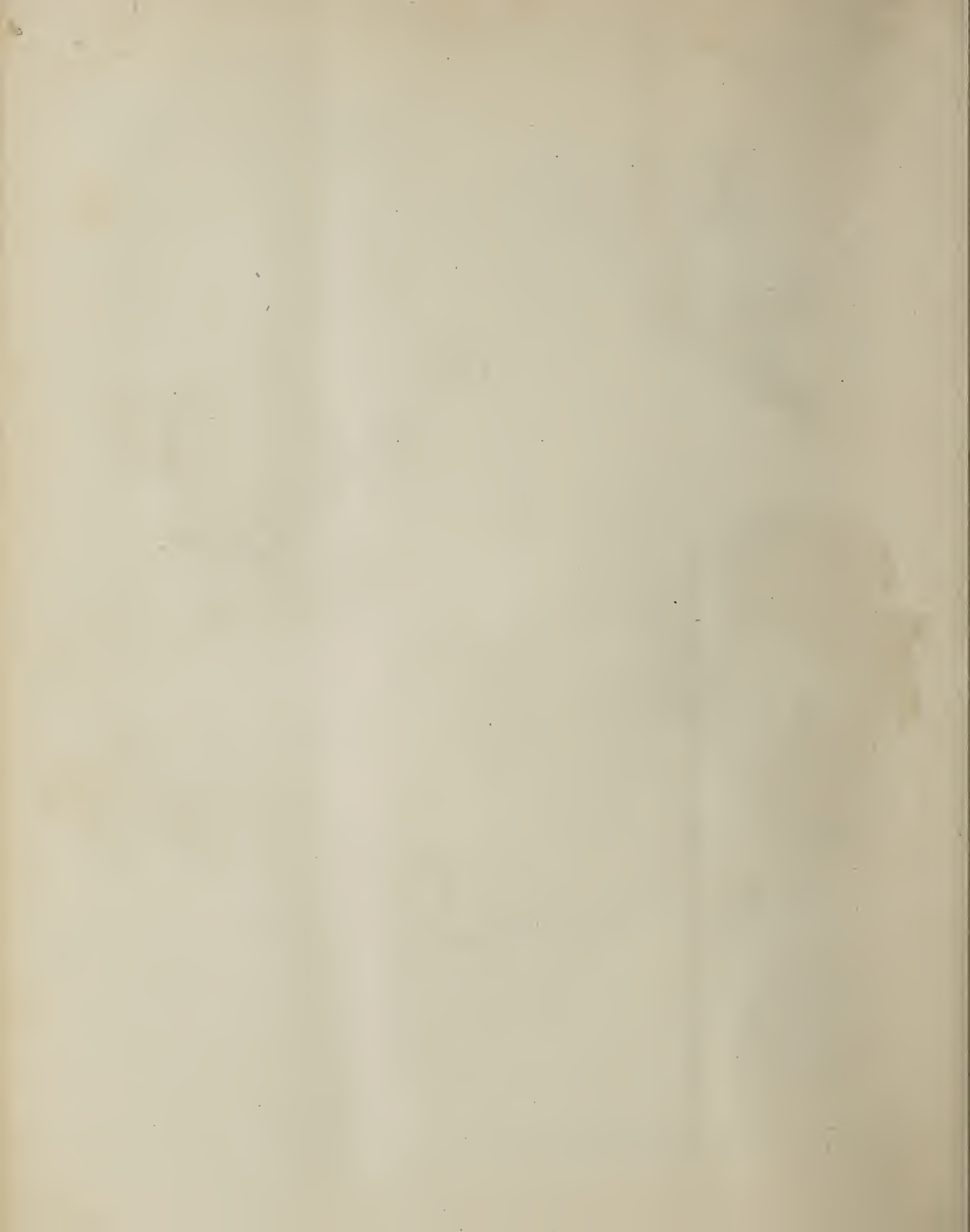
5. Improved Three-bladed Forceps, for facilitating the introduction of the trachea-cannula.

6. Modification of the Stomach-Pump as an Aspirator, suggested by Mr. A. Godrich. This apparatus combines a complete and efficient instrument with a few additions. An India-rubber tube is fitted to the pump, and at the end a stopcock, to which are attached the tubular needles. A short piece of glass-tubing is placed two inches from the needle, thus enabling the operator to see at once the character of the fluid which he is extracting. Many practitioners have availed themselves of the opportunity of thus possessing this valuable instrument by the outlay of a few shillings only.

7. Mr. Spencer Wells's improved Tubular Ovariectomy Trocar, with hooks for securing the pedicle. It is furnished with a pistol-shaped extremity, which adapts itself as a most convenient form of handle, and also has the great advantage of preventing the India-rubber tubing from kinking under any circumstances.

SUPPLEMENT TO THE
BRITISH MEDICAL JOURNAL.
JUNE 28TH 1873.





BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1873.

SUBSCRIPTIONS to the Association for 1873 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 28TH, 1873.

THE FORTHCOMING MEETING IN LONDON.

THE arrangements for the forty-first annual meeting of the Association are now tolerably near to completion. The Association has held only one meeting in London since its foundation in 1832. That meeting was held in August 1862. It was in every way agreeable and successful. Held under the presidency of Dr. Burrows, and signalised by addresses of remarkable ability from Professor Sharpey, Dr. Walshe, and Mr. Bowman, it attracted a very large number of eminent provincial men; and, by cementing more closely the bonds of equal friendship between the practitioners of the metropolis and of the three kingdoms, it laid the foundations of a cordial unity of feeling and action between town and country, and in all grades of the profession, which every succeeding year has solidified and enlarged. The Association received then the graceful hospitalities of the Royal College of Physicians of London. But it has outgrown the limits of the possible accommodation which the fine house of the College in Pall Mall can afford. Its numbers have nearly trebled in the last decade; and, to meet the increase in the number of attending members, and the greater scientific activity betokened by the subdivision of its professional work into six sections, it has been necessary to seek quarters which will provide numerous apartments for sectional and committee meetings, as well as two large halls—one for general meetings and one for purposes of refreshment. The authorities of King's College have, with the most unreserved and gracious liberality, placed at the disposal of the Association the whole of their spacious and well arranged building, in which are included apartments admirably suited for all the purposes of the meeting throughout the week. The museum will occupy the fine suite of apartments used as libraries. The general meetings will be held in the great hall; and the spacious adjoining apartments will be set apart for luncheon. The theatres or class-rooms of the faculties of arts, science, and medicine lie conveniently together, and will amply accommodate all the sections and committees. The Royal College of Physicians, unable to afford house-room to the growing body of the Association, is, by the rather unfortunately bare state of its coffers, equally precluded from offering a graceful hospitality to the Association in any other way, and is put to shame by other more fortunate or more public-spirited bodies. The programme of the meeting is very completely filled in this as in other respects.

On the first day of the meeting, a special choral service will be held, by permission of the Dean and Chapter, at St. Paul's Cathedral, for those members who desire to attend it.

It will be seen that three addresses will be given by distinguished orators, in medicine, surgery, and physiology. The Presidents of each section will also deliver sectional addresses at the opening of the business; and it is possible that arrangements may be made by which the Presidents' addresses, instead of being delivered simultaneously in the various sections, will be delivered successively, so as to allow of a larger audience assembling than the section itself can afford. The proceedings of the sections promise to furnish matter of great scientific interest. The arrangements for these are not yet complete; but it will be seen that already a number of interesting subjects are set down for successive days, each of which will afford matter for very important discussion by the eminent men who will be assembled from all parts of the country. Thus, to take one section as an example, in the Section of Medicine, the subject of kidney-disease, which is essentially one of the most active questions of the day, will be opened by Dr. Grainger Stewart of Edinburgh, and it may be expected that Drs. Dickinson, G. Johnson, and perhaps Sir William Gull and Dr. Sutton, will contribute to throw further light on subjects still much in debate. The Uses of Alcohol in Disease will afford materials for a debate which will be opened by Dr. Anstie, and in which Dr. Parkes of Netley, Dr. Gairdner of Glasgow, and probably Dr. Binz of Bonn, will take part. Such a discussion is one which only such a congress as this could produce, and it will be anticipated with lively interest. The programmes of the various sections are still in course of preparation; but the details, which will be found in another page, will show that the sections of surgery and psychology are already well provided; and there is reason to believe that the scientific character of this meeting will be such as to do honour to the metropolis and credit to the profession. The list of foreign visitors is not yet filled up: but among those who are expected are Virchow of Berlin; Oscar Liebreich, who will read a paper on Croton Chloral Hydrate; Bardeleben; Kœberle of Strasburg; Binz of Bonn; Ricord and Demarquay of Paris; and others—whose presence will add grace to the meeting, and whose learning cannot fail to enlighten the discussions.

The evening proceedings will include a reception by the Lord Mayor at the Mansion House; and his Lordship, with characteristic liberality, has expressed a desire to entertain the Presidents of Sections and Presidents of Branches, and the readers of Addresses, at dinner. This worthy recognition of the public importance and interest of this great meeting will be gratifying to the whole profession, and reflects honour on a mayoralty which will long be remembered in the City of London as one of the most memorable in the civic annals. The Royal College of Surgeons of England, mindful of its position as the greatest of our national medical bodies, and the guardian and partly the creator of our great national collection illustrative of anthropological and biological science, will throw open the College for a *soirée* on the second evening. The *soirée* of the College on the occasion of the former annual meeting in London was one of the most notable and agreeable incidents in that meeting, and this cannot fail to be equally so. It should be mentioned that Mr. Curling, who will, it is understood, be the President who will receive the Association, has taken a lively personal interest in all the arrangements for the

forthcoming annual meeting, and is, in fact, Chairman of the "Excursions Committee". The third evening will be occupied by the public dinner, as is usual. The numbers attending the meeting may be considerable; and it was thought in every way desirable to secure a hall having professional associations and character, for the public dinner on this occasion. The Benchers of Lincoln's Inn were applied to for the use of their noble hall. This is a privilege very rarely granted—we believe there is only one precedent; but, with a sympathetic cordiality which deserves our warmest acknowledgments, the Benchers unanimously accorded their assent, and the dinner of the Association will, by permission, be held in the Hall of Lincoln's Inn.

The fourth and last evening was open for a time, and was the subject of some competition amongst various public bodies. It was at first intended that a *soirée* should be held at South Kensington in the International Exhibition, which the Commissioners had early offered for the purpose; but that building, fine as it is, is rather far afield for men who have been at work in the Sections all day, and who will be dining probably chiefly in the central parts of London in the evening. The Council and the Professors of the Medical Faculty of University College stepped in with an invitation to a *soirée* at the College, to which the members and the ladies who may accompany them in their visit are invited; and this hospitable and agreeable offer was cordially accepted. The Flaxman museum, the library, art schools, and theatres of University College afford opportunities for a most brilliant reception, of which the Professors have on other occasions shown that they know how to avail themselves. The authorities of Guy's and St. Bartholomew's Hospitals were, we believe, also prepared to do honour to the Association and their provincial friends had any opportunity been left.

Saturday will be left as a vacant day; and the kindness of the Marquis of Westminster and of other noblemen having fine seats near London, and of the authorities of the Brighton Aquarium, will afford opportunities for some pleasant outings at the close of what will, it may be anticipated, prove to be a meeting replete with agreeable and instructive features.

The Sections will commence their work each day immediately after the termination of the addresses, and will close at half-past three, thus leaving some hours in the afternoon free for visiting public institutions and private galleries, many of which will be freely opened on this occasion by their owners.

Simultaneously with the meeting will be held meetings of the Poor-law Medical Officers' Association and of the Psychological Association.

The reports of the proceedings of the Association throughout the year will be of a satisfactory character. That which refers to the "financial position" will be unusually satisfactory. The whole of the accounts and books of the Association have been recently subjected to a rigid and minute examination by public accountants. The result of their analysis, extending back over two years, and including every document and voucher relating to the business of the Association, has been to show a steadily progressive growth in prosperity; and, without anticipating that report, we may say that it shows that the recent reorganisation of the business staff has been attended with good results; and

that, by a more careful collection of dues, the Association is so rapidly advancing in financial success, that the balance of assets and liabilities at this moment shows a considerable difference in favour of the Association, and that this balance is a growing one. The object of the Association has never been to accumulate capital; and, with a sole annual subscription of a guinea for all purposes, it never can be. But its financial position is eminently sound.

The reports of Committees will show that, with respect to Medical Reform, this much of advance has been made. When the Direct Representation Committee first commenced their operations, their proposition for direct representation of the profession in the General Medical Council was treated as chimerical, and the Government sacrificed their Bill rather than yield it. Now they are told, on the highest parliamentary authority, that there is no serious opposition to it; but some of the colleges, emboldened by the confusion created by the inopportune interposition of Mr. Lush with an impracticable Bill, to whose ludicrous and unhappy history it is unnecessary further to allude, have entered a strong opposition to the Government proposition of amalgamation, to which they had formerly assented, and there is no possibility of a private member successfully facing that opposition. The Government would now willingly concede direct representation; but they would not when they could, and now they cannot when they would. In other important matters relating to this organisation of Public Health Administration, the modification of clauses affecting public medical interests in the Public Health Bill (1872), the Births and Deaths Registration Bill, the Army Medical Warrant (1873), the Registration of Sickness, and other matters of like character, the Association and its Committees will have a good account to render.

We may look forward, therefore, to the forthcoming meeting as one which is likely to be in all respects as full of interest as any previous meeting, and as one which, by its larger proportions, and the ample and honourable recognition offered to it by public bodies and by the chief magistrate of London, will fully illustrate the rapidly growing and widely extending importance and usefulness of the Society. It may be hoped, also, that this meeting will be the starting-point for yet further efforts, and the commencement of another large extension of its borders, so that it shall presently unite in one great bond of brotherhood all who are worthy of comprehension in the fraternity of medicine in this metropolis and in the three kingdoms. It may be hoped that, with few exceptions, the whole of the profession in the metropolitan area will take the present opportunity of entering into union with the five thousand medical men who have joined hands in the Association, and will unite to give to visitors, members, and guests, from England, Ireland, and Scotland, a hearty, cordial, and unanimously sympathetic reception, which will never be forgotten. The funds subscribed are already adequate for all purposes. What further is needed is the personal presence and personal welcome of every medical man in the metropolis and the metropolitan counties, to greet all who will honour us with their presence from all parts of the United Kingdom. We have space for all, and welcome for all. We owe much to the profession in all parts of the three countries for splendid hospitality and hearty welcome not to be forgotten; and we invite them to crown their past proofs of friendship by coming to see us, and to join in our efforts for the common good in this our second London meeting.

"CATCHING COLD."

IN this changeable climate of ours, hardly a week passes without ourselves or some of our acquaintances catching a cold. Our opportunities of studying the pathology of colds are thus only too numerous, and yet we know so little about it, that he must either be a very wise or a very rash man who will undertake to say why exposure to an east wind will give coryza to one man, sore-throat to a second, bronchitis to a third, and so on. Almost all that can be stated about the matter with any degree of certainty is, that the diseases just mentioned, as well as a good many others which are all popularly ascribed to cold, are liable to come on after the whole body, or parts of it, such as the feet, have been quickly cooled below the normal, or, in other words, have been chilled. There are always two factors concerned in the cooling either of the body or of its parts. One of these is the nature of the external medium, such as air or water, which is in contact with the body; and the other is the condition of the blood-vessels, by which the warm blood is brought from the interior of the body to the surface, and thus exposed to the influence of cold. Dry air has so little power to abstract heat, that Arctic travellers can go about comfortably without a great coat when the thermometer is standing fifty degrees below zero, provided that the air be still. A very little wind is sufficient to prevent them from doing this, however, for the constant impact of fresh particles of cold air on the surface of the body soon carries off its heat. The presence of moisture in the air greatly increases its power of abstracting heat, and when wind and moisture are combined, the chilling effect reaches its maximum. We may be able to face a cold dry wind without feeling any inconvenience; but if the wind be moist, or, still worse, if our clothes be wet, we shall feel chilled completely through, shiver, and probably catch a severe cold. Heat has been constantly and rapidly abstracted from our bodies, and the blood which brings warmth to the surface has itself been at length cooled. No one is astonished at catching cold under such circumstances, but we are often astonished that we should do so during warm weather, and with hardly any apparent cause. Experience has shown us, in fact, that it is not so much the absolute lowness of temperature which gives rise to colds as sudden changes from a higher to a lower. The reason of this remained unknown till the recent researches of Professor Rosenthal cleared up the mystery. It is well known that when cold is applied to the surface of a healthy animal, the cutaneous vessels contract. They thus prevent the blood from circulating in the skin, and by confining it to the interior of the body, prevent its cooling, and preserve the temperature of the vital organs, unless the application of cold be continued for a considerable time. This is not the case, however, when the animal has been previously exposed to warmth some time before. The cutaneous vessels become paralysed by the heat, and remain dilated even after the cold has been applied. The blood is thus exposed over a large surface, and becomes rapidly cooled, even although the temperature of the surrounding medium is not very low. In Rosenthal's experiments, animals were kept for a little while at a temperature from about 97 deg. to 104 deg. Fahr. The temperature of the animals themselves quickly rose during their confinement to 111 deg. or 113 deg. Fahr. After their removal, it not only sank to the normal, but even below it, so that an animal which was from 107.6 deg. to 111 deg. in the warming apparatus fell to 96.8 deg., and remained at that for several days, although the room in which it was kept was moderately warm. Confinement in a choky office, hot theatre, or crowded ball-room, will have a similar effect on man, and in the latter case it will be increased by the exercise of dancing. From such places people pass out into the cool open air, or will sometimes even purposely station themselves in a draught. The blood which is coursing not only over the flushed face, but through the dilated vessels of every part of the surface, is rapidly cooled below the normal, and, on its return to the internal organs, cools them much more quickly than it could have done had the person simply been exposed to cold without dilatation of the vessels by previous warmth. Rosenthal lays much stress, and we think

rightly, on the great effect of sudden *cooling* in bringing on a cold, the sudden change in the temperature of the blood producing an irritating effect, and inducing inflammation in any weak organ in a way that a gradual alteration would not do. It would seem, however, that the alteration must be from a temperature above to one below the normal temperature of the blood, and not a mere reduction from one considerably above the normal to one at or near it. When much heated, we may stand for a short time in a cool atmosphere with impunity; but if we stand long enough to carry the cooling process too far and produce a shiver, we run a great risk of catching cold. The fact that it is more dangerous to sit for a long than a short time in wet clothes, appears to indicate that a considerable and more gradual cooling, such as may then occur, will produce similar effects to a slight cooling suddenly effected by exposure to a cold draught after being in a warm room. The effect of a chill in causing inflammations may be partly due to the effect of cold on the tissues themselves, and partly to the hyperæmia which will occur in some parts when the blood is driven out of others by the contraction of their vessels. Rosenthal is inclined to ascribe the chief power to the former of these causes. Everybody knows the beneficial effect of cold baths, cold sponging, etc., in "hardening" persons, as it is termed, so that those who employ them are able to face almost any weather, and to endure sudden changes of temperature without injury; while those who coddle themselves and stop up every crevice lest a breath of air should blow upon them, are constantly suffering from colds. Rosenthal considers that this is due to the frequent application of cold water or cool air increasing the tone of the cutaneous vessels, so that they do not become so much relaxed by heat as to be unable to contract with sufficient force when necessary. The power of regulating the temperature is thus preserved, and the person prevented from catching cold.

COUNCILLORS AT THE COLLEGE OF SURGEONS.

ON Thursday next, the annual meeting of the Fellows of the College of Surgeons will be held for the election of representatives in the Council. For these four vacancies there were nine, and there are now eight, candidates. "Yielding to the pressure of the co-proprietor of the *Lancet* and the staff", who have ascertained that the small number of votes which would be recorded in his favour would not be conducive to the interests of that paper, Mr. Wakley announces to his friends that he proposes to retire. It may be thought that this gentleman was hardly wise, after courting the bubble honour, to run away from before the cannon's mouth. But no doubt the very peculiar sort of pressure which has been brought to bear upon Mr. Wakley by his partner is likely to be effective enough. His retirement, however, does not materially affect the position, although it adds a comic element to the situation, which is sincerely to be regretted. There remain as candidates having serious probabilities of election on this occasion, Sir James Paget (who is, of course, rightly secure of re-election), three metropolitan Fellows—Mr. Cooper Forster, Mr. Marshall, and Mr. Savory—ranging them in the order of seniority, and one country Fellow, Mr. Southam of Manchester. The three metropolitan Fellows stand all on ground so good that it will be hard to select which shall enter the Council this year, and for which one the honour of election shall be postponed till next year. We shall only urge that one vote is due from all to Mr. Southam, as the chosen representative of the provincial Fellows. Nominated in accordance with a requisition rapidly signed by nearly two hundred of the best known Fellows in the provinces, and coming forward to fill the place vacated by Mr. Turner, Mr. Southam will, it is hoped, receive the suffrages of metropolitan not less than of country Fellows. An important principle is involved. Every one will, we feel sure, concede that there are many questions which repeatedly come under discussion at the Council of the College of Surgeons, which largely concern the interests and welfare of provincial schools. No metropolitan Fellow would willingly do an injustice or an injury to the provincial Fellows;

but it is impossible that their point of view can be always fully known to metropolitan hospital surgeons, while it is important that it should be always stated. Thus it is a matter of real importance to the College which aims at equal justice, and to the profession which claims equal justice, that the Council should include a practised and experienced teacher at a provincial school, able by his knowledge, his independence, and his connexion with his provincial Fellows, to represent their real interests and their thoughtful opinions. Mr. Southam has been selected by his fellows for that purpose: he is well able, and he stands pledged to give the necessary close attendance to the College business. We ask for him the support of country and provincial Fellows. But we again remind the provincial Fellows that an immense amount of underhand as well as of open caballing and canvassing has been going on in the metropolis, for gentlemen whose efforts are the more desperate in proportion as their prospects are for various reasons doubtful. The provincial Fellows must prove true to their candidate; and, although many men consider them practically disfranchised by their distance from town, they must prove on this occasion at least that they are not so. *Every man who has signed the requisition to Mr. Southam should consider himself bound in honour to come up to London and vote on Thursday, July 3rd.*

CHOLERA of a virulent type has broken out in Cawnpore, and in Lucknow small-pox has made its appearance.

ADDITIONAL wards will be opened at the National Hospital for the Paralysed and Epileptic, raising the total number of beds to 100.

SIR DOMINIC CORRIGAN will preside at the annual distribution of prizes at St. Mary's Hospital Medical School, on Wednesday, July 2nd.

THE amount received at the Mansion House up to Saturday afternoon, towards the Hospital Sunday Fund, was £21,438:19:11. One hundred churches had not yet sent in the list of their collections.

THE forty-ninth annual congress of German Naturalists and Physicians will be held in Wiesbaden, from September 18th to 24th. The Secretaries, Drs. Fresenius and Haas, express the hope that it will be numerously attended by the friends of natural science and of medicine.

AN examination of surgeons in the Royal Navy who are eligible, and who may be desirous of qualifying for the rank of staff-surgeon second class, will be held at the Royal Naval Hospitals at Haslar and Plymouth, on Tuesday, July 15th.

THE North London Hospital held a bazaar last week. It is mentioned as matter of congratulation, that "the number of out-patients who received medical advice and medicines reached a total of 7,694, showing an increase in numbers of 448."

THE Lancashire and Cheshire Branch had a very successful meeting on Tuesday at Warrington, under the presidency of Mr. White, who read an admirable address. A large number of members and their friends joined the dinner.

THE subject of the Jacksonian Prize of the Royal College of Surgeons of England for the year 1874 is announced to be "Tracheotomy: with particular reference to the causes of death after the operation, and to rules for rendering the operation more generally successful,"—the dissertation to be illustrated as usual by cases.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

AT the last meeting of the Council of the Pharmaceutical Society, Mr. T. H. Hills, of the firm of J. Bell and Co., was elected President of the Society. Mr. Hills has long been one of the most zealous, generous, and intelligent members of the Society, which has found in him a worthy successor to the late Jacob Bell in his munificence, his devotedness, and his zeal for the educational and social elevation of pharmacists. Mr. Hills is well known and greatly esteemed in medical society, and his presidency cannot fail to be honourable to himself and useful to the Pharmaceutical Society.

THE ARMY MEDICAL WARRANT.

WE understand that some considerable injustice is being permitted in the Brigade of Guards, in allowing a popular surgeon-major to continue in the service after having completed by more than two years the period for retirement, by which every medical officer of similar rank in the service has been compelled to retire since 1858 according to the terms of that Warrant, no matter when he entered the service. This is the more marked, as there are several medical officers still serving in the junior ranks who are of more than nineteen years' service, and who served throughout the Crimean war.

THE CHOLERA IN AMERICA.

THE cholera seems to have entered America by New Orleans. Its progress has been so rapid that the official bulletins were not believed, and its ravages had extended in cities incredulous of its approach. In the *Ohio Clinic* of the last mail, we read, as to the official bulletins announcing that cholera was in New Orleans, and was approaching Cincinnati and Nashville, "We are not inclined to credit any of these statements. It is very doubtful if true Asiatic cholera be present anywhere in this country. . . . But if we could get our dirty streets cleaned by a scare of this kind, we should hail the announcement with pleasure." It is to be feared that the "scare" is too tardy: it may be well that our English towns should take their "scare" early, and be clean in time.

CUSTOMS AND RECEIPTS.

THE medical profession is, we learn from the *Canada Medical Record*, worthily represented at present in the Dominion Cabinet by the Hon. Dr. Tupper, C.B., Minister of Customs, a graduate of the University of Edinburgh, and the Hon. Dr. Theodore Robitaille, a graduate of McGill College, who has recently been appointed Receiver-General. Such are the devious paths by which medical men are conducted to greatness in the colonies. The Hon. Dr. T. Robitaille must at times, one would fancy, be inclined to remember old customs, and to head his receipts with the magic R.

SUNLIGHT FOR THE SICK.

DR. WILLIAM H. HAMMOND, in discussing the sanitary influence of light, observes that the effects of deficient light upon the inmates of hospital wards and sick chambers have frequently come under his personal observation. Most physicians know how carefully the attendants upon the sick endeavour to exclude every ray of light from the apartment; and it must be admitted that the members of the profession are often fully as assiduous in this respect. That the practice, except in some cases of actual disorder of the brain and other parts of the nervous system, is pernicious, he is well satisfied. During the early years of the late war, he visited the camp and hospital of the regiment stationed in West Virginia. Reports had reached General Rosecrans' headquarters that the sickness and mortality were something frightful, and he was ordered to examine minutely into all the circumstances connected with the situation of the camp, the food of the men, etc. Among other things, he found the sick crowded into a small room, from which the light was excluded by blinds of India-rubber cloth. They were as effectually bleached as is celery by the earth being heaped up around it. Pale, bloodless, ghost-like looking forms, they seemed to be scarcely mortal. Convalescence under such circumstances was almost impossible, and doubtless many had died who, had they been subjected to the operation of the simplest laws of nature, would have recovered.

THE HARVEIAN ORATION.

ON Wednesday, at the Royal College of Physicians, London, the customary oration in commemoration of the life and labours of Harvey was delivered by Dr. Rolleston, F.R.S., Linacre Professor of Anatomy and Physiology in the University of Oxford. Dr. Rolleston gave an account of the finding, in the Sloane Collection at the British Museum, of the manuscripts of one Walter Warner, who had been supposed by some to have anticipated Harvey in his great discovery of the circulation of the blood; and showed by extracts from those manuscripts,

which he presented to the College library, that the supposition was wholly without foundation, and that the fame of Harvey remained unassailed. At the conclusion of the discourse, which was not less remarkable for its mingled elements of research, scientific erudition, and literary culture, than Professor Rolleston's well remembered address to our Association at the Oxford meeting, Dr. Burrows, the President of the College, in a few well chosen words, presented the Baly Medal to Professor Sharpey, in acknowledgment of his great labours for the advancement of physiological science. Dr. Sharpey, who wore the traces of his recent operation, but who bore himself manfully and vigorously, as of old, expressed the pleasure with which he received this honour at the hands of those best qualified to judge, and referred to his old friendship for his distinguished pupil Dr. Baly. We have received the manuscript of Dr. Rolleston's oration, and shall have the pleasure of publishing it next week. It is altogether one of the ablest of the Harveian orations yet delivered, and compares well even with the most able and erudite discourse delivered by Dr. Arthur Farre last year.

MEN AND CATTLE.

AT a recent meeting of the Lincoln Town Council, Alderman Brogden thought it strange that the officer who had the inspection of the health of the people should only receive £15 *per annum*, while the inspector of cattle received £77 : 3 : 6. But no one seemed to think it strange "in an agricultural county"; and the only explanation given was, that the inspection of cattle was paid by fees in an expensive way.

MR. ERICHSEN.

WE regret to state that, in consequence of Mr. Erichsen's illness having assumed a somewhat chronic character, he has, by the advice of his medical friends, decided on withdrawing from all active professional work for some time, and taking that complete rest which is considered necessary for his recovery. This will unfortunately prevent his delivering the address on surgery at the ensuing meeting of the Association. Mr. John Wood, of King's College, has at short notice undertaken to deliver an address in his stead.

THE CHOLERA IN EUROPE.

REPORTS from Dantzic state that on June 19th 27 cases of cholera occurring among Polish boatmen had been received into the hospitals at Neufähr and Strohdalch, of which 19 had died. The disease has reappeared in Warsaw, where, from May 30th to June 12th, there were 19 cases, of which four were fatal. Eight cases, of which five died, occurred in the neighbourhood of Thorn on June 13th and 14th. In Moravia, where no cases of cholera had occurred after March 23rd, the disease broke out on May 31st in a place in the district of Znaim. Six persons were attacked, of whom five died. In Galicia, during the second half of May, 118 new cases of cholera occurred in seven districts, with a population of 13,084. Including 48 remaining under treatment, there were in all 166 cases, of which 117 recovered, and 43 died.

THE FEMALE STUDENTS AT ZURICH.

THE professors of Zurich have put forward an energetic protest against the ukase of the Russian Government issued against the female students there, whom it charged, for political reasons, with being associated with radical projects, and living immoral lives. They insist that a great number of the calumniated students are known to them as admirable examples of diligence and modesty, and with lives far removed from any reproach of immorality. As to their coming to Zurich with any other object than the acquirement of knowledge, it is contended that, were such the case, they would not so assiduously attend lectures and laboratories from early in the morning to late at night, even then pursuing their studies at home for hours afterwards. The present result of the ukase is, that all the female students save two have resolved to leave Zurich for Paris, Munich, Heidelberg, and other Universities. The exceptional two have determined to remain at Zurich and abide the consequences. The Senate of the University have agreed to protest through the ordinary channels of diplomacy

against the calumnies contained in the official statement of the Russian Government. The rapid increase of female students in the University of Zurich, says the *Swiss Times*, may be seen from the following statistics of attendance. The first female student entered in the summer term of 1867. During the winter term of that year there were 3; in the summer of 1868, 5; in the winter of 1868-69, there were 8; in the summer of 1869, 9; in the winter of 1869-70, there were 14; in the summer of 1870, 16; in the winter of 1870-71, 22; in the summer of 1871, 19; in the winter of 1871-72, 31; in the summer of 1872, 63; in the winter of 1872-73, the number had increased to 110; in the present summer term, the number is 118.

EXAMINERS AT THE COLLEGE OF SURGEONS.

ON Wednesday, July 2nd, the Council of the Royal College of Surgeons will assemble to elect two examiners—one in the room of the late Mr. Partridge, and one to fill the vacancy occasioned by the retirement of Mr. Lane, who is eligible for re-election. There is, we believe, a very fair probability that the death-vacancy will be filled by the Council on the principle of which they have already affirmed the propriety—viz., that of electing a certain proportion of the examiners out of the Council; and that the choice will fall on Mr. Timothy Holmes, the present Hunterian Professor of Surgery and Pathology at the College. Mr. Lane is eligible for re-election; and he has filled the office of examiner during the last five years with such remarkable courtesy, skill, and success, that it is probable that he will be honoured by re-election for a further term. It is very well known to all teachers that the candidates for diplomas at the College have found in Mr. Lane a type of the perfect and kindly gentleman, who, while upholding the standard of examination, has emboldened and encouraged every candidate, by his natural kindness of manner and life-long experience of students, to do his best, and to show what knowledge he had. Re-elected or not, he will long be gratefully remembered as a model examiner at the College.

CHARING CROSS MEDICAL SCHOOL.

THE Bishop of Winchester distributed the prizes last Friday. Dr. A. J. Pollock, the Dean of the School, read a report which stated that the number of students had been last year the largest ever known in that institution, and that 40 new pupils had entered, 25 of whom had matriculated for the whole course of study. Another assistant-physician had been appointed, with special reference to the treatment of the diseases of children, and the governors had founded a new prize for clinical study. The prizes were then distributed. Mr. G. Brown took the Llewellyn Scholarship and gold medal, a silver medal for surgery, a prize for psychological medicine, and certificates in medicine, midwifery, and forensic medicine; Mr. H. A. Wickers, the Golding Scholarship, silver medals in materia medica and practical chemistry, a bronze medal in surgery, and a certificate in physiology; Mr. J. Cantlie, silver medals in midwifery, forensic medicine, and pathology, and a prize in psychological medicine; Mr. C. J. Woollett, silver medals in anatomy, physiology, and botany; Mr. J. G. Blackman, bronze medal in physiology, and certificate in chemistry; Mr. L. J. Newnham, silver medal in medicine and certificate in pathology; Mr. J. A. Phillips, silver medal in chemistry and certificate in physiology; and Mr. G. Davies, bronze medal in medicine. The Bishop delivered a brief exhortation to the students.

FATAL MISADVENTURES.

LAST week an inquest was held at Reading on the body of Mary Corps, aged 32, who died, or rather was killed, in the Royal Berks Hospital under the following circumstances. It seems that a draught was administered to the poor woman on Saturday evening by one of the nurses, which soon relieved her of all earthly suffering, for she died from its effects half an hour after taking it. Nor was this result surprising, for it was ascertained—of course after the event—that the draught contained four drachms of prussic acid, and that the deceased had taken half that quantity in the medicine given to her. It need scarcely be

added, that the excuse made by the dispenser for this trifling mistake was perfectly satisfactory. He was, he said, very busy on Saturday, having made up nearly two hundred prescriptions; he had used prussic acid frequently during the day, and it was near the bottle which he should have used for Mary Corps's prescription. He was unable to account for the mistake, and it was the first that had occurred. We have repeatedly pointed out that it is the duty of all hospital as of other dispensers to guard against such hurried misadventures—of fearful import—by adopting the use of some one of the mechanical forms of poison-bottles: the fluted bottles are best and simplest.

INTERNATIONAL COMPLIMENT.

UNDER this head the *Boston Medical and Surgical Journal* states that last winter Dr. Acland, of Oxford, was elected a member of the American Philosophical Society of New York, and recently a similar compliment was conferred upon him by the Academy of Medicine of that city.

DEATH OF ROMBERG.

THE German medical journals of this week announce the death on the 16th instant, at the age of seventy-seven, of Moritz Heinrich Romberg, the eminent writer on the pathology of the nervous system. Dr. Romberg was born in Meiningen, and graduated at the University of Berlin in 1817, after which he studied in Vienna under John Peter Frank. In 1820, he was appointed a medical officer of the poor in Berlin; a situation which he held for twenty-five years. In 1830, on the outbreak of cholera in Berlin, he was appointed director of the cholera hospital: and he held a similar post when the epidemic again appeared six years later. In 1838 he became an extraordinary professor, and in 1845 ordinary professor, in the University of Berlin. His principal work, a treatise on the *Nervous Diseases of Man*, was first published in three parts, in 1840, 1843, and 1846, and was, in 1853, translated into English by Dr. Sieveking for the late Sydenham Society. He also edited, in German, Sir Charles Bell's *Physiological and Pathological Researches on the Nervous System*, and was the author of treatises on cholera and on respiratory paralysis, and of various contributions to the periodicals. For some years before his death, he had suffered from symptoms of heart-disease.

MEDICAL SERVICE OF THE POOR IN AUSTRO-HUNGARY.

THE recent combinations of the cities of Pesth and Buda for administrative purposes has rendered necessary a new organisation of the sanitary service. The staff in Pesth will henceforth contain a superintending medical officer (*Oberphysikus*) with an annual salary of £300; an assistant-physician, with £100; thirteen district physicians, each with £100; thirteen examiners of dead bodies, with £60 each; thirteen midwives, with £40 each; and seven veterinary surgeons, with £80 each. The superintending medical officer will have the control of all sanitary matters in both Pesth and Buda, with the exception of the hospitals, which he is only to inspect. In Buda, the so-called physicians of the poor (*Armenärzte*) are replaced by district physicians, with the same salary as those in Pesth.

IMPROVEMENTS AT GUY'S HOSPITAL.

CONSIDERABLE alterations with the view of increasing the accommodation of the anatomical department are being carried out with great vigour at Guy's Hospital. The dissecting-room, which was built in 1850, and which was considered at the time to be a model of symmetry and size, has been found of late years quite inadequate to meet the requirements of the medical school, and is now being greatly enlarged in an eastern direction towards the main roadway. The old demonstrating-room has been pulled down, and a larger one, capable of holding a hundred students, with ample area for the demonstrators, is being erected on the site. At the same time the various premises in the rear of the museum, including the physiological laboratory, preparation-rooms, lavatories, and students' box-rooms, are all about to be remodelled, with the view of providing as much comfort, convenience, and

accommodation as the very limited space at the disposal of the surveyor will admit. Another improvement of not less importance is being carried out in what was formerly the kitchen of the hospital, and which is now being converted into the general bath-room of the establishment. A series of Finch's porcelain baths will be introduced into the several compartments into which this room is about to be divided, and it is also intended to fit up in connection with the department a commodious disinfecting oven for the purification of the clothing of the patients and of the bedding when necessary.

PRESENTATION OF THE PORTRAIT OF SIR JAMES PAGET TO ST. BARTHOLOMEW'S HOSPITAL.

ON Thursday last, the presentation of a portrait by Millais of Sir James Paget, Bart., F.R.S., to Lady Paget, and a similarly well executed copy to St. Bartholomew's Hospital took place in the large hall of the hospital. A large number of eminent members of the medical profession, including Sir Thomas Watson, Professor Turner of Edinburgh, Professors Acland and Rolleston of Oxford, etc., and also many ladies, were present. The Chair was taken by Dr. Burrows, President of the Royal College of Physicians; and Sir James, with Lady and Miss Jessie Paget, his wife and daughter, was received with cheers on entering. After some remarks from the Chairman, Professor Humphry, in a long and eloquent speech, proceeded to address Sir James Paget, commenting on the admirable manner in which the relationship between him and his pupils had been maintained, and giving a sketch of the career of Sir James. He concluded by presenting the portrait to Lady Paget. Sir James Paget acknowledged the presentation on the part of Lady Paget and himself. The meeting concluded with votes of thanks to the Chairman and Dr. Humphry.

THE ADULTERATION ACT.

A CASE of considerable importance to bakers and retail dealers generally was heard at the Nottingham Town Hall this week, when a baker of the town, named George Gill, was charged, under the new Adulteration Act, with selling adulterated bread and flour. On the 7th of May last, the officer appointed under the Act went to the defendant's shop and purchased a loaf and a small quantity of flour, which he took to the borough analyst, Dr. Truman, who analysed them, and found alum in the flour to the amount of 10 grains to a 4 lb. loaf, and in the bread at the rate of 26½ grains, thus rendering the articles injurious to health. Mr. Belk, who defended, urged that the defendant, when purchasing the flour had no means whereby to detect the presence of alum. The Town Clerk, who prosecuted, was willing to admit that, but contended that the Act of Parliament threw the responsibility of knowing that the articles they sold were pure upon the retail dealers, who could have their remedy in prosecuting the wholesale dealer and suing him for damages. The Bench took a similar view of the case, but, as this was the first conviction under the Act, inflicted the mitigated penalty of 40s. Notice of appeal was given.

MISINTERPRETED FIGURES.

THE annual dinner in support of King's College Hospital was held last week, Mr. Justice Honyman in the Chair. As is usual at public hospitals, it was mentioned with pride, and as a source of congratulation and a ground of support, that, besides 1,792 in-patients, gratuitous relief had been administered in 1872 to 31,818 out-patients. If these figures were a little more calmly considered, they would be thought a ground of shame and regret. The relief of an indiscriminate mass of persons who apply for assistance at the expense of others is not altogether creditable, either to those who receive or to those who thoughtlessly accord it. The donors to hospitals are commonly told that they are doing an unmitigated good; and they blindly rely upon the administrators of the charity to select fit objects. As a matter of fact, governors of hospitals in large towns take, as a rule, no trouble about it, but expect their unpaid medical officers to administer to all comers. The abuse of metropolitan hospitals is enormous, especially in the out-

patient departments; and the sooner it is understood that, to swell the number of out-patients is not an unmitigated source of glory to the officials, the better it will be for the self-respect of our population. We heard this week of a set of governors who pointed out with regret to their medical officers by resolution that the number of out-patients was decreasing.

THE DWELLINGS OF THE POOR.

AT the twenty-ninth annual meeting of the Society for improving the dwellings of the poor, a satisfactory report was made of the progress of efforts in this direction. Dr. Ross, the medical officer of the district of St. Giles, testified to the physical and moral improvement effected by the society among the population, including costermongers and sellers of flowers, oranges, and matches, living in the most deplorable circumstances, and liable to diseases which they carried about with them, so that the very violets sold in the street might be infected with the poison of scarlet fever. The deaths in the year in the district were six hundred in excess of the average that ought to rule. He believed we should never do what was necessary in the way of demolition and reconstruction without a general compulsory measure to be carried out by a local authority, with rating power. He was sorry to see that others had not availed themselves of the experience of this society as to outside staircases, which had proved so efficacious in preventing the diffusion of disease.

THE MEDICAL OFFICERS OF THE POOR IN BERLIN.

THE public medical attendants of the poor in Berlin (with the exception of the Councillor of Health, Dr. Hildebrandt) have lately asked for an increase of salary from 300 thalers (£45) to £500 thalers (£75). The directors of the poor, while acknowledging the request to be one deserving consideration, have complied with it to the following extent. The salaries of twenty-seven surgeons of the poor are to be raised, from April 1st, from 350 thalers (£52:10) and 300 thalers (£45) to 420 thalers (£63) and 360 thalers (£54); that of twelve of the second class from 250 thalers (£37:5) to £300 thalers; and that of six of the third class from 200 thalers (£30) to 240 thalers (£36). At the same time, the duty is imposed on them of attending without remuneration to all requisitions of the police for professional visits, or to any urgent demands for medical assistance that may be made within their districts, even though the recipients of such aid may not be supported as paupers by the funds of the commission of the poor.

GERMAN UNIVERSITIES.

THE following statistics relating to German Universities have recently appeared. At the Albertina in Königsberg, the number of matriculated students in the present half-year is 564; besides whom, 17 non-matriculated students are attending the classes. There are 150 medical and 17 pharmaceutical students.—At Göttingen, the number of students is 978, of whom 150 are medical. In this University, there is an increase of 55 over the number of students in the last session.—At Heidelberg, there are 883 students—an increase of 161 over the previous session. Of the 883, 112 are students of medicine.—At Tübingen, the number of students is 886, being 90 more than in the winter session, and more than in any other previous session, except in the winter term of 1845-46, when the number was 890. There are 174 students of medicine. The numbers of students of medicine in other German Universities are stated to be as follows: Greifswald, 298; Halle, 137; Jena, 86; Freiburg, 100; Heidelberg, 112; Bonn, 142; Strasburg, 128; Munich, 334; Würzburg, 464; Basle, 65; Rostock, 27. In Leipzig, there are 99 new students in the medical classes this summer.

PRESERVED MUTTON.

DR. ROBERT GILLAND, of the Berkshire County Lunatic Asylum, states in his last annual report, which, by the way, shews the continued success of the institution, that the New Zealand preserved mutton is now consumed as an article of diet on three days of the week. It is, as a rule, not used entirely by itself, but as a supplement to portions of

meat previously cooked, left from former meals, odd pieces, and the liquor obtained from boiling the roast-meat bones. In this manner it is served in soup, pies, and Irish stew, forming a palatable and nutritious diet, which is much relished by the patients; who, however, expressed considerable dissatisfaction when the preserved mutton was given on one full-meat day, in lieu of the ordinary roast-meat. The total quantity consumed during last year was 7,735 lbs., at an average cost of 5½d. per lb.; the corresponding cost of the fresh meat supplied by contract, including bone, being 7½d. per lb. It will thus be apparent that by the use of preserved meat in the asylum a considerable saving has been effected in the course of the year.

DEATH FROM CHLOROFORM ADMINISTERED FOR THE EXTRACTION OF A TOOTH.

DR. GALT, of Louisville, records (*American Practitioner*, June, 1873) another of those casualties from chloroform administered for the performance of very slight operations, of which so many have occurred. The chloroform was administered May 10th, for the extraction of a tooth from a handsome lad, seemingly in robust health, twelve years of age. It was administered on a napkin, the pulse and respiration being carefully watched. "Simultaneously with the extraction of the remainder of the tooth, I felt the artery flicker, and perceived a sudden pallor and change of expression in his countenance. We all noticed this change, and immediately lifted him from the chair, holding him with his head down and feet elevated at an angle of forty-five degrees; but, seeing no change, I laid him on the floor and pulled his tongue forward with an athenaculum, and Dr. Dunn applied ammonia to his nostrils. He responded immediately with a deep, long inspiration, which he repeated several times under the effects of the ammonia and the cold douche. After taking ten or twelve of these deep, sighing inspirations he ceased to breathe; and, though I used Dr. Marshall Hall's method of artificial respiration for several minutes, I never succeeded in arousing the action of the heart. Dr. Dunn very promptly brought a bellows, with which we carefully inflated his lungs, alternately filling and emptying them. This artificial respiration was kept up for some time, but his heart had ceased to beat." No necropsy is recorded; but Dr. Galt subsequently learned that "the patient was suspected to be suffering from some heart-trouble."

SCOTLAND.

DR. MURIE.

WE are glad to hear that Dr. James Murie, Professor of Anatomy in the Edinburgh Veterinary College, has been unanimously elected to the newly founded lectureship of animal physiology in the School of Arts.

THE LADY MEDICAL STUDENTS IN EDINBURGH.

THE judges of the Court of Session, who were consulted in the case of Miss Jex-Blake and others *v.* the Senatus of the University, have given in their opinions, which were received on the 18th inst. Lords Deas, Ardmillan, and Jerviswoode of the Inner House agree with Lord Gifford (Ordinary) in favour of the right of women to obtain medical degrees, as already held by the latter; while the other four Lords Ordinary take an opposite view of the case. It only remains now to be seen what course the four judges of the second division, who asked the assistance of their brethren, will take, and the Court will abide by the decision of the whole. As the Lord President, who is Chancellor of the University, declines to give an opinion, it is possible the whole Court may be equally divided; in which case, we understand, Lord Gifford's interlocutor will stand.

IRELAND.

DURING the month of May, the city analyst of Dublin made 76 examinations of food and drink. Of 36 samples of coffee, 24 were adulterated with chicory and burnt sugar.

REPORT

ON

MODERN MEDICAL ELECTRIC AND GALVANIC INSTRUMENTS, AND RECENT IMPROVEMENTS IN THEIR APPLICATION:

WITH SPECIAL REGARD TO THE REQUIREMENTS OF THE MEDICAL PRACTITIONER.

IV.

WE have now considered all the principal portable constant batteries which are at the present time in use, both in Europe and America; and it only remains for us to say that, with all their excellent qualities, they are nevertheless, one and all, much inferior in therapeutical virtues to that modification of Daniell's battery which is in England known as Becker-Muirhead, and in Germany as Siemens-Meidinger or Remak. This is the only really constant battery, scientifically speaking, in existence, as polarisation in it has been reduced to an imperceptible minimum. Polarisation is avoided by using no acid, but only water for the zinc, and a solution of cupric sulphate for the copper. The chemical changes, therefore, which must always go on in the battery, are infinitely retarded, and no perceptible diminution of the intensity of the current occurs for weeks and months, even if the instrument be freely used.

This battery, which we have had in use for the last ten years, has

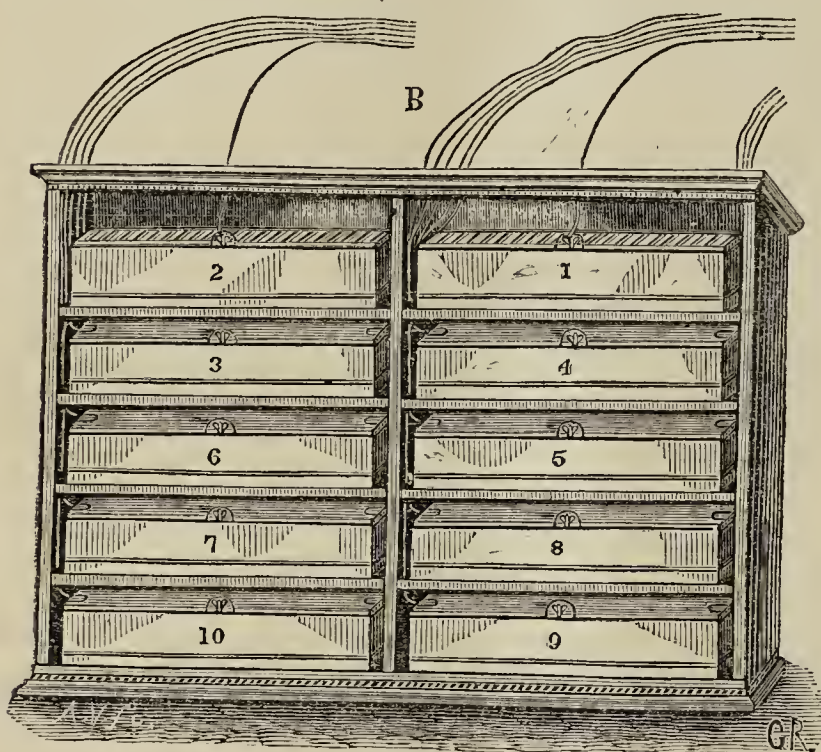


Fig. 15.

been put up for us by Mr. Becker, of the firm of Elliott Brothers. It consists of ten teak boxes superposed upon each other in two rows, as shown in the diagram (Fig. 15), and furnished with wires so as to enable us to collect the current of every five cells. The wires are carried from the basement of the house to the ground-floor, and joined to a pole-board fixed on one of the walls of the consulting-room. *bw* (Fig. 16) are the battery wires, which are insulated except at their extremities, which are soldered to a silver plate hidden in the dials *d d'*. The dial on the left-hand side will give the current of from 5 to 45, and that on the right the current of from 45 to 100 cells. *cw* are the conducting wires connected with the polestuds *n p*, and furnished at their other ends with directors, *D*. *b'w* is the wire connecting the circuit of the battery with the tangent galvanometer *g*, which indicates the strength of the battery-current. Under ordinary circumstances, the current does not pass through the galvanometer; but it may be made to do so by connecting *n* and *p* with a conducting wire, and unscrewing the knob *k*, whereupon the deflection of the needle gives us an indication of the condition of the battery which is out of sight. The ordinary galvanometer is really not much more than a galvanoscope. It will indicate the existence of a current, and also give an approximative idea of its strength by the magnitude of the angle to which it is deflected; but the latter is not really proportionate to the intensity of the current.

For accurate measurement, the tangent galvanometer (Fig. 16 *g*) is necessary. The current is here made to pass through a broad circular band

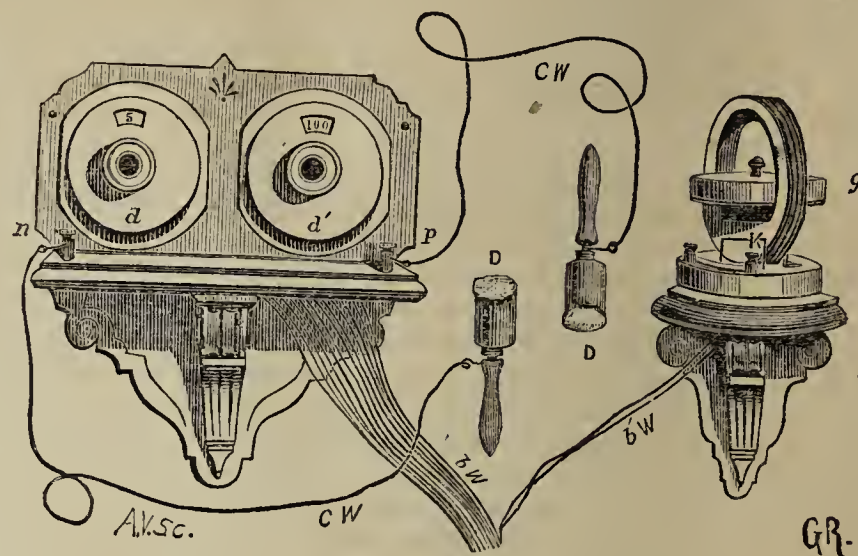


Fig. 16.

of copper, in the centre of which is the magnetic needle. The length of the needle is so proportionate to the diameter of the band, that the distance of the end of the needle from the band, and consequently the action of the current upon it, is the same at all angles of deflection. This instrument is so placed that the plane of the band coincides with the magnetic meridian.

We have already seen that, in the Becker-Muirhead battery, polarisation is, to all intents and purposes, reduced to zero; but it has other important advantages. It is very easy to nurse, and never gets out of order. We have used it almost daily for the last ten years, and have never on any occasion been disappointed with its effects. On the whole, it is best to have the apparatus nursed once a month; and this can be easily done by an intelligent mechanic in less than an hour. The plates and porous vases must be renewed once in every three or four years; but all the other parts of the instrument remain permanently useful.

It is, however, not only the constancy, the ease with which the apparatus is nursed, and its conservative qualities generally, which must recommend the use of this instrument; but there are several other considerations which are somewhat more difficult to explain, and which yet go far towards establishing its absolute superiority over other smaller machines. *The current produced by the portable batteries is more painful than that produced by the large stationary battery.* Now it is very important, in the treatment of most nervous disorders, to avoid giving pain. If much pain be produced by the application, it is often necessary to change the places where the electrodes are applied. Moreover, involuntary muscular contractions will occur in consequence, and the really constant flow of the current through the organs is thus impeded. This is one of the reasons why the therapeutical results obtained with the large battery are better than those obtained with the portable batteries, more especially in affections of the nervous centres and in the different forms of neuralgia. The characteristic feature of Becker's battery is the large surface of the metals composing it, and the absence of acids. Now the power of decomposing water, and the magnetic properties of the two currents produced by a large and a small battery, may be the same, and yet there is a difference in their physiological and therapeutical effects. *The same electro-motive force which, in a portable battery, is crammed into a square inch, has perhaps the space of ten or twenty square inches to spread over in the large battery.* Again, in a short time after being put in action, the metals of the portable battery become irregular in their production of electricity, and local currents are formed, which interfere with the flow of the principal current. These circumstances serve to account, at least to some extent, for the superiority of the large over the small batteries. It is, however, more the province of the physicist than that of the physician to analyse the minutiae of these matters. As practitioners, we have simply to register the fact that the large stationary Becker-Muirhead is better than all the portable batteries which have been constructed. It should, therefore, be the hospital battery, and is indispensable to all those who occupy themselves more particularly with the study of the influence of electricity upon neurotic conditions.

The price of this battery, which may be procured from Messrs. Elliott, 112, St. Martin's Lane, and 449, Strand, is as follows. Set of ten cells in teak box, £2:2; set of one hundred with dial, £25; shelf for ditto, £1:10; set of fifty, £15; ditto on movable carriage,

£17:10; pair of handles, 15s.; galvanometer, £2:5. The price of the arrangement, as figured in Figs. 12 and 13, is therefore about £30.

We now proceed to notice recent improvements in the batteries used for the galvanic cautery.

In France, Grenet's, and in Germany and England, Middeldorff's battery, is chiefly used. Their description will be found in Dr. Althaus's *Treatise on Medical Electricity*, p. 328 and 331. Suffice it to say here that both are objectionable—Grenet's, because it has to be

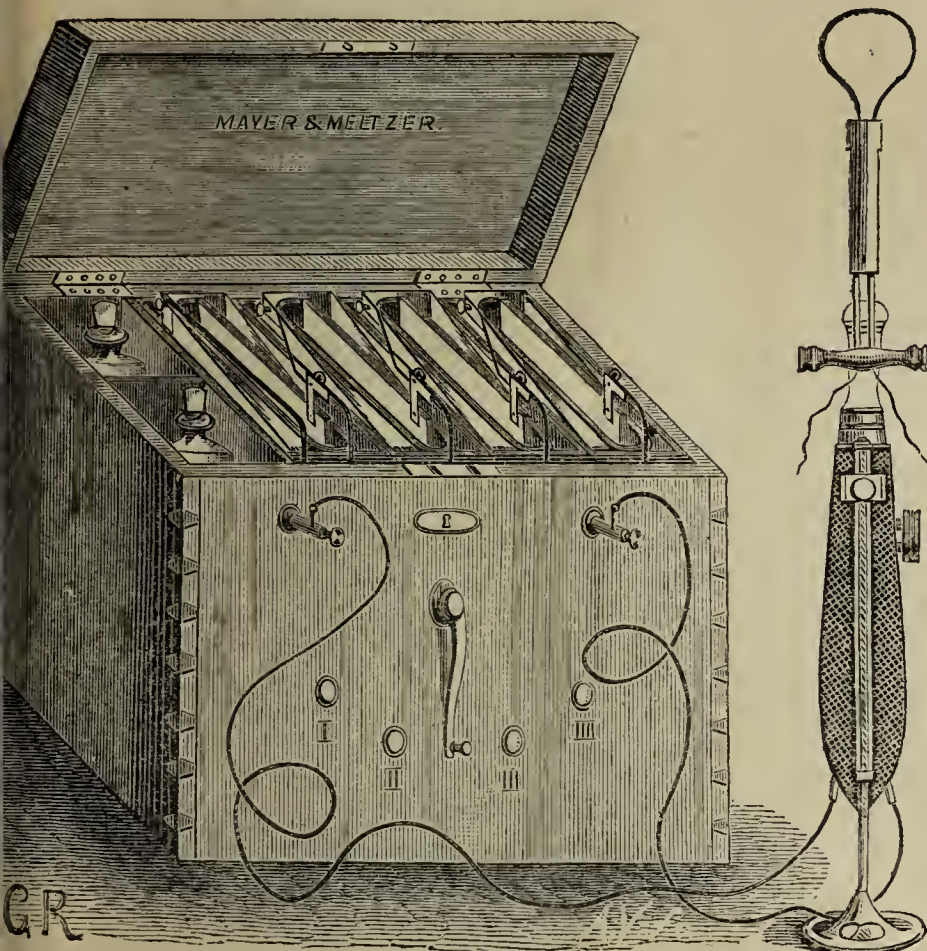


Fig. 17.

worked by a pair of bellows, which nearly paralyses the assistant whenever a prolonged operation is performed, the instrument being,

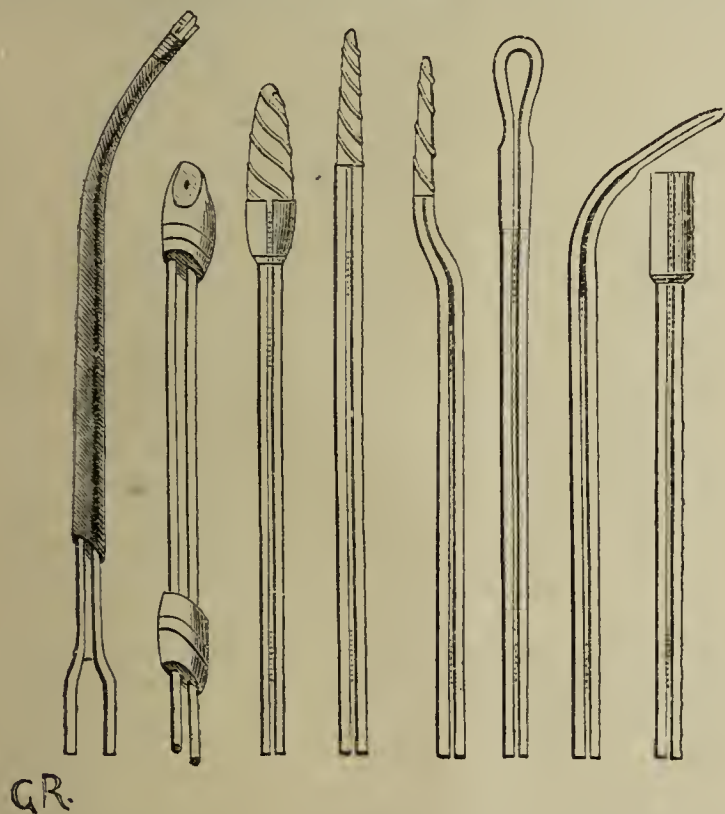


Fig. 18.

moreover, uncertain in its action; and Middeldorff's, because pure nitric acid is used for its charge, which gives off fumes most irritating

to the air-passages, and easily enters into ebullition. In both these instruments, it is not easy to regulate the degree of heat produced, which is, nevertheless, of the greatest importance; because, if white heat be attained, there is danger of hæmorrhage; and, if too little heat be evolved, the instrument is more or less inert.

Professor von Bruns of Tübingen uses a battery composed of zinc and iron, and charged with strong nitric acid. It is very powerful, but wants close watching, as the acid easily enters into ebullition, and destroys all the furniture and other things with which it may happen to come in contact. Stöhrer's galvanic cautery battery consists of six pairs of zinc and carbon, charged with diluted sulphuric and nitric acids, and is much more manageable than Grenet's, Middeldorff's, or Bruns's.

A nice galvanic cautery battery on Stöhrer's principle has been recently manufactured by Messrs. Mayer and Meltzer, of 59, Great Portland Street. (Fig. 17). It combines lightness and portability with great

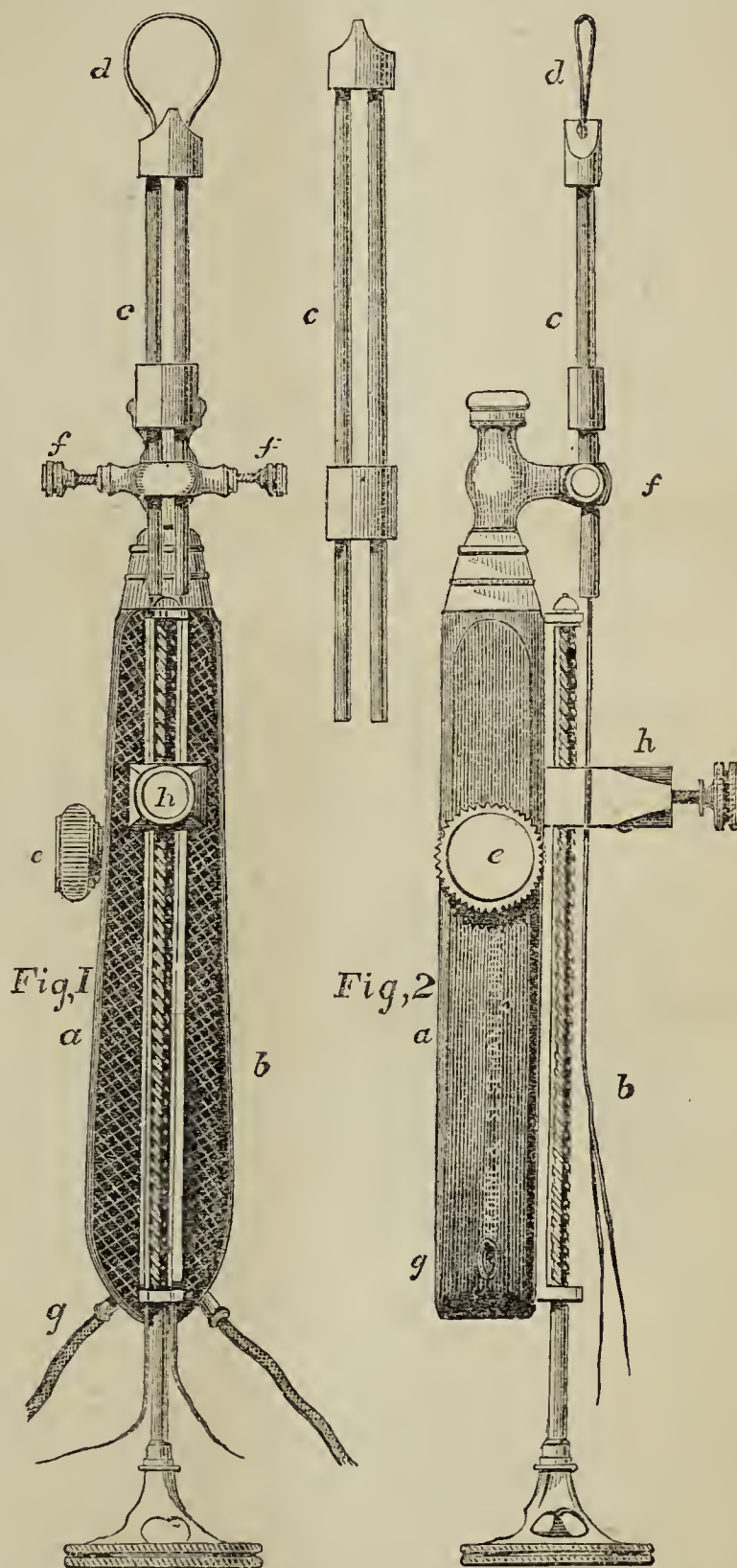


Fig. 19.

power, and is much more easily adjusted than the other batteries. The box in which it is contained is fourteen inches long, nine inches wide,

and seven deep. This contains not only the plates and electrodes (Fig. 18), but also two stoppered bottles for the acids with which the battery is charged, and which are diluted sulphuric acid (1 in 8) and nitric acid. A lever with dial plate in front of the box allows the use of the battery while the box is closed, thus effectually preventing the escape of nitrous acid fumes. The electrodes are an *écraseur*, cutting loops, and porcelain cauteries. The price of this battery is five guineas.

Messrs. Krohne and Sesemann, of 8, Duke Street, Manchester Square, have lately constructed a galvanic *écraseur* (Fig. 19), which is very highly spoken of by those surgeons who have used it. It consists of the handle *a*, which carries the two wires that have to transmit the thermic influence to the platinum loop *d*, and are at their other end connected with the battery wires *g*. *c* are the cannulæ through which the wires pass after they have left the handle; *f*, the sockets to which the cannulæ are screwed; *e* is the contact-breaker, and *h* the clamp for fixing the wires. Fig. 1 shows the instrument in front, and 2 gives a side view of the same.

The same manufacturers have made large and small porcelain cau-

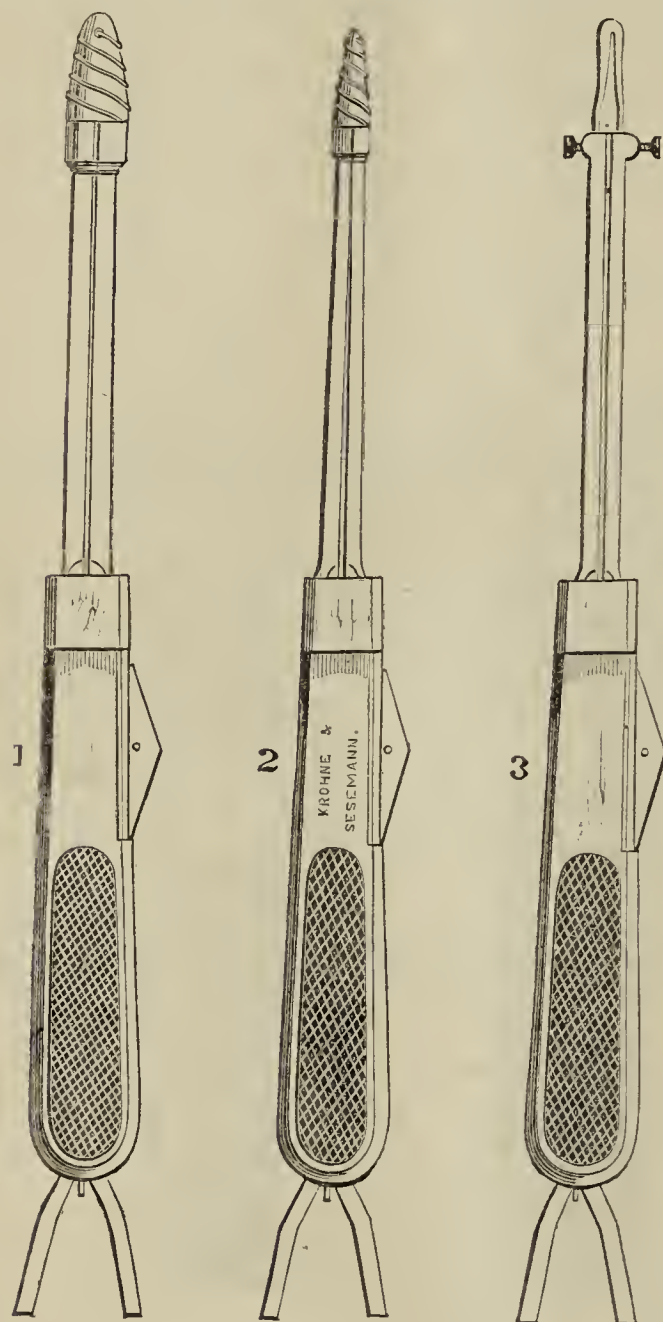


Fig. 20

teries. Platinum wires of different shape and size may be fixed into the handle for varying the mode of cauterisation; and on each handle is a sliding knob for making and breaking the current (Fig. 20).

THE Maharajah of Puttiala has applied to the Viceroy of India for the services of Assistant-Surgeon Calthrop, at present Professor of Anatomy and Physiology in the Medical College at Lahore, and Meteorological Observer to Government. His Highness wishes to make Dr. Calthrop his private physician, and to place him in general charge of all the dispensaries of his State. A liberal salary has been offered.

THE SHAH OF PERSIA AND THE CONVENTION OF GENEVA.

WE are authorised to state that the visit of His Majesty the Shah of Persia to this country has resulted in an act which will be highly agreeable to lovers of humanity. On Tuesday last, His Excellency Malcolm Khan, Persian Minister, at the instance of Sir Arnold Kemball, received at Buckingham Palace M. Henry Dunant, of Switzerland, the originator of the Diplomatic Convention of Geneva for the Wounded, and of the Red Cross organisation; and discussed the objects of the Convention. His Excellency expressed the warm interest which the Shah felt in this subject, and his desire to give diplomatic adhesion to the Convention for neutralising the sick and wounded in war, and the persons and materials provided for their succour. The Convention of Geneva has already been signed by all European monarchs, including the Sultan of Turkey, who gave his adhesion in 1865. The protocol of the Convention was left open in 1864 at Berne. The adhesion of the Shah will, therefore, be addressed to the High Federal Council of Switzerland. The Shah is already familiar with the emblem and its present merciful significance amongst European troops in time of war. The red cross was flying on Tuesday, at the review at Windsor, over the ambulance in the rear, which was drawn up facing the saluting-point. In Austria, in Switzerland, and in Sweden, all medical officers and the hospital staff corps bear the *brassard* on parade and during movements of troops in peace, in order to popularise the emblem and to make its meaning familiar. The Shah is the first purely Asiatic monarch who has given his adhesion to the Convention and to the merciful principles which it establishes. M. Henry Dunant, who has devoted the best years of his life and has sacrificed all his private interests to the development of the humanitarian idea with which he was inspired by the sight of the horrors of Solferino, must be earnestly congratulated at seeing the fertile idea, which has taken firm root throughout Europe, and has borne noble fruit there, now planted in the soil of Asia. It is strange that, of all civilised powers, the United States of America has alone withheld its assent from the Convention.

THE UNITED HOSPITAL ATHLETIC SPORTS.

NOT even the great attractions of Spithead and "Lord's," were apparently sufficient, in any way, to affect the attendance on Monday, at Lillie Bridge Grounds. Indeed, the number of students and their friends was, we think, greater than on any previous occasion. The lovely weather and the increasing popularity of the sports, indeed, sufficiently explained the sometimes inconveniently crowded grounds. The number of entries was altogether considerable, eight out of eleven medical schools sending representatives. It would be well if the committee compelled each hospital to adopt a common uniform for its men, it would make the programme intelligible, practically not so according to the present plan, and give the spectators a clue to the individual men contesting the various events. We arrived in time to see the one mile race, one of the most interesting events of the day, contested. A young gentleman, conspicuous in green and amber running drawers, was pegging away, leading considerably, but at a pace he could evidently not sustain. On consulting the programme, we found no gentleman answering the description. At the close of the race we observed, on close inspection, that he wore a dark violet cap, which at the distance appeared almost black. We then found, on again referring to the card, that the gentleman in question (we suppose), was entered on the card as "Sherman Biggs, Middlesex—violet." The same impossibility, or difficulty, in "spotting" the men, but to a less marked extent, was common in many of the contests. Guy's men were, however, an exception. They were all dressed in a common uniform, and their representatives, at least, if not the individual men, were at once recognised. The programme in many other respects required revision. Surgeons in the list of vice-presidents were promiscuously dubbed "M.D.," and the typographical errors were not unfrequent throughout the programme. There were also rumours of mismanagement in preparing the list of entries. But, with these exceptions, the meeting passed off with great *éclat*. The arrangements were, in other respects, admirable, and reflected credit on the committee, and Mr. Hicks, the secretary. A strong wing of the finest military band in the service, that of the Royal Regiment of Artillery, added very materially to the enjoyment of the meeting.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FOURTH FIRST ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in King's College, London, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1873.

President—ALFRED BAKER, Esq., F.R.C.S., Surgeon to the General Hospital, Birmingham.

President-elect—Sir WILLIAM FERGUSSON, Bart., F.R.S., F.R.C.S., Surgeon to King's College Hospital, London.

The business of the Annual Meeting will be transacted in six Sections, viz.:—

SECTION A. MEDICINE.—*President*: Dr. Sibson, F.R.S., London. *Vice-Presidents*: Dr. Habershon, London; Dr. Eason Wilkinson, Manchester. *Secretaries*: Dr. John Murray, 42, Harley Street, London, W.; Dr. Silver, 2, Stafford Street, Bond Street, W.

SECTION B. SURGERY.—*President*: John Hilton, Esq., F.R.S., London. *Vice-Presidents*: W. S. Savory, Esq., F.R.S., London; Dr. George Buchanan, Glasgow. *Secretaries*: Henry Arnott, Esq., 6, Nottingham Place, London, W.; Dr. Alexander Ogston, Aberdeen.

SECTION C. OBSTETRIC MEDICINE.—*President*: Dr. Braxton Hicks, F.R.S., London. *Vice-Presidents*: Dr. G. H. Kidd, Dublin; Dr. Leishman, Glasgow. *Secretaries*: Dr. J. H. Aveling, 1, Upper Wimpole Street, London, W.; Dr. A. B. Steele, Liverpool.

SECTION D. PUBLIC MEDICINE.—*President*: Dr. Lyon Playfair, C.B., M.P., F.R.S., London. *Vice-Presidents*: G. W. Hastings, Esq.; T. J. Dyke, Esq., Merthyr Tydfil. *Secretaries*: Dr. Corfield, 10, Bolton Row, Mayfair, W.; Dr. Baylis, Birkenhead.

SECTION E. PSYCHOLOGY.—*President*: Dr. Harrington Tuke, London. *Vice-Presidents*: Dr. Radcliffe, London; Dr. Thurnam, Devizes. *Secretaries*: Dr. Blandford, 71, Grosvenor Street, London, W.; Dr. S. W. D. Williams, Hayward's Heath, Sussex.

SECTION F. PHYSIOLOGY.—*President*: Professor Humphry, M.D., F.R.S., Cambridge. *Vice-Presidents*: Dr. Rutherford, London; Dr. Ransom, F.R.S., Nottingham. *Secretaries*: Dr. W. M. Ord, 11, Brook Street, London; Dr. McKendrick, Edinburgh.

TUESDAY, August 5th.

10 A.M.—SERVICE AT ST. PAUL'S CATHEDRAL.

3 P.M.—GENERAL MEETING—President's Address, Report of Council, and other Business.

9 P.M.—RECEPTION BY THE LORD MAYOR at the Mansion House.

WEDNESDAY, August 6th.

10 A.M.—SECOND GENERAL MEETING.

11 A.M.—ADDRESS IN MEDICINE, by E. A. PARKES, M.D., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

9 P.M.—RECEPTION BY PRESIDENT AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY, August 7th.

10 A.M.—THIRD GENERAL MEETING—Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by JOHN WOOD, Esq., F.R.S., Professor of Surgery in King's College, London.

12.30 P.M.—MEETINGS OF SECTIONS. Adjourn at 3.30 P.M.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION.

FRIDAY, August 8th.

10 A.M.—MEETINGS OF SECTIONS.

11 A.M.—ADDRESS IN PHYSIOLOGY, by J. BURDON SANDERSON, M.D., F.R.S., Professor of Practical Physiology in University College.

1 to 2.30 P.M.—PUBLIC LUNCHEON.*

2 P.M.—CONCLUDING GENERAL MEETING.

9 P.M.—SOIRÉE AT UNIVERSITY COLLEGE.

SATURDAY, August 9th.

EXCURSIONS.—By permission, the following among other Excursions will be arranged:—

Excursions to Cliefden, near Maidenhead, the seat of the Marquis of Westminster; and to Windsor Castle.

Excursion to Brighton, and visit to Brighton Aquarium.

Visit to Woolwich Arsenal and the Factories.

Arrangements will be made, of which further details will be published, for facilitating visits during the week to the Print and MSS. Rooms of

* By invitation of the Metropolitan Members.

the British Museum, the Mint, the General Post Office, the Private Collections at Grosvenor House, Stafford House, etc., and to some leading Factories.

*** Communications as to the Meeting may be addressed to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, Lincoln's Inn, W.C.

The Honorary Local Secretaries are—

Dr. A. P. STEWART, 75, Grosvenor Street, W.

Dr. A. HENRY, 16, Brunswick Square, W.C.

Dr. S. WILKS, F.R.S., 77, Grosvenor Street, W.

GEORGE W. CALLENDER, Esq., F.R.S., 47, Queen Anne Street, W.

ERNEST HART, Esq., 59, Queen Anne Street, W.

ANNUAL MUSEUM.

The sixth annual exhibition of objects of interest, in connection with medicine, surgery, and their allied sciences, will take place in the rooms of King's College, during the first week of August 1873.

The Committee appointed to take charge of the arrangements for this museum will be glad to receive—1. Pathological specimens (wet or dry); 2. Drawings or diagrams illustrating disease; 3. Casts or models; 4. Surgical instruments and appliances; 5. Microscopic preparations; 6. Microscopes, thermometers, and other instruments of investigation; 7. Preparations, diagrams, etc., relating to investigations in anatomy and physiology; 8. New medical books.

It is intended that the surgical instruments, etc., shall be *bonâ fide* novelties, or improvements on those in common use. The Committee will be greatly obliged to exhibitors if they will send in their contributions as early as practicable.

Pathological Department.—The pathological part of the Museum will be arranged in the following departments—*a.* Diseases of brain, injuries to head, etc.; *b.* Diseases of heart and blood-vessels; *c.* Diseases of lungs; *d.* Diseases of abdominal and pelvic viscera; *e.* Malignant diseases; *f.* Diseases of eye and ear; *g.* Diseases of skin; *h.* Syphilis; *j.* Fractures and dislocations; *k.* Congenital deformities; *l.* Diseases of the lower animals; *m.* Miscellaneous.

Exhibition of Patients.—It is intended to arrange for the exhibition of living subjects of disease at special hours. Those intending to bring forward such, must give notice at least a fortnight before the meeting, and state the time at which it will be most convenient to them to attend. A written description of the case must also be sent. Notice of the hours fixed for each demonstration of this kind will be printed in the catalogue.

Exhibition of Instruments and Apparatus.—It is intended to arrange for the exhibitions of complete series of instruments, as electro-therapeutic apparatus, and instruments for physical diagnosis. Facilities will also be afforded, when requested, for the display of instruments in action, or for special explanation by the exhibitors of apparatus, etc. A department will be provided for the exchange or sale of duplicate photographs, casts, etc.

Catalogue.—It is intended to print a catalogue, which will be as complete as circumstances may permit. The Committee earnestly request those who intend to exhibit to bear in mind that it is impossible that descriptions, etc., can be included in the catalogue *unless sent in early*. They should be received at least a fortnight before the meeting, that is, not later than July 16th.

Communications, objects intended for exhibition, etc., may for the present be addressed to the private care of any of the members of the Museum Committee, or to Mr. FRANCIS FOWKE, at the office of the BRITISH MEDICAL JOURNAL. During the week preceding the meeting, all articles should be sent direct to the Library, King's College, and addressed to the care of the Curator of the Museum of the British Medical Association.

The following is a list of the Museum Committee; to any member of which communications, etc., may be addressed—Mr. Jonathan Hutchinson, *Chairman*, 4, Finsbury Circus, E.C.; Dr. George Buchanan, 193, Bath Street, Glasgow; Dr. Cayley, 58, Welbeck Street, W.; Mr. Richard Davy, 33, Welbeck Street, W.; Dr. Dickinson, 11, Chesterfield Street, Mayfair, W.; Dr. C. Hilton Fagge, 11, St. Thomas Street, E.C.; Dr. Gordon, 1, Howard Street, Belfast; Dr. Green, 74, Wimpole Street, W.; Mr. Furneaux Jordan, 22, Colmore Row, Birmingham; Dr. Charles Kelly, 94, Wimpole Street, Cavendish Square, W.; Dr. Moxon, 6, Finsbury Circus, E.C.; Dr. John William Moore, Dublin; Dr. Payne, 6, Savile Row, W.; Dr. A. Silver, 2, Stafford Street, Old Bond Street, W.; Dr. Heywood Smith, 20, Portugal Street, Grosvenor Square, W.; Mr. George Southam, 10, Lever Street, Manchester; Dr. Grainger Stewart, 19, Charlotte Square, Edinburgh; Dr. H. G. Sutton, 9, Finsbury Square, E.C.; Mr. C. G. Wheelhouse, Hilary Place, Leeds; Dr. Wilks, 77, Grosvenor Street, W.; Dr. C. Theodore Williams, 78, Park Street, Grosvenor Square,

W. The *Honorary Secretaries* are Mr. Warren Tay, 10, Finsbury Pavement, E.C., and Mr. Francis Fowke, 37, Great Queen Street, W.C.

Papers.—The following papers have been promised.

Francis E. Anstie, M.D. Alcohol in Pyrexia.

T. Clifford Allbutt, M.D. The After-history of Cases of Railway Accident.

H. Charlton Bastian, M.D., F.R.S. On the Modes of Causation of Epilepsy and allied Convulsive Affections at different Periods of Life.

James Ross, M.D. The Theory of Counterirritation.

Thomas J. MacLagan, M.D. The Germ-theory of Disease applied to the Explanation of the Phenomena of Idiopathic Fever.

William Sedgwick, Esq. The Absence of Purging in Cholera.

T. Grainger Stewart, M.D. On Chronic Bright's Disease.

Christopher Heath, Esq. On Colotomy.

G. W. Callender, Esq., F.R.S. On the Isolation and Treatment of Wounds.

Jonathan Hutchinson, Esq. Some Notes on the Effects of Iodide of Potassium.

William S. Savory, Esq., F.R.S. On the Treatment of Strictures of the Urethra.

Arthur E. Durham, Esq. The Removal of Bronchoceles by Operation.

Berkeley Hill, Esq. A New Urethrotome for incising very Narrow Strictures.

T. Holmes, Esq. On the Diseases which simulate Aneurism.

George Critchett, Esq. The Treatment of some of the Superficial Affections of the Eye.

T. Pridgin Teale, Esq. On the Restoration of Perinæum and Sphincter Ani ruptured during Labour.

J. T. Clover, Esq. The Induction of Sleep during Surgical Operations.

William Mac Cormac, Esq. Some Remarks on Onychia Maligna.

Spencer Wells, Esq. On the Excision of the Enlarged Spleen.

C. E. FitzGerald, M.B. A Series of Ophthalmoscopic Drawings with Explanatory Notes.

Lawson Tait, Esq. 1. On the Anatomy and Treatment of Dermoid Cysts of the Ovary and Peritoneum. 2. On Methylene Ether as an Anæsthetic.

John C. Murray, M.D. Urinary Calculi: their Preventive and Solvent Treatment.

Thomas W. Hime, M.B. Intrauterine Therapeutics.

Ewing Whittle, M.D. The Anticipation of Post Partum Hæmorrhage.

John Bassett, Esq. Note on the Prevention of Uterine Hæmorrhage.

A. B. Steele, L.K.Q.C.P. Case of Apoplexy and Hemiplegia in the Puerperal Period, terminating in Recovery.

J. A. Wanklyn, Esq. 1. The Action and Relative Value of Disinfectants. 2. The Chemical History of Excreted Urea. 3. The Ammonia process of Water-analysis for Medical Officers of Health.

T. W. Grimshaw, M.D., and D. Toler Maunsell, M.B. State Medicine and Public Health in Ireland.

J. W. Moore, M.D. The Influence of Mean Temperature on the Prevalence of Small-Pox.

J. W. Moore, M.D. Crystallisation of Nitrate of Urea from Urine.

Charles Elam, M.D. On Disturbed Mental Phenomena falling short of Insanity.

J. G. Davey, M.D. The Delusions of the Insane: their real value as a Means of Diagnosis.

J. Langdon Down, M.D. On some of the Causes of Imbecility and Idiocy.

Francis E. Anstie, M.D. Some of the Relations of Nerve-pain with Mental Derangement.

T. Buzzard, M.D. On Co-ordinated Convulsions from Mental Shock.

David Nicolson, M.B. On the Occurrence of Insanity among Criminals.

W. H. O. Sankey, M.D. Is there such a Disease as Acute Primary Mania?

H. Sutherland, M.D. Climacteric Insanity in the Male.

David Yellowlees, M.D. Insanity and Intemperance.

SOUTH EASTERN BRANCH.

THE twenty-ninth annual meeting of this Branch will be held at three o'clock on Wednesday, July 2nd, at the Assembly Rooms, Ashford; EDWARD GARRAWAY, Esq., of Faversham, President-elect.

Dinner will be provided at five o'clock, at the Saracen's Head Hotel; tickets, 7s. 6d. each.

Previously to the business meeting, a trip to Eastwell Park will be arranged, for which carriages will leave the railway station at one o'clock.

The Works of the South-Eastern Railway Company, the parish Church and its ancient Tomb, the Cemetery, the Cottage Hospital, and the Open-air Swimming Bath, may also prove interesting.

Members are privileged to introduce friends to the day's proceedings.

G. F. HODGSON, *Honorary Secretary*.

Brighton, June 17th, 1873.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Friday, the 11th day of July next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

37, Great Queen Street, June 26th, 1873.

NORTHERN BRANCH.

THE annual meeting of the above Branch will be held in the Library of the Newcastle-upon-Tyne Infirmary, on Thursday, July 3rd, at 2 P.M.; G. Y. HEATH, M.D., President, in the Chair.

Dinner at the Turk's Head Hotel, at 5 P.M. precisely. Tickets, 12s. 6d. each.

G. H. PHILIPSON, M.D., *Honorary Secretary*.

Newcastle-upon-Tyne, June 16th, 1873.

SOUTH WESTERN BRANCH.

THE annual meeting of the above Branch will be held at Callington, on July 3rd, at 12 noon; J. KEMPTHORNE, F.R.C.S., President-elect.

The dinner will take place at Golding's Hotel, at 6 P.M. precisely. Tickets, 7s. 6d. each, exclusive of wine.

An excursion will be made to King Dungarth's grave and Trevelth Cromlech, thence to the Hurlers (Druidical remains) and the Cheeswring.

Members wishing to read papers or to join the dinner, are requested to communicate, on or before June 25th, to the Honorary Secretaries.

The South Devon, Cornwall, and West Cornwall Railway Companies, will grant members return tickets to or from any of their stations to Liskeard or Plymouth, available from July 2nd to 4th inclusive, at single fares, on production of ticket of membership.

JOHN WOODMAN, F.R.C.S. } *Acting Honorary*
LOUIS TOSSWILL, M.B. } *Secretaries*.

2, Chichester Place, Southernhay, Exeter, June 9th, 1873.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Belvoir Hotel, Rhyl, on Tuesday, July 8th, at 1 P.M.; R. DAVIES, Esq., of Llanfair-talhairn, President.

The dinner will be at 4 P.M. Tickets, including waiters and dessert, 7s. 6d. each.

Members who have cases to report or papers to read, and those who intend dining, will please to communicate, as soon as possible, with the undersigned.

D. KENT JONES, *Honorary Secretary*.

Beaumaris, June 9th, 1873.

MIDLAND BRANCH.

THE annual meeting of the above Branch will be held in the Board Room of the Leicester Infirmary, on Tuesday, July 8th, at 2 P.M.; H. LANKESTER, Esq., President-elect.

Dinner at the Bell Hotel at 5 P.M. Tickets, 7s. 6d. each.

Members wishing to read papers, or to be present at the dinner, are requested to give immediate notice to the undersigned.

THOMAS BLUNT, M.D., *Honorary Secretary*.

St. Martin's, Leicester, June 17th, 1873.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, July 24th, at 2 P.M., under the presidency of GEORGE GILLET, Esq.

Dinner at 5 o'clock.

Gentlemen are requested to send to the Secretary the titles of communications they wish to make at the meeting.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, June 24th, 1873.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held at the Bristol Library and Institution, on Thursday, July 10th, at 3.30 P.M.; EDWARD LONG FOX, M.D., President, in the Chair.

The business of the meeting will be to receive the Report of the Council; to elect the officers of the Branch, and nine representatives to the General Council for the ensuing year; to transact the necessary business and to discuss such subjects connected with the interest of the Branch and of the profession as may be brought before it.

Members who have not paid their subscriptions, are requested to do so to the Local Secretaries, at or before the annual meeting, in order that the accounts may be made up before the anniversary meeting of the Association.

The dinner will be held at the Royal Hotel, College Green, Bristol, at 6.30 P.M. Tickets, including ice and dessert, 7s. 6d. each.

The Bristol Secretary particularly requests that those members who intend to be present at the dinner will send in their names before Monday, July 7, in order that the necessary arrangements may be completed.

E. C. BOARD, Bristol. } *Honorary Secretaries.*
R. S. FOWLER, Bath. }

Bristol, June 16th, 1873.

METROPOLITAN COUNTIES BRANCH.

THE twenty-first annual meeting of this Branch will be held at the banqueting-hall, Alexandra Park, on Tuesday, July 15th, at 3 P.M. President for 1872-73, Sir WILLIAM FERGUSSON, Bart., F.R.S.; President-elect for 1873-4, RICHARD QUAIN, M.D., F.R.S.

At half-past 5 P.M. *precisely*, the members will dine together; RICHARD QUAIN, M.D., F.R.S., in the Chair. Tickets, fifteen shillings each (including ices, tea, coffee, and attendance, and exclusive of wine).

A. P. STEWART, M.D. } *Honorary Secretaries.*
ALEXANDER HENRY, M.D. }

London, June 18th, 1873.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH:
PATHOLOGICAL AND CLINICAL SECTION.

THE seventh and last ordinary meeting was held on April 25th, 1873. Present: FURNEAUX JORDAN, Esq., in the Chair, and thirty-seven members.

1. *Removal of Myeloid Growth from Lower Jaw.*—Mr. FURNEAUX JORDAN showed a young lady from whom he had removed the larger portion of the lower jaw, the seat of a large myeloid tumour, which produced great deformity and affected both speech and swallowing. Thirteen years ago, a portion of the base of the bone was removed for similar disease; it quickly returned and steadily grew. There was no glandular enlargement, and the patient's health was good.

2. *Excision of the Ankle-Joint.*—Dr. JOLLY showed the bones removed in excision of the ankle-joint for disease. The operation was performed in his usual way, by lateral incisions behind the malleoli. No tendons or blood-vessels of any importance were divided.

3. *Multilocular Ovarian Cyst.*—Mr. MANN showed a multilocular ovarian cyst successfully removed from a lady, aged 30, by Mr. West. The patient became pregnant last August of her third child. The ovarian disease grew concurrently with the pregnancy. Premature labour was induced last January, and she was delivered of twins at about five and a half months. Two months afterwards, ovariectomy was performed. An extensive adhesion to the omentum was divided by the actual cautery, and a lesser one was ligatured, the ends being cut short; two or three bleeding points were touched with the hot iron. The pedicle was clamped, the instrument coming away on the tenth day.

4. *Successful Ovariectomy.*—Mr. VINCENT JACKSON read notes of a recent case of successful ovariectomy. A married woman, aged 42, was admitted into the Wolverhampton and Staffordshire Hospital with a large multilocular ovarian tumour of twelve months' duration. The woman was thin, and suffered much distress from the weight and pressure of the cyst, which consisted mainly of fluid contents. There were anasarca of the lower extremities, œdema of the vulva and of the anterior abdominal walls, and much erythema. On March 6th, ovariectomy was performed. There were very extensive and strong adhesions to the front of the abdominal wall, to the omentum, the cæcum, and the right brim of the pelvis. The pedicle was clamped. She was discharged on April 15th.

5. *Anatomical Apparatus.*—Mr. W. J. FOSTER exhibited an apparatus for producing fine pathological or anatomical injections.

6. *Diseased Kidneys and Vesical Calculi.*—Dr. JAMES THOMPSON showed the urinary organs of a patient, aged 73, who had passed large

numbers of lithic acid calculi up to the last three years of life. Since then he had had good health. After death, nineteen calculi as large as rifle-bullets were found in the bladder; the ureters were greatly enlarged, and both kidneys much diseased.

7. *Diagnosis of Laryngoscopic Appearances.*—Dr. SAWYER exhibited diagrams illustrating the laryngoscopic appearance in the following four cases. 1. Pressure on the left recurrent laryngeal nerve from aortic aneurism; 2. Unilateral paralysis of the adductors of the cords (inflammatory); 3. Bilateral paralysis of the adductors (hysterical); 4. Paralysis of the arytenoideus proprius.

8. *Specimens of Heart-Disease.*—Dr. BALTHAZAR FOSTER showed two specimens of heart-disease—one to illustrate hypertrophy with dilatation, the other to illustrate atrophy of the heart.

9. *Uterine Fibroid Polypus in Situ.*—Dr. MALINS exhibited the uterus and appendages of a patient, showing a fibroid polypus attached to the summit of the anterior wall of the uterus, measuring one and a half inches in length, and of conical form. The cavity of the body was distended by it, but it did not affect the cervical cavity. *Ante mortem*, for diagnostic purposes, a single laminaria tent was introduced for twelve hours, the uterus was brought down, and the forefinger of the left hand, passed into the cavity, felt the polypus. A febrile condition previously existing was aggravated, the tongue became brown, and death ensued at the end of three weeks.

CORRESPONDENCE.

MEDICAL ADVERTISING AND MEDICAL FEES.

SIR—I have often thought of sending a few lines to you on these heads, and am now the more urged to do so by the letter of "Juvenis Senior," in your issue of to-day. Like your correspondent, I have sold my books outright to a very eminent publisher, but not with the effect of seeing them constantly paraded in the daily journals. I have always been shocked and disgusted to see this bidding for the public by men who should themselves know better, and whose example is followed by their inferiors. But until the time of my own experience, I had no reply to those who contended that the matter was one wholly in the hands of their publishers. Now, in answer to "Juvenis Senior," I can say, from the experience of two books which have been published some time, which have sold very well, and which have brought me good practice through the profession, that the publisher does not, of his own cost and wishes, display the advertisements in question. Very delicately he wrote to tell me that he intended to devote such and such a sum to advertisements, in order to sell the book, and that these would appear a few times in the leading daily journals, but chiefly in the medical journals. The sum he named was a liberal one, but he added, "if you wish the book, for other than a publisher's reasons, to appear more freely in the general and special press, it is customary to place a certain further amount in the publisher's hands for that purpose." This, he said, was commonly done, and I now knew how far "the author was not responsible" for the trade advertisements in the daily journals. My publisher, in order to serve his own ends, inserted such notices very sparingly. I am thankful to say, that I requested him not to insert any further notices in the *Times*, or other non-professional papers, but to add about thirty per cent. to the advertisements in the medical papers. This, I think, is fair enough.

Now as to the fees. I feel strongly with "Juvenis Senior," that the leaders of the profession are missing their way, both as regards us and themselves, by their chamber practice. I practise, as a consultant, in the country, and have therefore no rivalry with them; but when I hear of the crowds who beset their chambers, I am reminded of the out-patient practices of the hospitals, or of the doors of a fashionable quack. I charge one guinea, as a rule, and two guineas for long consultations. The leading physicians and surgeons in London do no more. I give my patients all the time their case requires; our leaders give them fifteen minutes. Leaving all else, I would ask, if men who do this have a right to complain that medicine is less of a career than law? When I send a patient to the eminent surgeon, Sir Diggory Sharpe, or to the eminent obstetrician, in the same street, my patient is rapidly questioned by a polite gentleman, who all the while has one eye on the clock, and if I receive any letter at all concerning him, it is too often to show that he has gone to town for a worse opinion than my own. Hence we in the country beg people not to go to the leaders, but to pay a liberal fee to "Juvenis Senior," who will probably give us the full benefit of his ability and knowledge. It would never do, however, to pass a rule that certain physicians should make higher charges than the rest; but why can they not see the enormous benefit of making such a scale for themselves. I wish to send my patients to the best man I can hear of,

and my patient, whose case is probably a very important one, wishes not to jostle with fashionable dyspeptics for a guinea's worth of the great man's time, but to have all the time his case requires, and to pay liberally for it. People who really need a second opinion would gladly pay three, four, or five guineas for it. The consultant would divert a lot of weedy practice to his juniors, and he would enjoy a larger income for half the wear and tear. Every man will learn for himself how soon he can afford to place the higher value upon his time.

June 21st, 1875.

I am, etc.,

PAGANUS.

* * We are authorised to state that the gentleman mentioned in the letter of "Juvenis Senior" always entrusted the advertising of his books to the sole hands of his publishers, and had no share in it himself.

OBITUARY.

JAMES RYALL ROUCH, F.R.C.S.

MR. J. R. ROUCH, the third son of the Rev. W. W. Rouch, Wesleyan minister, of Bristol, was educated at the Wesleyan School, Kingswood, near Bristol. He prosecuted his medical studies in connection with St. Bartholomew's Hospital, and was a diligent and indefatigable student. He received the gold medals in Botany (1867) and in Materia Medica (1866) of the Society of Apothecaries, and obtained two Scholarships of £50 each. He became in 1870 a Fellow of the Royal College of Surgeons. He was House-Surgeon to the Bradford Infirmary in 1869-70, and was elected Surgeon to the Metropolitan Free Hospital in 1871. His health having partially failed, he relinquished a partnership practice; and, being advised by his medical friends to try the effect of a sea-voyage, he accepted an appointment as Surgeon-Superintendent under the Queensland Government, and sailed in the ship *Light Brigade* on December 25th for Rockhampton, Queensland, Australia. His health continuing to decline during the voyage, contrary to his expectation, he reached Rockhampton in great debility, and at the Queen's Hotel in that place, surrounded by the captain and officers of the ship, and attended by medical and Christian friends, who ministered to his comfort, he peacefully exchanged mortality for eternal life, on Monday, April 7th, 1873, aged 35, beloved and lamented by a large circle of friends, and by all who knew him.

JOHN WILLS, M.D., SHAFTESBURY.

DR. JOHN WILLS, who died on May 29th, aged 45, was the second son of the late Thomas Wills, Esq., solicitor. He commenced his studies under the late Mr. Bennett, and completed them at Guy's Hospital, in 1851. In 1862 he took his degree, at the University of St. Andrew's. In 1852, Mr. Wills was appointed Resident Medical Officer to the Eastern Dispensary, Bath, and on resigning this appointment, in 1853, he took an extensive practice at Child Okeford, near Blandford, where he continued till 1867, when, on account of failing health, he was induced to seek retirement in his native town, Shaftesbury.

JOSEPH DAVIES, M.R.C.S., J.P.

WE regret to announce the sudden death of Mr. Davies, of Bedwas, which took place at Newport on May 31st, in his 81st year. Mr. Davies had left Bedwas by an early train for Newport in excellent health and spirits. On his return to the station in a cab, when the door was opened he was found dead. Mr. Davies was born in the parish of Mynyddyshoyn, in Monmouthshire, was educated at Cowbridge Grammar School, and apprenticed to Mr. J. Brewer, of Newport, where he saw a great deal of practice. In London, he studied at Guy's and St. Thomas's Hospitals, where he formed and ever retained a most exalted opinion of Sir Astley Cooper. In 1813, he took the diploma of the College of Surgeons. From 1814 to 1830, he was actively engaged in a very large country practice at Abercarne, and afterwards at Penner House, in the same parish. He was most successful in practice, and retired to Bedwas in 1830. As a surgeon, he was eminently practical, and gifted with a large amount of common sense. In 1834, he was made a magistrate for the county of Monmouth, and subsequently for the county of Glamorgan. Although the oldest magistrate on the bench, he was always regular and punctual in his attendance. For some years, he had been Chairman of the Petty Sessions at Blackwood (Monmouthshire) and Caerphilly (Glamorganshire). After retirement from practice, he employed his leisure time in farming, and took great pride in the preservation of the old Glamorgan breed of cattle. Mr. Davies was a great sportsman, and for many years kept an excellent pack of hounds. The walls of his dining-room are adorned with the brushes of about seventy foxes; and many a time has the writer listened to the glowing and enthusiastic account of the hunt after the owner of

this or that particular brush. A few years ago, he was requested by the gentlemen of the county to become "master of the hounds," which honour he declined on account of his advanced age. Mr. Davies was a very early riser through life, generally breakfasting about six o'clock. He was very kind in his demeanour, being equally courteous and accessible to the poor as to the rich, and by his uniform kindness and gratuitous attendance on many of them in sickness he had won the respect of the lower classes; by his very pleasant and affable manners, kind disposition, and great conversational powers, he was equally popular with the higher classes, amongst whom he was known as the "Baron of Bedwas." A few years ago he was nominated high sheriff of the county of Monmouth, but was excused on account of his age. On the 6th instant, he was buried in the family vault at Bedwas. Mr. Davies was married three times, and leaves one daughter.

LOCAL GOVERNMENT

AND

SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT.

ST. COLUMB MAJOR, CORNWALL.—Mr. Moorman has been appointed Medical Officer of Health for the Rural District of St. Columb-Major Union and the two Urban Districts of Padstow and Newquay, for a term of two years, at a salary of £120. Area, about 70,826 acres; population, about 16,000.

THE PUBLIC HEALTH ACT IN WALES.

It will be remembered that the first step of Mr. Doyle, the Local Government Board Inspector for South Wales, in carrying out the Public Health Act, was to get inspectors of nuisances and medical officers of health temporarily appointed for the purpose of drawing up reports as to the actual sanitary condition of the country. These reports have recently been collected and published in a volume by the Local Government Board. Of the revelations which these reports make, Mr. Doyle himself says:—"There is not a county, nay, there is hardly an union in the district, from which even the limited number of these reports that are printed, imperfect as some of them are, do not supply overwhelming evidence of the existence of nuisances of the very worst description. It is not easy to picture anything more deplorable than the state of towns, villages, hamlets, and cottages as they are represented in these reports, represented more strongly perhaps in those that are withheld than even in those that are printed. Water-supply insufficient or poisoned with sewage and other filth, drainage wholly neglected, not of cottages and detached houses only, but of villages and streets of towns; dwellings occupied by large families that are declared to be 'unfit for human habitation', cases of overcrowding, the details of which can with difficulty be credited; thousands of houses without any privy accommodation or means of ventilation whatever; pigstyes and privies so built that the filth from them is often found oozing through the rubble wall into the cottage. Such is the general character of the statements that I find in page after page of the reports that are sent to me from the several unions, accompanied in many cases by the deliberate opinion of medical men that such a state of things might be easily remedied, and that not being remedied it is the fruitful source of sickness and death." To remedy this disgraceful condition of things, Mr. Doyle proposed, in a letter to the general sanitary authorities of the district, and again in a speech delivered on June 20th, at a conference of the representatives of the sanitary authorities assembled at Cardiff, to divide Wales into four large districts, over each of which should be appointed a medical inspector, debarred from private practice, and receiving an income of not less than £800 a year, and that he should advise and assist the local officers of health and sanitary authorities. He also advised the election of the local medical officers as officers of health, and the appointment of thoroughly efficient inspectors of nuisances. "I am satisfied," said Mr. Doyle, "that in Wales, the success of sanitary administration will depend upon the combined services of local officers of health acting in co-operation with a central officer for large districts." At the conference at Cardiff, Mr. Doyle advised the representatives to nominate a committee to meet the sanitary authorities of the other end of the district, to settle the boundaries of the district, and to appoint the central officer. After some discussion, it was agreed to meet at Merthyr-Tydfil on the 16th of August. To this plan, now proposed by Mr. Doyle, we give our earnest and hearty assent. It is that of the Public Medicine Committee of this Association, that which we have from the first urged upon the Local Government Board and the local authorities.

MEDICAL NEWS.

THE CONJOINT EXAMINATION SCHEME FOR ENGLAND.

WE learn without surprise, that the feature in this scheme, which was passed over so lightly at the College of Physicians, and on which we commented as being the really objectionable element in it, has attracted attention, and has met with successful opposition in the Council of the College of Surgeons. The Council object to the withdrawal of one half of the fees received from their control, and propose to disallow that part of the scheme which authorises the Committee of Reference to appoint a treasurer who will intercept the funds. For this we have already pointed out what we think sufficient reasons.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 19th, 1873.

Bingham, Samuel, Kirton-in-Lindsey
Burchell, Edward, Meadow Lane, Leeds
Garrett, John, London Hospital
James, William Dale, Yonge Park, Upper Holloway
Lewtas, John, Greenwich
Medcalf, Ernest Sexton, Ware
Penny, George Toun, Bridgefield, Lancashire
Saberton, Frederick William, Ely

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, the 10th, 11th, and 12th of June, the following candidates obtained the License to practise Medicine.

Daniel Robert Alcock, John Henry Boxwell, Henry Eccles Evans, Arthur Benjamin Finny, William Greer, William M'Enery, John Richard Palmer, Luke Peacan, and William Henry Warren.

The following candidates obtained the Midwifery Diploma.

Daniel Robert Alcock, Henry Eccles Evans, Arthur Benjamin Finny, William M'Enery, Robert Spence, and William Henry Warren.

MEDICAL VACANCIES.

THE following vacancies are announced:—

BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.
BROMLEY, Kent, Rural, combined with several other Rural and Urban Sanitary Districts—Medical Officer of Health: £800 per annum. Applications to Joseph Snelling, Esq., Tonbridge.
COLERAINE UNION, co. Londonderry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Articlave Dispensary District: £90 per annum, and fees. Applications to Hugh Heylett, Esq., Liffock, Castlerock, Coleraine.
DERBYSHIRE GENERAL INFIRMARY—Assistant House-Surgeon. Applications to Samuel Whitaker, Esq., 4, Victoria Street, Derby.
DONEGAL LUNATIC ASYLUM, Letterkenny—Resident Medical Superintendent.
GENERAL HOSPITAL, Birmingham—Resident Medical Officer: £100 per annum, board, and residence. Applications to W. T. Grant, Esq.
HARRIS—Parochial Medical Officer. Applications to John Cunningham, Esq., Rodel, Harris, by Stornoway.
H.M.'s INDIAN MEDICAL SERVICE—Eleven Surgeons.
HEXHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £300 per annum for three years. Applications to John Stokoe, Esq.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
KNIGHTON UNION, Radnorshire—Medical Officer and Public Vaccinator for the Llanbister District: £70 per annum, and fees.
LEEDS GENERAL INFIRMARY—House-Physician: £100 per annum, board, furnished apartments, and washing.
LEEDS URBAN SANITARY DISTRICT—Medical Officer of Health: £400 per annum. Applications to Capel A. Curwood, Esq.
LICHFIELD UNION—Medical Officer for the Yoxall District: £20 per annum, and fees.
LIVERPOOL EYE and EAR INFIRMARY—House-Surgeon: £80 per annum, residence and maintenance.
LIVERPOOL INFIRMARY FOR CHILDREN—House-Surgeon: £80 per annum, board and lodging.
LIVERPOOL, Parish of—Assistant Medical Officer to the Workhouse, Brownlow Hill: £80 per annum, apartments, and rations, and £20 per annum for examining applicants for out-door relief. Applications to H. J. Hagger, Esq.
LONDON TEMPERANCE HOSPITAL—Physician.—Surgeon.
MOUNTMELLICK UNION, Queen's County—Medical Officer and Public Vaccinator for the Maryborough Dispensary District: £100 per annum and fees. Applications to John Gaze, Esq., Maryborough.
PENRITH RURAL AND URBAN SANITARY DISTRICTS—Medical Officer of Health: £300 per annum.
ROTHERHAM HOSPITAL and DISPENSARY—Resident House-Surgeon: £120 per annum, board, and furnished apartments.
ST. THOMAS'S HOSPITAL—Demonstrator of Anatomy.
SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Physician.
STAMFORD and RUTLAND GENERAL INFIRMARY—House-Surgeon, Apothecary, and Secretary: £100 per annum, board, lodging, and washing.
STOCKPORT UNION—Medical Officer for the Stockport District and the Workhouse.

STRATFORD-ON-AVON, etc.—Medical Officer of Health: £600 per annum.
SUDBURY RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications to H. C. Canham, Esq.
TORMOHAM AND ST. MARY-CHURCH URBAN SANITARY DISTRICTS—Medical Officer of Health: £400 per annum for three years.
TORRINGTON UNION—Medical Officer: £100 per annum and midwifery fees.
TRAINING HOSPITAL, Tottenham—Physician.
WEST DERBY UNION—Assistant Medical Officer to the Workhouse: £120 per annum, apartments, board, etc. Applications to W. Cleaver, Esq., 14, Clayton Square, Liverpool.
WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead—House-Surgeon and Assistant-Secretary: £100 per annum, furnished rooms, etc.
WESTMINSTER HOSPITAL—House-Physician.
WHITEHAVEN UNION—Medical Officer for the Lamplugh and Harrington Districts. Applications to John McKelvie, Esq.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL—House Governor and Secretary: £150 per annum, to commence, board and residence.
WOOLWICH UNION—Medical Officer for the New Infirmary and the Workhouse: £225 per annum, rations, etc., and residence. Applications to E. Brough Sargent, Esq., Plumstead.
WORKSOP UNION—Medical Officer for the Harthill District: £35 per annum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication,

MARRIAGES.

MAHOMED—CHALK.—On June 14th, at the Parish Church of St. Nicholas, Brighton, by the Rev. R. Ingham Salmon, M.A., Frederick A. MAHOMED, Esq., of the London Fever Hospital, to Ellen, eldest daughter of the late Charles CHALK, Esq., Solicitor, of Brighton.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London. 7.30 P.M.: Meeting of Council. 8 P.M.: Papers by Dr. George Roper, Dr. Eardley-Wilmot, and Dr. Wiltshire; and Specimens by Dr. Squire, Dr. Heywood Smith, and others.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

W. A. S.—It is rare, but not by no means unprecedented to find scabies without itching. The alkaline sulphur lotion is a very good one.

INFLUENCE OF THE DERBY ON THE DRUG MARKET.—In Messrs. Morgan's trade report in the *Chemist and Druggist* on the drug market, it is mentioned that the one exception to universal flatness is in the case of quicksilver, and it is added that "there is a humorous idea 'on 'Change' that the result of the Derby may, and sometimes does, affect the price of mercury. If there be any truth in this notion, it would seem that Doncaster was not the animal on which 'the Baron's' hopes were fixed, as it is since that gentleman's victory that the price of metal has stiffened. Baron Rothschild regards the quicksilver profits as his 'pocket-money'; and as he nets about a hundred per cent. on all he sells, on the average, the little extra is supposed to be worth some two hundred thousands per annum. As we said, the price is very firm just now, and a buyer of five hundred bottles, who offered £13 15s. the other day, was not accommodated."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE BIRMINGHAM PICTURE GROUP.

SIR,—The further explanation seems required that all the names you mention were instances of copies from *cartes*, some of them very bad ones. If you will look again at the picture, you will see that I do not occupy "a very prominent place in the foreground," but that I am quite in the background—in my proper place as joint-secretary of the Midwifery Section.

7, Great Charles Street, Birmingham.

I am, etc., LAWSON TAIT.

** We do not quite concur with Mr. Tait as to the value of his explanation; but we hope that this correspondence may excite sufficient curiosity to ensure a large sale of the picture-group, which is, on the whole, as we have said, a very interesting *souvenir*, and one which indicates meritorious enterprise on the part of the publishers, Messrs. Thrupp, of Birmingham.

MEDICUS (Barmouth).—Article 206 of the Consolidated orders of the Local Government Board states that the following are the duties of a district medical officer:

1. "To attend duly and punctually upon all poor persons requiring medical attendance within the district of the union assigned to him, and according to his agreement to supply medicines to such persons whenever he may be lawfully required to furnish such attendance or medicines by a written or printed order of the guardians or of a relieving officer of the union, or of an overseer."

A medical officer is not bound to attend any case without a regular order, but if he be sent for and attend the case without an order, or treat the patient as being under his care, he will be held responsible for any neglect which may occur, and will not be permitted to plead in justification the want of an order. It would appear that, strictly speaking, a district medical officer is not bound to attend a *pauper* without an order from some constituted authority; but a *pauper* in the district of the medical officer who applies for medical relief without a distinct written order, in a case of sudden illness or emergency, should certainly not be refused, on the grounds of humanity.

With respect to claiming payment in a court of law, it must be remembered that the patient is a pauper, and it may be the proverb, "sue a beggar and catch a louse," would be here practically exemplified. It is evident that the authorities could not be held responsible for the attendance on a pauper in the district of a medical officer which is included in the contract entered into between the guardians and the medical officers.

THE SURGEONS OF THE CANCER HOSPITAL.

SIR,—Entirely concurring in your strictures on the report of the Cancer Hospital, and on the responsibility of its surgeons to their profession for the statements put forward, I will take this opportunity of calling the attention of the authorities to the annexed advertisement, which may be commonly found in the "miscellaneous" corners of various daily papers, and often in unsavoury company. Now, sir, the title of this pamphlet is in singular contrast to the extracts which you quoted from the report of Mr. Marsden and Mr. John Foster, in which "cancer-cures" are so flourishingly reported in terms which startled Mr. D. Mocatta into the expression of the opinion that such good news for sufferers should be trumpeted throughout the world. Mr. Marsden is the senior surgeon, and I have no means of knowing his estimate of professional opinion. Mr. John Foster is, however, very well known in professional circles as a trusty and accomplished *aide-de-camp* of an eminent metropolitan surgeon. I am sure that he cannot meet his fellows without a blush, while the statements made in his name, if not by him, remain unexplained. The proceedings of his colleagues implicate himself, and the report of the medical officers is his report. The College of Surgeons might very wisely imitate the College of Physicians in forwarding a copy of their resolution against "excessive advertising" in the daily papers to all their fellows and members.

I am, etc.,

M. H. C.

** We called attention in a leader of June 14th, to the report of the preceding year. The report of the present year is only known to us through the newspapers. The *Times* report had the following statement:—

"Of the in-patients it is most gratifying to find that fifty-four were discharged with disease arrested or relieved; eighty-nine were successfully operated upon and discharged well; thirty-eight were discharged cured without operation. On the other hand, of seventy-two who were admitted in a hopeless state, forty-two died, and there remained in the institution at the end of the year fifty-three. The power of arresting cancer, and in some instances of curing it, by a combination of local and constitutional remedies, the surgeons now believe to be established, and with far less suffering and annoyance to the patient than was formerly the case. Both these reports were adopted, the chairman saying that the report of the surgeon deserved not merely circulation in the British Isles, but throughout the world. The services of the various officers of the institution having been suitably acknowledged, and a vote of thanks was passed to the chairman, and it was responded to in an earnest speech in behalf of the now sufferers from the dreadful disease of cancer. The meeting, which was of the most enthusiastic character, then terminated."

If the surgeons of the Cancer Hospital really possess the power of curing cancer by local and constitutional means, and if, besides a large number "cured" by operation, they had the pleasure of discharging thirty-eight cases of cancer "cured without operation," it is certain that their fame cannot be too widely spread; but if it be not true, and they allow it to be believed and encourage the belief—they at least owe to the profession and the public some explanation of the unfortunate circumstances.

THE POCKET CLINICAL THERMOMETER.

SIR,—I observed in the JOURNAL of the 7th instant, your report of Arnold and Son's Pocket Clinical Thermometer (patented). I have this week seen the instrument, and my examination of it fails to verify the account I had read. The diagram in the JOURNAL does not represent the actual size of the instrument. When closed for the pocket case, it measures 4 inches—opened ready for use $3\frac{3}{4}$ inches. It is not engraved with the centigrade scale in addition to that of Fahrenheit.

11th June, 1873.

I am, etc.,

M. B.

** The thermometer sent for our inspection was marked with both centigrade and Fahrenheit scales. The measurements of the instrument given in the descriptive text in the JOURNAL are about the same as those given by our correspondent, and are considerably more than are represented by the engravings.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MR. SMITH (St. Helier's).—The subject is one of great difficulty; but we shall be glad to receive further information, and will take care that it is placed before the proper authorities.

WE entirely agree with Miss Firth, that, considering the imperfect education which midwives receive compared with medical men, "it is wonderful that a midwife should ever be right when a doctor is wrong." That being so, it is unnecessary to publish the rest of her letter. It is desirable that the education of midwives should be more suited to the nature of their duties, and that they should learn to know their positions and fill it well.

F.R.C.P. (Aldershot).—The communication was an eccentric one; but, as the circumstances which our correspondent deprecates are in no way threatened among us at present, it will be better to let the subject drop.

POSITION OF TWINS.

SIR,—In your impression of May 31st, there is a letter from Mr. Ashworth referring to the position of the fetus *in utero* in cases of twins. On looking through my case-books from 1867 to the present date, the following points bearing on the subject are found.

	No. of Case.
Both children with head-presentation	6
Both children with breech-presentation	2
First child head, second child breech, presentation	2
First child breech, second child head, presentation	1
First child head, second child foot, presentation	1
First child foot, second child head, presentation	1
Total number of cases of twins attended	13

Total number of cases of labour attended 923

I am sorry I can give no further particulars of the presentations. I find I have only noted head or breech, etc., as case might be, without stating how the child was placed with regard to the pelvis of the mother. It should be observed that, in one case which I have placed amongst the first class, I had to rely on the statement of a woman who was present at the birth, as unfortunately both children were premature and born before I arrived; but the observer was competent and fit to be relied on. Perhaps it is worth noting that the woman above alluded to had been delivered of twins about two and a half years previously.

Trowbridge, Wilts, June 5th, 1873.

I am, etc., G. C. TAYLER, M.D.

LACRYMAL CANALICULUS KNIFE.

SIR,—Permit us to correct an error in your impression of the 14th inst. relative to Mr. Greenslade's instrument for slitting the punctum lacrymale and canaliculus. In the short notice of this instrument it is stated as being made by Messrs. Arnold and Son. But the facts are as follows. The instrument was first made by us from a verbal description of Mr. Greenslade's, and so well was he pleased with it that he forwarded us a paragraph relative to it, to be inserted in yours or some other weekly medical journal. Judge of our surprise when we heard that Messrs. Arnold had taken the identical instrument with our name on to a workman to have some made like it; and the statement in your Journal of the above date makes it appear that it is their carrying out from Mr. Greenslade's suggestion, instead of which we have no hesitation in saying that it is copied from ours; in fact, Mr. Greenslade has shown our instrument at Charing Cross and several other hospitals. We also beg to forward you the paragraph from Mr. Greenslade for your inspection and insertion, if you think fit.

We are, etc.,

MAYER & MELTZER.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Liverpool Weekly Albion June 21st; The Manchester Guardian, June 25th; The Aberdeen Daily Free Press, June 21st; The Bath Express, June 21st; The Birmingham Daily Post, June 25th; The Hull Packet; The Yorkshire Post and Leeds Intelligencer; The Melbourne Argus; The Kendal Mercury; The Roscommon Journal; The Herts and Essex Observer; The Sussex Daily News; The City Press; The Birmingham Daily Mail; The Bacup Times; The Inquirer; The Lincoln Gazette; The Wrexham Guardian; The Western Mail; The Lincolnshire Chronicle; The Daily Review; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Rolleston, Oxford; Dr. Rumsey, Cheltenham; Dr. Bradbury, Cambridge; Mr. W. Sedgwick, London; Mr. V. Jackson, Wolverhampton; Dr. George Johnson, London; Dr. John Williams, Swinton; Mr. H. Smith, London; Our Paris Correspondent; Mr. Stokes, London; Mr. Griffith, Wrexham; Dr. Murray Lindsay, Mickleover; Mr. Ward Jackson, Clifton; Dr. Priestley Smith, Birmingham; Mr. G. F. Hodgson, Brighton; Dr. Bathurst Woodman, London; An Associate; Mr. W. M. Clarke, Bristol; Mr. A. Stradling, London; Dr. Clifford Allbutt, Leeds; Mr. Erichsen, London; Mr. P. Squire, London; Messrs. Mayer and Meltzer, London; Mr. T. M. Stone, London; Miss Frith, London; M. Smith, St. Helier's; Mr. Shirley Brooks, London; Mr. McPherson, Brighton; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. North, York; Mr. Purves, London; The Secretary of the Obstetrical Society; Dr. Steele, London; Mr. J. W. Langmore, London; Dr. G. M. Humphry, Cambridge; Mr. Blainey, Leeds; Dr. Spencer, Clifton; Mr. White Cooper, London; Dr. Burdon Sanderson, London; Dr. Keith, Edinburgh; Mr. John Marshall, London; Mr. Callender, London; Mr. Cowan, London; Mr. L. Blaise, London; Mr. Matthews, London; Medical Officer, Malta; Mr. Trotter, London; Dr. Farquharson, London; Dr. T. K. Chambers, London; Dr. Steele, Liverpool; Mr. Curling, London; Dr. Phillips, London; Dr. B. H. Paul, London; Dr. Chevallier, Ipswich; Dr. J. W. Moore Dublin; Dr. Tucker, Sligo; Dr. Tweedie, London; Dr. W. M. Kelly, Taunton; Dr. Fraser, London; Dr. Lyon Playfair, M.P., London; Dr. Jaccoud, Paris; Dr. Binz, Bonn; Dr. Pettenkofer, Munich; Dr. Gueneau de Mussy, Paris; Dr. T. L. Brunton, London; Dr. Cheadle, London; etc.

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